



Household composition after resettlement and emotional health in adolescent migrants

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ABSTRACT

Background: Migration during adolescence constitutes an important stressor that particularly impacts unaccompanied minors (UAM). Adolescent UAM in the United States (U.S.) are relatively understudied, especially regarding their resilience and emotional well-being after resettlement. Small school-based studies have documented the mental health status of UAM who resettled reuniting with their parents. However, many do not resettle with parents and less is known about the degree to which post-resettlement household composition impacts resilience and emotional well-being.

Methods: Our goal was to examine how migration characteristics, supports, resilience, and emotional well-being vary by UAM resettlement household composition (reunification with parents, reunification with a non-parental family member, or living in a household not containing any family members). Using a mixed-methods (quantitative-qualitative) cross-sectional approach, we assessed 46 Latin American adolescent UAM to the U.S. who resettled into these three household types.

Results: Youth experienced support differently by household type, influencing their strategies for adapting and coping post-resettlement, impacting their resilience (Kruskal Wallis-H 4.8; $p < 0.09$) and emotional well-being (Kruskal Wallis 5.3; $p < 0.07$). Youth living in households without relatives ($n = 9$) had lower resilience (Fisher's exact test $p < 0.002$) and positive affect (Fisher's exact test $p < 0.003$) and needed to expend greater efforts to mobilize social supports than youth living with parents ($n = 22$) or with non-parental family members ($n = 15$).

Conclusion: The needs and coping abilities of UAM migrants vary with the composition of their immediate receiving environment, their post-resettlement household. Understanding differences associated with these household characteristics can guide interventions to maximize emotional health and resilience.

1. Introduction

Substantial research has documented the crucial role that families, particularly parents, play in the adaptation and well-being of child and adolescent migrants (Small and Covalt, 2006; Vedder and Motti-Stefanidi, 2016). However, Latin American youth who migrate as UAM

to the U.S. face a variety of scenarios. They may reunite with parents who migrated years before, or with other family members, or have to live without family support (Berger Cardoso et al., 2019). We know little about how diverse household compositions and the social bonding resulting from these resettlement environments influence youth's well-being and adaptation. Understanding the role that household composi-

Abbreviations: CBO, Community Based Organizations; NYC, New York City; FY, Federal Year; UAM, unaccompanied minors; ORR, Office of Refugee Resettlement; PTSD, posttraumatic stress disorders; RA, research assistant; NIHTB-EB, NIH toolbox emotional battery; GLS, General Life Satisfaction; CYRM28, Children Youth Resilience Measure-28.

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tion plays may enable tailoring support to better benefit these youth. We use mixed methods to explore differences and similarities in lived experience, well-being, and resilience of Latino youth who migrated as UAM to the U.S. and were resettled in diverse household compositions.

Despite a longstanding history of Latin American migration to the U.S., since 2014 the federal government reported increases in overwhelmingly male (70%) adolescent UAM migrating from Central America. In federal year (FY) 2019, 76,020 UAM were apprehended at the southern U.S. border, though data on those entering but not apprehended are non-existent.

Poverty, economic stagnation, violence, and persecution in their home countries push adolescent migrants to journey to the U.S. without their family (Goldberg, 2014). Some youth leave behind caretakers while others leave to rejoin parents who have previously migrated. The prospect of educational opportunities also inspire youth to migrate without an adult, despite the fact that such opportunities may be scarce for older adolescents (Goldberg, 2014). Although no large-scale studies have documented the mental health and well-being of UAM arriving in the U.S., data from 30 middle-school students suggest that about 40% experience a mental health disorder after migration, most commonly PTSD (Cardoso, 2018). Pre- and peri-migration trauma coupled with stress and other challenges post-migration pose a risk to their well-being. Youth juggle limited access to legal services, challenges during family reunification, daily stressors, and school system barriers, all contributing to make adaptation more challenging (Berger Cardoso et al., 2019; Cardoso, 2018).

Nonetheless, European data suggest that a large proportion of teen migrants are resilient despite high exposure to stressful experiences before and after migration. Resilience – the capacity of individuals and their environments to interact in ways that optimize developmental processes to overcome adversity (Ungar, 2013) – may alleviate the toxic effect of pre-migration trauma and post-migration stressors and contribute to the psychological well-being and adaptation of teen migrants (Suárez-Orozco et al., 2018). Growing evidence suggests that social bonding and sense of belonging to a community such as a family, school, or peer group can strengthen youth capacity to cope with daily hassles (Masten and Narayan, 2012; Raymond-Flesch et al., 2017). However, the relationship of social bonding with resilience and psychological well-being has not been examined among UAM in the U.S., and little consideration has been given to the heterogeneity of their receiving environments or to avoiding deficit-based approaches with their concomitant stigmatization and under-appreciation of youth agency (Motti-Stefanidi, 2018).

Moreover, the resettlement environments in Europe and the U.S. are quite different, suggesting the need for U.S.-based research. Most UAM in Europe are placed in UAM centers or foster families. In the U.S., of all UAM apprehended in 2014, the office of refugee resettlement (ORR) released ~90% to sponsors, including ~60% to a parent (ORR Category 1), 13% to uncles, 12% to siblings, and 6% to other relatives (ORR Category 2); while fewer than 10% were released to sponsors who are not family members (ORR Category 3). ((ORR), O.o.R.R 2021) Although these proportions vary from year to year (e.g., 39% in Category 1 and 50% in Category 2 in FY 2021), the proportion released to non-relatives has remained stable around 10% ((ORR), O.o.R.R 2021). While these statistics include only UAM apprehended at the southern U.S. border, they may approximate the proportions of the initial resettlement household compositions of all officially tracked migrants. In addition, the few studies on UAM in the U.S. have been school-based, focusing primarily on the experiences of youth who reunited with one or both parents.

Prior work suggests that UAM reuniting with their parents cope with negative emotions triggered by the earlier separation (e.g., sense of abandonment) (Cardoso, 2018). For UAM who do not reunite with parents, the demands of work and school and transitioning into adulthood without family support may generate added stress (Hernández, 2013). Past research has started to clarify the impact of migration patterns and family disruptions on the adaptation of migrant children in U.S.

schools. However, these school-based studies exclude adolescents who never attended school, dropped out, or only attended briefly. Moreover, the experiences of adolescents who live with other non-parental relatives or without family have been minimally represented, in part due to the challenges of finding and involving them in research (Chase et al., 2020). Although this group may represent a smaller portion of migrant youth, they may include those who most lack support. Research with community samples would help clarify the range of resettlement patterns among unaccompanied youth and how these patterns influence their post-resettlement well-being and adaptation.

The current study is based on baseline data from CAMINANDO (Children & Adolescents Migrating Independently, Neighborhood, Acculturation, Neurocognition, Diet, & Opportunities), a longitudinal study that uses a mixed-methods (quantitative-qualitative) approach to examine factors predicting post-resettlement health outcomes in adolescents who migrate from Latin America to NYC as UAM. This report characterizes youth resilience and psychological well-being and examines how and why they vary depending on household composition at resettlement. Our goal is to examine the resilience and emotional health of UAM resettling into diverse household compositions and the distinct and shared supports, strengths, and unmet needs across these three settings to inform future supportive interventions.

2. Methods

2.1. Study population

The CAMINANDO study has enrolled youth participants since April 2017 in partnership with three NYC community-based organizations (CBOs) offering services to migrant teens. Youth are recruited at CBO informational events or referred directly by CBO staff. Inclusion criteria were having migrated overland from Latin America without a parent, entering the U.S. before their 18th birthday and within 5 years of the interview, being at least 14 years old at baseline, and Spanish fluency. All participants provided consent or witnessed assent, as approved by the Institutional Review Boards of the Columbia University Irving Medical Center. Beginning in September 2017, all participants were also invited to answer a semi-structured interview, and a total of 46 youth were interviewed and comprise the current sample. All data were de-identified before data entry, transcription, or analysis. No names were recorded during qualitative interviews. The study was covered by a certificate of confidentiality issued by the National Institute of Minority Health and Health Disparities of the National Institutes of Health.

2.2. Study design

Following the GRAMMS quality framework (O’Cathain et al., 2008), we describe in the subsequent Methods sections the rationale for the mixed-methods design, sequencing, and sampling and the methods for data collection, prioritization, analysis, and integration (see supplementary material including GRAMMS checklist). CAMINANDO followed a convergent design (Fetters et al., 2013), in which qualitative and quantitative data collection occurred in parallel. We chose a mixed-methods design to provide an in-depth picture of the role that household composition plays in shaping the lived experiences and well-being of UAM youth. The quantitative assessments allowed us to characterize youth using existing measures and to quantify differences in resilience and well-being across groups, while the qualitative data provided rich subjective insights into the daily experiences and perceptions of well-being and of how these related to the household structures into which they resettled. The qualitative data clarified and expanded upon the quantitative findings.

The study population was defined by a purposive and convenience sampling strategy. The strategy was purposive in that selection criteria were defined to capture the migration experiences and well-being

of a specific subgroup of migrant youth, those who migrated as children without an adult. The strategy also followed a convenience approach in that we partnered with three New York City (NYC) CBO service providers, enabling recruitment of an otherwise largely inaccessible population.

2.3. Data collection and materials

Trained research assistants (RA's) in teams of two interviewed the youth in person in Spanish at the CBOs, our offices, or at participants' homes depending on youth preference. Assessments occurred over 1–2 sessions, with the second session conducted within one week of the first.

Quantitative Data: Youth were interviewed using Spanish-language instruments and questionnaires adapted for CAMINANDO to query demographics, housing and living arrangements, age at migration, reasons for migrating, hobbies, and school attendance prior to migration and after resettlement using a survey designed for low-literacy young adults in Mexico and visual props and response cards to facilitate response (Orjuela et al., 2005). Questions about perceived quality of friendships were added after 5 participants had been interviewed so those data are only available on 41 youth. Exposure to violence was assessed using the Chicago Neighborhoods Study Wave 3 (MyETV) (Earls et al., 2002) instrument (translated and adapted for our study (Matías-Carrelo et al., 2003), with permission) which measures their exposure to 31 types of violence (see supplementary material). We measured resilience with the CYRM28 (Ungar and Liebenberg, 2013) and psychological well-being using the age-appropriate iPad-based NIH tool box – emotional battery (NIHTB-EB) (Spanish version). Participants under 18 at interview completed the age-13-to-17 battery and those 18 and older completed the 18+ battery (Babakhanyan et al., 2018). Because of the low literacy level of many participants, responses were read to youth unless they indicated a desire to complete the assessments on their own. All youth were afforded privacy to indicate their response on the touchscreen.

Qualitative Data: At the end of their interviews, youth were asked 11 open-ended questions with probing regarding their supports, challenges, and goals (see supplementary material). The semi-structured interviews lasted 10–20 min and were audio-recorded. Names of places and individuals were deleted from the transcripts. Once interviews were transcribed and deidentified, audio recordings were erased. Only researchers involved in the study had access to the deidentified data.

2.4. Data analysis

Qualitative and quantitative data were analyzed separately, giving equal weight to both components; in a subsequent data-integration step, qualitative data were used to clarify and expand upon quantitative findings (Fetters et al., 2013). The following three respondent groups were created based on ORR-defined sponsor characteristics ((ORR), O.o.R.R 2021) and compared using quantitative and qualitative data: a) youth who reunited with their parents; b) youth who reunited with a non-parental relative; and c) youth whose post-resettlement household did not include any family members. This last group included youth residing in shelters and those living alone (including with other individuals to whom they were unrelated). Assignment to the three household composition groups relied on qualitative data that was verified (with complete concordance) with survey data on housing and living conditions.

2.5. Quantitative analysis

We compared demographic and migration characteristics, emotional well-being, and resilience across the three groups using only bivariate

analyses given the small sample. Schooling pre-migration was assessed as years of schooling completed in country of origin and by calculating the years of schooling not attended (missed), using the expected number of school years attended given standards in their country of origin. Exposure to violence was examined as the number of types of violence. Resilience was dichotomized (high-low) at the standard CYRM28 cut point of 106 (Ungar and Liebenberg, 2013). Data on emotional health from the NIHTB-EB (Babakhanyan et al., 2018) was examined using three subdomains that could be calculated on the entire age range of the sample: positive affect, general life satisfaction (GLS), and perceived stress. Only age-adjusted T scores were used. Associations between CYRM28 and NIHTB-EB scores were examined using Spearman correlation coefficients. Age-adjusted NIHTB-EB subdomain T-Scores were considered “potentially problematic” if >1 SD above/below the mean in the problematic direction. We created a composite variable combining the three subdomains to denote when respondents had a potentially problematic score in at least one subdomain (Matías-Carrelo et al., 2003). Given the limited sample size and non-parametric distribution, descriptive comparison among the three household-composition groups was conducted using Kruskal-Wallis H (K-WH) tests for continuous variables and for comparing distributions among the three groups of youth. For comparisons among two groups of youth and examining dichotomized categorical data we used Fisher's exact tests to further examine distributions that were significantly different by Kruskal Wallis H. Analyses were limited to descriptive distributions of demographic and migration characteristics using SPSS v26. All testing of significance was two-tailed and p-values were reported as significant if <0.05, and of borderline significance if 0.05–0.10. Those above 0.10 were not reported.

2.6. Qualitative data analysis

Using semi-structured interviews, we explored the lived experiences of youth and the impact of household composition on well-being during resettlement. Semi-structured interviews were transcribed verbatim by two RAs and reviewed by an independent RA. Three researchers coded and analyzed the data. All study personnel were bilingual native Spanish speakers.

Thematic analysis (Braun and Clarke, 2006) guided the coding of interviews and identification, analysis, and reporting of themes. Since, to our knowledge, this was the first study to explore the specific influence of different household compositions on post-migration well-being of UAM in the U.S., we found an inductive analytical approach to be more appropriate. We first examined factors that promoted and hampered the well-being of youth from their own perspective. Two coders (including MM) read the first twenty transcripts, developed a codebook inductively, and coded every transcript using the preliminary codebook as a guide. When new codes emerged, these were discussed, incorporated in the coding scheme, and used to recode all interviews. Codes were organized by themes and categories (see supplementary table). After thirty interviews, no new codes or themes emerged, indicating data saturation (Braun and Clarke, 2021). However, to ensure that no new material would emerge given the heterogeneity of the sample with respect to characteristics that could influence their well-being (i.e., household composition, motivation for migration, age at migration) we continued to recruit subjects into this exploratory study (Braun and Clarke, 2021).

The first round of coding revealed that youth living with a parent, other relatives, or without family in the U.S. described different experiences before and after migration, which seemed to contribute to their coping and well-being. We then compared the code list and main themes from interviews across the three groups. Common themes and differences between the household groups were outlined and discussed by the core author group (MM & MOG, AR, RLF). MM then recoded all interviews to identify key themes within each group, cross-checking results with the transcripts to challenge the findings and look for alternative interpretations (Creswell and Miller, 2000). An overarching theme was identified across the three groups: *Redefining and mobilizing supports that*

Table 1
Self-reported demographic and pre-migration characteristics overall and by household composition group.

Demographics		All youth (n = 46)		Household composition		Living with sibling or other relative (n = 22)		Living without family (n = 9)	
		N	%	N	%	N	%	N	%
Sex	male	33	72.	8	53.3	20	90.9	5	55.6
	female	13	28	7	46.7	2	9.1	4	44.4
	Mean		SD	Mean	SD	Mean	SD	Mean	SD
Age at interview		18.1	2.1	17.3	1.80	18.2	2.3	18.9	1.5
Age at migration		15.6	1.7	15.1	2.0	15.4	1.7	16.8	0.4
Years in the U.S.		2.2	1.5	2	1.5	2.4	1.7	2.2	1.4
Pre-migration and migration		N	%	N	%	N	%	N	%
Country of origin	Mexico	3	8.7	0	0.0	1	4.5	2	22.2
	Ecuador	2	4.3	2	13.3	0	0.0	0	0.0
	Honduras	21	45.7	8	53.3	8	36.4	5	55.6
	El Salvador	6	13.3	1	6.7	4	18.2	1	11.1
	Guatemala	14	30.4	4	26.7	9	40.9	1	11.1
Speak an ethnic language		21	45.7	5	33.3	11	50.0	5	55.6
	Mean		SD	Mean	SD	Mean	SD	Mean	SD
Number of types of violence experienced prior to U.S. arrival		18.0	11.4	16.4	10.0	18.0	11.8	20.8	13.4
Years of school completed in country of origin		7.7	2.4	7.6	1.8	7.8	2.8	7.8	2.7
Years of school not attended (missed) prior to migration ^a		2.8	2.2	2.5	1.9	2.6	2.3	4.0	2.4
Age started working ^b		10.8	3.0	11.4	3.3	10.4	2.9	11.0	3.3
Began work in country of origin		N	%	N	%	N	%	N	%
Before adolescence (age13)		17	37.0	3	20.0	10	45.5	4	44.4
During adolescence (13+ years)		12	26.1	5	33.3	6	27.3	1	11.1
Never worked before migration		17	37.0	7	46.7	6	27.3	4	44.4
Youth themselves made decision to migrate		34	73.9	10	66.7	17	77.3	8	88.9
Motive for migration ^c									
Economic		29	63.0	9	60	16	72.7	4	44.4
Escaping violence		28	60.9	10	66.7	12	54.5	6	75.0
Family reunification ^d		31	67.4	15	100	12	54.5	4	44.4

^a Calculated using age at migration and years of schooling youth is expected to have completed in their home country.

^b For those who worked pre-migration.

^c Youth can endorse more than one option so percentages can exceed 100%.

^d Kruskal Wallis-H test=10.83, $p = 0.004$; all other demographic and migration characteristics did not differ by household composition group.

promote well-being, which describes how youth rethink and find supports within and outside their families to become more independent, cope with daily stressors, and pursue their goals. Crucial differences in how youth redefined and mobilized supports to create social bonds were also identified across the groups. Quotes were chosen to illustrate these findings.

In the final integration step, MM, MOG, AR, and RLF examined the congruences and divergences that emerged from the quantitative and qualitative findings and used the qualitative data to provide potential social and psychological mechanisms for quantitative differences across the three household-composition groups. These results were discussed and approved by the core author group (MM & MOG, AR, RLF) during the writing process and presented in the Discussion.

3. Results

3.1. Youth demographic and migration characteristics

Table 1 shows the demographic and pre-migration characteristics of the entire sample and by household composition group. Our sample was predominantly male, living primarily with non-parental relatives; nearly one-third lived with parents and a smaller proportion lived without family members. Most youth came from Honduras and Guatemala. The distribution of countries of origin differed slightly and non-significantly across groups.

A large proportion of youth were not in school at the time of study participation. Age at study participation and at time of migration did not

differ significantly between the household composition groups but those living with parents were slightly younger than the other two groups.

The closed-ended questions revealed that, although youth were equally likely across groups to have migrated to escape violence or poverty, youth living with their parents were significantly more likely to migrate for family reunification. Youth themselves decided to migrate, with most youth being the primary decision maker, while a smaller proportion made the decision together with another relative. Pre-migration experiences also varied. Participants in the three household-composition groups were equally likely to have worked in their home countries prior to migrating to the U.S.; however, youth living with their parents appeared less likely to have started working before adolescence (age 13) compared with youth living with non-parental relatives or without family members. Similarly, youth living without family appeared to have missed more years of school prior to migrating, consistent with a higher likelihood of working before adolescence.

Youth reported variable exposure to violence, with all youth reporting exposure to some type of violence prior to U.S. arrival (data not shown). Although the number of types of violence to which youth were exposed did not differ significantly across the three groups, youth living in households whose composition did not include family members appeared to experience more types of violence, compared with youth living with parents or with other relatives.

Table 2 shows select characteristics of NYC post-resettlement life among youth. Participants living with non-parental relatives appeared more likely to report having good friends while youth living without family were most likely to report lacking good friends (K-W-H test =7.87; $p < 0.02$). Somewhat surprisingly, youth living with their par-

Table 2
Self-reported life characteristics after resettlement in New York City overall and by household composition group.

Post-migration		Total (n = 46)		Living with parents (n = 15)		Living with sibling or other relative (n = 22)		Living without family (n = 9)	
		N	%	N	%	N	%	N	%
Schooling in NY	Yes, now	28	60.9	12	80.0	12	54.5	4	44.4
	Yes, in the past	15	32.6	2	13.3	9	40.9	4	44.4
	Never	3	6.5	1	6.7	1	4.6	1	11.1
Has an adult caretaker ^{a, b}		36	80.0	15	100.0	17	85.0	3	33.3
Has good friends ^c	Not at all true	7	17.1	2	15.4	3	15.0	2	25.0
	A little true	5	12.2	3	23.1	1	5.0	1	12.5
	Somewhat true	8	19.5	4	30.8	2	10.0	2	25.0
	Quite a bit true	6	14.6	1	7.7	2	10.0	3	37.5
	Very true	15	36.6	3	23.1	12	60.0	0	0.0
Regrets coming to U.S.	Very little	32	74.4	9	60.0	17	85.0	6	75.0
	Somewhat	8	18.6	5	33.3	2	10.0	1	12.5
	Very much	3	7.0	1	6.7	1	5.0	1	12.5

^a Kruskal Wallis-H test= 18; $p < 0.001$.

^b Fisher's exact test $p < 0.001$ comparing youth living without family to youth living with family (parental or other)^cKruskal Wallis-H test =7.87; $p < 0.02$; Because this question was included later in the study, only 41 youth were asked this question.No other post resettlement characteristic here differed in distribution between the three household groups.

ents appeared more likely to express regret about coming to the U.S., compared with those living with non-parental relatives or no family, though this difference was not significant. Youth did not differ by group in the likelihood of ever having attended school in the U.S. but those living without relatives were less likely to attend school currently (though their somewhat older age adds to the challenge of integrating into a school). Youth living in households whose composition did not include relatives were significantly less likely to report having an adult caretaker post-resettlement (Fisher's exact $p < 0.001$) as might be expected.

3.2. Resilience and emotional well-being

A majority of youth showed high resilience based on their CYRM28 score (Ungar and Liebenberg, 2013; Montoya et al., 2011). In Spearman correlation analyses, CYRM28 scores correlated significantly with all three NIHTB-EB composite scores: GLS ($r = 0.371$) ($p = 0.01$); positive affect ($r = 0.442$) ($p = 0.002$); and inversely with perceived stress ($r = -0.426$) ($p = 0.003$). Table 3 shows the distribution of CYRM28 and NIHTB-EB summary scores overall and by household composition. Overall, the distributions for resilience and NIHTB-EB summary scores varied by household composition. NIHTB positive affect scores differed significantly between the three groups, (K-WH test = 8.24, $p = 0.016$), with a mean rank positive affect score of 24.07 for those living with their parents, 27.64 for those living with older siblings or other relatives, and 12.44 for those not living with any relative. For both resilience and perceived stress the findings similarly showed differences in ranks among the three groups, with lower resilience among those living in households not including relatives, while for perceived stress, those with lower stress appeared to be in households with non-parental family members, though these differences were of only borderline significance (K-W H test = 4.81 for perceived stress, and K-WH = 4.75 for resilience, $p = 0.09$ for both). GLS scores did not differ by household composition group. Two-fifths of youth scored in the potentially problematic range in one or more NIHTB-EB summary scores and this proportion varied by household composition (K-W H test=5.26; $p = 0.07$).

Youth living in households not including relatives had higher likelihood of a low resilience score compared with those living with relatives (whether parental or other) (Fisher's exact test, $p = 0.002$). Similarly, youth living in households whose composition did not include relatives had a higher likelihood of having at least one domain score in the potentially problematic range (Fisher's exact test; $p < 0.06$). This effect was most pronounced for positive affect scores, as youth living in households not including relatives were more likely to have potentially problematic scores for positive affect when compared with those living with relatives (Fisher's exact test, $p = 0.003$). Two-thirds of youth

living in households without relatives had a potentially problematic positive affect score, while fewer than one-fifth had potentially problematic scores in perceived stress or GLS. The group of youth living in households whose composition did not include relatives included youth living in a shelter ($N = 3$) and youth living alone in multiroom apartments shared with non-relatives ($N = 6$). The proportion of youth with a potentially problematic NIHTB-EB summary score or with low resilience appeared similar in those living in shelters and those living with non-relatives outside of a shelter setting (data not shown), although these findings are exploratory given the small sample.

Interestingly, youth living with their parents appeared to have the highest likelihood of potentially problematic perceived stress scores. Youth who lived in households with non-parental relatives appeared somewhat less likely to have perceived stress at a potentially problematic level compared with those living with parents or in households without relatives, although this difference was not significant (Fisher's exact test=0.10).

3.3. Qualitative findings

We identified an overarching theme: *Redefining and mobilizing supports that promote well-being*, which described how youth identified and mobilized new sources of support and created social bonds within and outside the family, and how these influenced their well-being. Although most youth across the three groups voiced the importance of finding and relying on an adult figure as caretaker and advice-giver, key differences emerged across the three groups. The categories, themes, and codes are shown in the Supplementary Data Table (see supplementary material). We report aspects (themes) of lived experience unique to each group and how these aspects relate to UAM well-being during resettlement.

Overall, youth living with their parents (ORR group 1) described *that finding purpose in their parent's migration project, readjusting expectations about relationships with their parents, and reestablishing bonds* with them influenced their well-being and pursuit of goals. For youth living with non-parental relatives (ORR group 2), *finding new parental figures* among their extended family and their *desire to "become someone"* helped them become stronger and more resilient despite being separated from their nuclear family. In addition, the process of *balancing transnational family responsibilities with educational prospects* shaped their pursuit of goals and well-being. For youth living in households whose composition did not include family members (OR group 3), the *urgency to migrate and limited supports when living independently* hampered their well-being. Yet, *finding "mentors" in communal living and in the larger community in order to feel connected* helped them to be more resilient.

Table 3
Resilience (CYRM28) and NIH-Toolbox Emotional Battery Composite scores overall and by household composition group.

Score	All (n = 46) (median, min,max)		Living with parents (n = 15) (median, min,max)		Living with sibling or other relative (n = 22) (median, min,max)		Living without family (n = 9) (median, min,max)	
CYRM28 ^a	112 (50,139)		116 (74,134)		114 (50,139)		96 (90,128)	
Positive affect ^b	47 (23,75)		46 (30,69)		50 (32,75)		37 (23,50)	
General life satisfaction	53 (31,77)		55 (40,77)		56 (31,73)		48 (32,73)	
Perceived stress ^a	54 (29,71)		55 (40,69)		50 (29,71)		58 (43,63)	
	N	%	N	%	N	%	N	%
Resilience (CYRM28) (N = 46)								
Low	19	41.3%	5	33.3%	6	27.3%	8	88.9% ^e
High	27	58.7%	10	66.7%	16	72.7%	1	11.1%
Potentially problematic	N	%	N	%	N	%	N	%
NIHTB-EB summary scores								
Potentially problematic								
NIHTB-EB composite score ^c								
Any NIHTB-EB score ^d								
No scale	28	62.2%	9	60.0%	17	77.3%	3	33.3%
One scale	12	26.7%	6	40.0%	3	13.6%	3	33.3%
Two scales	5	11.1%	0	0.0%	2	9.1%	3	33.3%
General life satisfaction	3	6.7%	0	0.0%	2	9.1%	1	11.1%
Positive affect ^b	11	24.4%	1	6.7%	4	18.2%	6	66.7% ^f
Perceived stress ^a	8	17.8%	5	33.3%	1	4.5%	2	22.2%

^a Kruskal Wallis-H test=4.8; p = 0.09.

^b Kruskal Wallis-H test=8.2; p< 0.02.

^c Potentially problematic=age-adjusted T scores ≥1 SD from the mean; score >60 for perceived stress; <40 for general life satisfaction and positive affect^d Any emotional risk=a score in the potentially problematic range on any one of the 3 composite scores; Kruskal Wallis-H test=5.3; p<0.07 when comparing the three household composition groups; Fisher's exact test, p <0.06; when comparing youth living in households whose composition does not include family members with those living with family members.

^e Youth living in households not including relatives had higher likelihood of a low resilience score compared with those living with relatives; Fisher's exact test, p = 0.002.

^f Youth living in households not including relatives had higher likelihood of a potentially problematic score for positive affect compared with those living with relatives; Fisher's exact test, p = 0.003.No other scores had differences between household composition groups with p ≤ 0.10.

3.3.1. Living with parents

Finding purpose in their parents' migration project. Youth living with their parents described how having their parents in the U.S. was a major pull factor that brought a sense of security and excitement when they experienced violence and lack of opportunities in their home country. Most youth were eager to “be again” with their parents and described their migration as a project they shared with their parents.

I was threatened [that I had] to sell drugs. Then, I kept thinking about things that I didn't want to happen that could happen in life because I am not with my mom. That's why I made the decision. I wanted to be near my mom. Now I am. That is what always gives me happiness. (A. 18-year-old male from Honduras)

Youth also expressed the importance of finding their own purpose in the migration journey. Having a sense of agency and purpose about the decision helped them to balance autonomy with connectedness to their parents while maintaining pride in their identity and finding justification for their journey.

I would like for others to know that it's good to express yourself. Not be embarrassed about being an immigrant... That others also realize [like me] that if they immigrated from their country, it is because they have a purpose. Maybe [it's] to better themselves, have a good future, or protect their life. (B. 16-year-old female from Honduras)

Those few youth who described migration as mainly their parent's project described a lack of motivation and agency to migrate. “I was never ambitious [enough] or interested to come here. But I knew my mother could not leave the US.” The adaptation process was more troubled for these youth, as this same youth described:

When I lived there, one felt as if one was living really badly. Now, I think that it was good there, even though it's a poor country with lots of problems and gangs. There I could go out more freely. (C. 19-year-old female from Honduras)

Bonding with parents supports youth's pursuit of goals. Youth described how receiving support from their parents was something that parents “must do,” even if they had been away for years, because the parents had wanted to bring them.

My mom was the one who sent for me to come. So, she's my main support because I can count on her for anything. (D. 15-year-old male from Guatemala)

Despite the changes in family relations that occurred when parents migrate leaving their children behind, the responsibilities brought by family ties remained. Youth described how parents cared for them in the U.S., making certain they were clothed, ate well, went to school, and were healthy. “My mom is always making me eat. She always worries about my health.” (E. 18-year-old female from Guatemala). Youth also described how parents provide practical support and cover their basic needs but

also are available to give “good advice” as this youth explains, “they, out of all people, I have to follow, and I know that they give me good advice and they won’t ignore me”. (F. 15-year-old female from Honduras)

Parental support and effort empowered youth to focus strategically on achieving their goals.

I don’t plan on abandoning my mom because I know they are there for me and one day they’ll be older and less able and I’ll be there for them... I want to live a better life and although I’ll always remember my past, I’ll later be able to laugh and make a better life out of a bad one...I work wherever I am given a chance, ready to do what I’m told. If I have a boss, I will not disrespect him, I’ll pay attention and follow his instruction... I’ll work until I’ve learned [it all] ... and can find my own work so I can be the boss of others... (A. 18-year-old male from Honduras)

By meeting their basic needs, parents freed UAM to focus on their future goals, such as education. Younger migrant youth (mostly female) who resettled with their parents entered the U.S. school system earlier than other youth and described clear career plans (e.g., in nursing, medicine, architecture, law enforcement) for higher education (e.g., college) as their main motivation to migrate. Their parents’ practical support allowed them to focus on their education, although youth attending school also described mentors within the educational system as crucial to helping navigate aspects of life unfamiliar to their parents, such as the school system or planning for college.

Readjusting expectations about relationships with parents. At the same time, family reunification also came with its own challenges, including readjusting to new family rules, new relationships, and power dynamics.

It’s been challenging for me to get used to [my parents], but I know that I have a place [in their lives]. I turn to them, not [to]strangers, but to my parents. I have my two little sisters; now I’m the oldest, in Honduras I was the youngest...so now I have more obligations. Also, the way they teach things such as how to behave well. It’s all different from what I was taught in Honduras. That has also been difficult, but since I’m still a minor, I have to do what they say. (F. 15-year-old female from Honduras)

Reuniting with their parents sometimes required confronting their expectations. For some youth, that implied losing some independence, as they felt obliged to comply with new family rules. Some youth also expressed frustration at not being able to spend time with their parents, who worked long hours, leaving some youth feeling alone and isolated.

Here, you can’t spend time with your family because, most of the time they’re working. So, you have to be in the house all day (alone). (C. 19-year-old female from Honduras)

Overall, parental support and advice gave youth inner strength but having a good relationship with their parents also required flexibility and adaptation to new roles. Simultaneously, parental support was necessary for them to pursue their goals but youth also needed the bridging capital of school professionals to attain some goals.

3.3.2. Living with non-parental relatives

Family ties and desire to “become someone” help to cope with sadness. Youth living with non-parental relatives described the impact that separating from parental figures in their country of origin had on their emotional well-being. Most youth described feeling sad and lonely, even if they reunited with other relatives, like uncles or cousins. “When I first came, I missed my family a lot, I cried a lot.” (G. 19-year-old female from El Salvador). Youth coped by remaining in regular contact with their relatives in their home country to feel connected and supported while they transitioned to greater self-reliance.

When I know it’s something big, I tell my parents, but when it’s something I can solve myself, I don’t tell them. Before I called them every day. Now I call only twice a week. (G. 19-year-old female from El Salvador)

While becoming more independent from parents is a natural developmental process, for these youth the migration process accelerated the transition to self-sufficiency that seemed to start with the decision to migrate and the desire to “be someone important,” even if that meant leaving their parental figures behind. All three of these elements: the motivation to “outperform,” maintenance of transnational ties, and support from their extended family appear to be sources of strength.

New parental figures in the extended family. Having other relatives in the U.S. facilitated the process of becoming “someone” [important]. Youth explained how older brothers or uncles who migrated previously became caretakers “like parents,” providing housing to them, sustaining them economically or supporting their education.

(My supports are) a brother that has always taken care of me. He used to encourage me in El Salvador and my other brother is the one who supports me so that I can go to school. I consider [them] my parents here (H. 21-year-old male from Guatemala).

As above, older siblings often supported and pushed youth to accomplish what they themselves had not had the opportunity to do, such as finishing school or pursuing higher education.

I wanted to work in a Beauty Salon...in Honduras I used to straighten hair... [At first] my (older) sister wanted to find hair stylist jobs so the two of us could work together, but then (she said) it’s better that I just study, to prepare myself well because that will be more useful for me, more than any job...so now I just study. (I. 16-year-old female from Honduras)

These comments highlight how older siblings can take a protective, parental-like role with their younger siblings. Youth also described their siblings as their “friends” or confidants, introducing them to their own social network, facilitating their integration. Having a near-peer relative such as a sibling or a cousin who migrated earlier influenced youth choices and their adaptation process.

Balancing transnational family responsibilities with educational prospects. Youth who were the first in their nuclear family to migrate described the challenges of pursuing “dreams” of having an education or a more fulfilling job while being responsible for helping their family back home. Even when a U.S. relative provided housing and advice, youth often needed to contribute financially to their family in their country of origin. This responsibility heightened their need to become self-reliant and financially independent.

I wanna be working somewhere - to get money, just to buy my own stuff and help the family with the things they need. (J. 14-year-old male from El Salvador)

Nonetheless, for some youth transnational responsibilities were also perceived as beneficial, helping them to “be strong,” and to face the challenges of being in a new country. Knowing that they were helping their home-country family gave them strength and pride.

There are difficult moments in life, moments when you laugh, but also moments in which you’ll cry, will feel you are falling down. But one has to get up for our family, to give them and yourself a future. (G. 19-year-old female from El Salvador)

Other factors, including enjoying school and learning, having studied in their home country, and having adult mentors in CBOs or at school influenced youth’s motivation and choice to put their education first despite transnational responsibilities.

I want to keep helping my family, I have siblings who are studying, so I want to help them and my mother, but I want to pair this equally with my own education, to keep studying and to be able to have a higher education. Since I entered [the CBO], my advocate has taught me and explained the importance of preparing myself academically...Young people like me

come to meet our basic necessities and then when we meet these, it's like the most we can reach.... [But] I feel very fortunate because I know that I can go further and study. (K. 22-year-old male from Guatemala)

This youth, who lived with a supportive uncle, exemplified the process of being able to think beyond immediate needs as afforded when the appropriate support is available at school, at home, or in the CBOs.

3.3.3. Living in households whose composition does not include family members

Urgency to migrate. Most youth not living with family described a sense of urgency that pushed them to migrate despite knowing they would be alone in the U.S. *"The economic situation. I felt like at any moment I could die. I got desperate."* (L. 21-year-old male from Honduras). Sometimes their motivation was not necessarily to reach the U.S., but to leave their country to escape a precarious situation.

My plan wasn't to come to the United States, but rather to leave. Since it was easier to get here, I came here to see if I could make it. (M. 17-year-old male from Honduras)

These unplanned decisions reflected an unbearable reality and affected their well-being upon U.S. arrival. When UAM lacked a clear plan of what they would encounter and what do in the U.S., their fate depended in part on others – agencies or people – to help them navigate a new environment.

Limited supports when living independently limits youth possibilities. Youth living alone lacked the economic and practical support that youth living with relatives appeared to have: *"I don't have anyone."* Even when they had acquaintances, they sometimes felt alone. *"Even though there are many people here (in the U.S.), you feel alone."* (N. 21-year-old male from Mexico)

For those living independently, their goals included working to make a living and improving their English to find a better job. They had to become self-sufficient very quickly and that limited their possibilities of making long-term plans, as they had to focus on covering their basic needs. Indeed, these youth only gave vague answers and said they were uncertain when asked about their plans.

In addition, not having support from relatives aggravated the difficulties youth experienced because of their migratory status. Most youth in this group had expected to be able to work to sustain themselves and support their families back home. The barriers they faced in finding employment because of their immigration status contributed to their stress.

I migrated to help my family, my parents, and my brothers who are studying. But I'm still not allowed to work (due to pending migration case). (Looking worried) (O. 17-year-old male from Guatemala)

Finding mentors in communal living and in the community to feel connected. While the absence of family often brought loneliness and isolation, it also mobilized their need to find other adult figures who became important mentors or *"like family."*

At my job, there is a man who's older, Mexican, but he gives good advice. The same advice that my parents gave me. When we see each other, it's like having a family member. If you can't be with your own family, it's about the affection that can grow with other people. (H. 21-year-old male from Guatemala)

Youth also described how, despite *"being alone"* and often feeling lonely, friends from church, soccer, or staff at their shelter or CBOs had become their main sources of support when they needed help, indicating resourcefulness in finding connections and other people who could support them to navigate the challenges of migration.

My (ethnic group) friends have given me everything, clothes, food, money. (O. 17-year-old male from Guatemala)

In the absence of family, peers appear to fill an even more crucial role in youth's adaptation and well-being. Nonetheless, mobilizing these supports or finding other youth with whom to socialize was not always easy. At least two youth who lacked support in their home country also described not having anyone in NYC to support them if they were in need. In contrast, the structures in place in shelters and organized communal living provided youth with the practical and social supports they needed, as this youth explained:

My support here is the organization. Because I live with them. Whatever problem we have, they help us. With anything that could happen to me (N. 19-year-old female from El Salvador).

All youth in this group expressed the need to find mentors and peers who could support them and help them feel connected in the absence of family members. However, their specific living situation – whether living alone or in a communal arrangement – affected their access to social resources.

4. Discussion

The CAMINANDO study is the first to study resilience and emotional well-being in migrant youth from Latin America who migrated to the U.S. as UAM and were recruited through a community-partner setting without including parental participation or consent. Importantly, because we did not recruit in an educational setting, we are able to include youth who are not attending school. These factors allow us to include youth who have variable housing arrangements and social support networks.

Quantitative and qualitative results highlight similarities across groups in their migration experiences, supports, and well-being. Youth across groups were exposed to violence, came from households with limited financial resources, and expressed some desire to find better opportunities in the U.S., characteristics of UAM also described by prior literature (Goldberg, 2014; Lorenzen, 2017). In addition, across groups, youth highlighted the importance of finding support from adults and – for the group of youth who attend school – having supportive teachers and counselors who help them focus on their education, reaffirming the importance of bonding (Suarez-Orozco et al., 2001) and providing bridging capital (Raithelhuber, 2019) to support their well-being.

At the same time, this study contributes to prior work about Latin American UAM by identifying differences in the migration process, supports, and well-being associated with post-resettlement household composition. Our survey data showed that youth living without family post resettlement were more likely to have worked before adolescence in their home country and had missed more years of school before migrating, both indicators of lower socioeconomic status. Although most UAM desired a better future, youth living with parents were more explicit in their motivation to pursue higher education in the U.S., potentially influenced by a somewhat younger age of entry into the U.S. education system, their parents' having migrated before them, and the higher prevalence of females. Females were over-represented in this group, who may have higher educational aspirations than males (Hagelskamp et al., 2010), potentially fostering integration and social mobility (Schapiro et al., 2018).

In our data, emotional health and resilience also varied by post-resettlement household composition, and these may impact youth's later adaptation and development. Youth living without family showed lower positive affect and lower resilience than the other two groups. In contrast, youth living with non-parental relatives were more likely to have good friends and lower perceived stress, while youth living with parents had the highest likelihood of experiencing a problematic level of perceived stress. Youths' qualitative descriptions of their lived experiences suggest mechanisms potentially underlying these differences. For youth living with parents, their perception that they could rely on their parents to cover their basic needs and provide advice empowered them to focus on the goals that motivated them to migrate and to cope with

daily hassles, possibly enhancing their positive affect. Youth living with their siblings or other relatives saw them as parental figures and seemed to benefit from these relationships in navigating the challenges of a new country, establishing friendships through their siblings, and coping with the loss of what they left behind. Therefore, for these two groups, their U.S. families became their primary sources of support, providing the social bonding necessary to enable them to focus on their current and future goals, despite the challenges of readjusting to new family dynamics. Conversely, youth who left their family behind and did not live with relatives in the U.S. were more likely to express feeling lonely, in part because they lacked a caretaker. However, it is important to note that this group was small and heterogeneous. For example, youth living in shelters or communal living described finding support from staff and counselors who helped them forget their worries and enjoy themselves, both potential coping mechanisms (Cardoso, 2018). However, youth living without family often lacked an adult figure on whom to rely. They described how finding other youth like them through community-based activities or hobbies helped them emotionally and practically (e.g., by covering basic needs like clothing, food, or finding a lawyer). However, the process of becoming independent and self-reliant in the face of an uncertain future, while having limited adult assistance to build their social capital, may have contributed to reducing their resilience and positive affect, as observed in survey data.

Prior findings with migrant adolescents have identified parents as an important source of social capital protecting youth from substance abuse and externalizing behaviors (Raymond-Flesch et al., 2017; Garcia-Reid et al., 2015). Our work extends these findings to youth who migrated as UAM to the U.S. who, by definition, have suffered a rupture in their relationship with their parents. Our data also suggest that when youth themselves lack clear goals for migration, parental support may not suffice, making the adaptation more stressful and contributing to regrets about having migrated to the U.S.. Research with Latino families has also described the importance of near-peer relatives, such as siblings and cousins, in supporting adolescents in their education or pubertal changes (Flores, 2018; Updegraff et al., 2005). Our results also suggest that in stepwise migration situations older siblings may also assume a parental role. Siblings may facilitate extra-familial friendships, a crucial developmental process in adolescence that can be inhibited by discrimination or acculturative stress (Córdova and Cervantes, 2010). Our quantitative data are consistent with this finding, as youth living with non-parental relatives were far more likely to report having good friends.

A large body of research in Europe has documented the challenges experienced by UAM who do not have family ties in the receiving country. Consistent with this literature, our findings showed lower resilience and positive affect in this group and documented how the need to become independent while having only limited support appears to affect UAM well-being. Nonetheless, our quantitative data suggest that these youth experience similar levels of life satisfaction as youth living with parental or non-parental relatives. These discrepancies require further exploration. Life satisfaction is a protective factor for youth development and relates to cognitive evaluations of one's life (Matias-Carrelo et al., 2003). Therefore, it might be influenced by youth's expectations for their migration as a life project, a topic needing future study.

Our study has several limitations. First, it was based on a convenience sample, made necessary by the challenges of reaching this population, but reflecting the self-selection of those willing to share their experiences and possibly excluding more vulnerable youth who may be unwilling to participate. Therefore, our results should not be generalized beyond the population and groups studied. We have no means of knowing the representativeness of our sample of UAM. Second, the small sample size may have limited statistical power to detect differences between our three groups in quantitative analyses. Third, instruments had not been normed for these migrant youth specifically, although the CYRM had been partially developed in one of the predominating countries of

origin of study youth. Fourth, although we achieved data saturation and our sample was larger than prior studies of similar youth, it could still be considered small, especially at the group level. Fifth, we recruited youth in a megalopolis. Research in remote, rural, and less-diverse settings is necessary to document resettlement in different U.S. contexts. Sixth, we lack data reported by family members. Future research would benefit from including the perspective of relatives and communities. Seventh, our data may be subject to recall bias, though it is unlikely that such bias would differentially affect the three groups that we compare. Eighth, applying a mixed-methods approach may have limited the length of the qualitative portion, since time and energy had to be allocated to the quantitative component. However, respondents provided sufficiently rich responses to address the study aims and clarify quantitative findings across groups, and data saturation was achieved prior to study completion.

Our study also has considerable strengths. The use of a convenience sample allowed us to access a group that is rarely studied and about whom data are scarce. We were able to gain the trust of participating youth through a careful process of partnering closely with CBOs in a manner that was both feasible and ethical. The study sample produced a wealth of information for understanding youths' post-migration experiences and well-being, examine variations in well-being, and consider key differences between youth living in different post-resettlement household-composition settings. To our knowledge, this is the first study to explore the role of post-resettlement household composition in shaping the well-being of UAM in the U.S. In addition, the mixed-methods design allowed us to quantify potential differences in resilience and well-being between groups and identify possible explanations based on UAM's lived experiences. Results from this pilot study suggest areas for further study, including comparing the well-being and related experiences of UAM across different household compositions longitudinally in larger samples including youth in and out of the educational system.

5. Conclusion

The results of our U.S.-based study of UAM migrants from Latin America demonstrate that the majority of youth are resilient without potentially problematic emotional health, despite the challenges of their past exposures to violence and limited access to schooling. Potential predictors of future development such as emotional health, resilience, and social support structures vary by post-resettlement household composition. Resilience and psychological well-being could be negatively impacted in UAM when they lack adult support and face unpredictable environments, as is more frequent for those living without relatives. Recognizing such differences can permit more effective tailoring of community-based programs and resources to account for these differences and better meet the needs of UAM migrants, maximizing their later potential and mental health.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary materials

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