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Differentiating the Impact of Family and Friend Social Support for Single Mothers on Parenting and Internalizing Symptoms

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Research Paper

Differentiating the impact of family and friend social support for single mothers on parenting and internalizing symptoms

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ABSTRACT

There is growing interest in what helps parents maintain good parenting when they encounter stressors. The United States has the world's highest rate of single-parent households. These families often experience higher adversity and, in turn, mental distress. Supportive relationships are widely recognized as indispensable for healthy psychological well-being; however, the sources of support have often not been differentiated in research. The present study investigated the relative roles of family support and friend support in predicting single mothers' internalizing symptoms and parenting support. The sample included 200 single mothers from a Mid-west state recruited during Fall 2019. Hierarchical linear regressions found both family and friend support predicted more parenting support, whereas only friend support predicted fewer internalizing symptoms. In addition, family and friend support interacted in predicting internalizing symptoms. When friend support was high/sufficient, family support could augment friends' positive impact on single mothers' mental health. Latent profile analysis identified four profiles: *kinship network, friendship network, socially isolated*, and *widely connected*. The *widely connected* profile had the most optimal outcome. Both *socially isolated* and *kinship network* profiles were presented with unique risks. Taken together, our findings underscored the importance of friend support and the potential risk of only accessing family support. Implications for social support interventions for single mothers are discussed.

There are growing calls for researchers to focus on the well-being of primary caregivers – typically mothers – and what helps parents maintain good parenting when they are struggling with persistently high stress (Luthar and Eisenberg, 2017). Single-parent families are becoming increasingly common around the world (Chiu et al., 2018), and the United States. has the world's highest rate of children living in single-parent households (Pew Research Center, 2019). About 30% of America's families with children under 18 years old are single-parent families. Among single-parent families, 80% are headed by single mothers, including those who were divorced, widowed, or never married, with nearly a third living in poverty (U.S. Census Bureau, 2016). Research on single mothers has most often taken on a deficit-focused approach in demonstrating single mothers have lower socioeconomic status, poorer self-rated health and mental health, higher hospitalization, and mortality compared to partnered mothers and the general population (e.g., Liang et al., 2019; Murry et al., 2001; Weitoft et al., 2000). While providing valuable information, these studies failed to address the mechanism and contextual factors that impact single

mothers' well-being (Murry et al., 2001) or the strengths and resilience that many single-mother families demonstrate (Taylor and Conger, 2017).

Caregivers strongly benefit from feeling supported by others (Luthar and Ciciolla, 2015; Schiller et al., 2021). For many single mothers, support from family and friends may be especially salient given single mothers lack the support of a spousal relationship (Cairney et al., 2003; Nelson, 2000; Ontai et al., 2008). Compared to partnered mothers, single mothers are twice more likely to report internalizing symptoms (Liang et al., 2019), which can adversely impact parenting and their children's psychosocial development (Taylor and Conger, 2017; Waldfogel et al., 2010). Researchers have attributed a higher risk of internalizing symptoms in single mothers to lower levels of perceived social support (Cairney et al., 2003; Liang et al., 2019). However, the differential impact of support sources (e.g., family, friends, professionals) remains understudied and unclear (Schiller et al., 2021). Elucidating findings on family and friends as unique sources of social support can inform targeted policies and counseling interventions to enhance the

well-being of single mothers from a strength-based perspective (Kjell-strand and Harper, 2012; Taylor and Conger, 2017). This study aimed to advance the understanding of how social support impacts mental health among single mothers by providing among the first investigation into how family and friends may serve as distinct sources of social support from both variable-centered and person-centered perspectives.

1. Conceptualizing social support

Social support has unequivocal importance for social functioning and well-being across the life span (Gariépy et al., 2016). Whereas parental support is most important for children and adolescents, spouses are often viewed as the most important source of social support during adulthood, followed by family and then friends (Gariépy et al., 2016). In particular, perceived social support (i.e., subjective appraisal of the availability and adequacy of support network), in contrast to received social support (i.e., the quantity of social support received), has been more consistently linked to more optimal psychosocial outcomes (Haber et al., 2007). We use the shortened term *social support* henceforward to refer to perceived social support for brevity. Social support is conceptualized to provide overall benefits to recipients' well-being (i.e., the main effects model) and be activated when the recipients experience an exceeding amount of stress, also referred to as the buffering-effects model (Cohen et al., 2001). That is, individuals with higher levels of perceived support encounter fewer adverse circumstances and are more resilient to stressful situations when they occur.

In addition, although most research focused on the global perception of social support with regards to life in general, increasing attention has been given to domain-specific social support (e.g., general vs. sexuality specific support for sexuality minority youth; Sheets and Mohr, 2009). In the current study, we investigated how perceived social support from family and, separately from friends, was related to domain-specific support around parenting among single mothers given the salience of parenting responsibilities as a sole caregiver (Widan and Greeff, 2019). Moreover, grounded in the main effects theoretical model, we were interested in the impact of family and friend support on single mothers' internalizing symptoms.

2. Family and friend support among single mothers

Single mothers, by definition, receive no or limited spousal support and often rely on their family and friends for parenting duties and support beyond childrearing tasks (Cairney et al., 2003; Nelson, 2000; Ontai et al., 2008). Family and friends may compensate for spouse or partner (e.g., Manne and Glassman, 2000) in providing both instrumental support (e.g., having someone to help pick up the child) and emotional support (e.g., having someone to share parenting, work, or life stress with). Family support has been particularly well researched in African American single-mother families – with findings highlighting both the benefits for single mothers' mental health as well as negative interferences (Jones et al., 2007; Murry et al., 2001). Extended families, for example, may offer unsolicited advice or criticism on single mothers' parenting practices, thus causing additional parental distress Taylor (2015). Friend support has been less examined. Friend support tends to be studied together with one's overall social support, which was negatively related to internalizing symptoms (Cairney et al., 2003; Kotchick et al., 2005; McLoyd et al., 1994) as well as positively related to parenting behaviors and parent-child relationships (Kotchick et al., 2005; Lee et al., 2009).

Given the salience of single mothers' social support network without spouses, it is surprising that few research has thus far compared family and friends as distinct sources of support for single mothers (Taylor and Conger, 2017). Even when social support from family and friends were measured separately, they were often used as a combined score (e.g., Cairney et al., 2003; Kotchick et al., 2005). For the few studies in which both support were separately measured and examined, Woody and

Woody (2007) found family support, but not friend support, was related to effective parenting among low-income African American single mothers. Whereas Ward and Turner (2007) indicated friend support, but not family support, was inversely associated with receiving government service, the Temporary Assistance for Needy Families (TANF) program among single mothers in rural New England, indicating informal support from friends may compensate the needs for formal support. However, neither study specifically examined single mothers' mental health as outcomes. These gaps in research are particularly concerning as social support from family and friends is often diminished overall for single mothers compared to partnered mothers (Cairney et al., 2003; Harknett and Hartnett, 2011). The demands of a sole caregiver, for example, may limit single mothers' contact with friends in a social setting (Cairney et al., 2003). Thus, when friend support is low, single mothers may need to rely more on social support from their parents, siblings, or other extended family members (Cairney et al., 2003; McLanahan et al., 1981). Similarly, when family support is not available or relationships with their kinship network are unhealthy, single mothers may need to rely more on friends (Cook, 2012; McLanahan et al., 1981; Nelson, 2000). Hence, not only do family and friends provide compensatory roles for spouse and partner, support from family and friends may need to compensate for each other. This potential compensatory relationship between family and friend support has yet to be examined. Therefore, we examined the unique contribution as well as the interaction effects of family and friend support on single mothers' internalizing symptoms.

In addition to internalizing symptoms, another aim of the current study was to advance our understanding of how general social support from family and friends relates to domain-specific perceived support around parenting. Past quantitative studies on single mothers have only measured general social support (e.g., Cairney et al., 2003; Chiu et al., 2018) or domain-specific support around parenting (e.g., Liang et al., 2019; Ontai et al., 2008), assuming they are interchangeable constructs. However, research on social support in other populations has suggested that general social support may not capture, for example, domain-specific support for sexual minority youth (Sheets and Mohr, 2009). Although it is plausible here both family and friends could provide parenting support, meta-analytical evidence has also suggested family might be a more available source of support for caregivers' parental obligations (Gariépy et al., 2016). In contrast, friends may provide other support (e.g., emotional support in everyday life) beyond the domain of parenting (Luthar and Ciciolla, 2015).

3. The current study

The purpose of the current study was to examine the relative roles of family and friend support in predicting domain-specific parenting support and internalizing symptoms among single mothers. This study builds upon and extends available literature in multiple ways. First, we studied family and friends as distinct sources of support for single mothers and their potential interaction effects. Second, the link between general support from family and friends to parenting support was examined. Third, we used variable-centered and person-centered approaches to provide different perspectives for understanding psychological processes DiStefano (2012). A variable-centered perspective can disentangle the independent and interactive roles of family and friend support in predicting parenting support and internalizing symptoms. It was hypothesized that family and friends would positively predict parenting support and negatively predict internalizing symptoms. Predictions regarding their unique contributions to parenting support and internalizing symptoms and their interactional effect were unclear, given past studies have not yet examined family and friends as distinct sources of social support for single mothers' mental health and parenting support.

A person-centered perspective can further identify different types of single mothers in terms of profiles of family and friend support and compare these typologies on parenting support and internalizing

symptoms. Indeed, past qualitative findings (McLanahan et al., 1981; Widan and Greeff, 2019) suggested single mothers adopted different configurations of support networks, for example, a family of origin network (with few friends included) or a friends network (with few families included). We hypothesized that the profile with high levels of family and friend support would have the most adaptive outcome (i.e., the highest level of parenting support and the lowest level of internalizing symptoms). In contrast, profiles with reduced family and friend support would report lower levels of parenting support and higher levels of internalizing symptoms.

4. Method

4.1. Participants and procedure

Participants were drawn from a mixed-method longitudinal study [PI: Zoe Taylor; Purdue IRB #1906022308] of 200 single mothers in urban (79%) and rural (21%) locations in Indiana. The current study uses quantitative data from Wave 1. At Wave 1, mothers were recruited through university extension educators, social media advertisements, and community resources in Fall 2019. Mothers were eligible if they were (1) the head of household, residing in Indiana, and not cohabiting with a partner, (2) had at least one child under 18; (3) at least 20 years old, (4) and fluent in English. After eligibility was determined, mothers were sent an online consent and survey in English (approximately 45–60 min). Participants received a $20 gift card for completing the online survey. See additional study procedural details in Taylor et al. (2021).

The age of the participants ranged from 20 to 59 ($M = 36.74$, $SD = 8.02$). The majority of the participants were White (88%), which mirrors the racial demographics of Indiana, with an additional 5.5% Black, 3% Latina, 1% Asian, 2.5% Biracial. Single mother status was reported as never married (38%), divorced (54%), widowed (1.5%), and separated (6.5%). Eleven mothers (5.5%) had a child through adoption or IVF as a single woman. Participants had 1.74 children on average ($SD = 1.00$, range = 1–6). Mothers had children in early childhood (ages 0–5, 29%), middle childhood (ages 6–12, 26%), adolescence (ages 13–18, 18%), and mixed developmental stages (27%). The majority of mothers (73%) worked full time with income ranging from below $20 K (18.0%), $20 K to $30 K (22.0%), $30 K to $40 K (19.5%), $40 K to $50 K (18.5%), $50 K to $60 K (9.5%), $60 K to $70 K (5.5%), to above $70 K (7.0%). Mothers had a high school education (14%), some college (32.5%), college graduate (34%), or a master's degree or higher (19.5%). Participating mothers came from 46 of the 92 counties in Indiana.

4.2. Measures

4.2.1. Family and friend social support

The 12-item Multidimensional Scale of Perceived Social Support Scale (MSPSS; Zimet et al., 1988) was adapted to assess single mothers' perceived, general social support. Six parallel items were used to measure family support and friend support separately (e.g., "You can talk about your problems with your family/friends") on a 1 (*Not at all true*) to 5 (*Always true*) Likert-type scale. The original MSPSS also has a subscale to measure perceived social support from significant others. MSPSS has been widely used with strong reliability and validity in diverse samples (e.g., (Sheets and Mohr, 2009). Cronbach's alphas were 0.92 for the Family Support subscale and 0.93 for the Friend Supportsubscale.

4.2.2. Parenting support

Five items from the Oregon State University Policy Program (Ontai et al., 2008) were used to assess perceived domain-specific support around parenting. Single mothers evaluated these items (e.g., "I have someone to offer helpful advice or moral support around parenting") on a 1 (*Not at all*) to 5 (*Always*) Likert-type scale. The original scale demonstrated good internal consistency ($\alpha = 0.85$) and construct

validity with perceived parent confidence. Cronbach's alpha was 0.81 for the current study.

4.2.3. Internalizing symptoms

The Mini Mood and Anxiety Symptom Questionnaire (Mini-MASQ; Casillas and Clark, 2000) consists of four subscales (general distress/depression, general distress/anxiety, anhedonic depression, and anxious arousal). Mothers reported on their internalizing symptoms during the past seven days using 26 items rated on a 5-point Likert-type scale from 1 (*Not at all*) to 5 (*Everyday*). Twenty items were positively keyed (e.g., "Felt keyed up or on edge"), and six items were reversely keyed (e.g., "Felt like you had a lot to look forward to"). Positive items were reverse coded so that a higher score indicated higher levels of internalizing symptoms. The MASQ has been adapted to several short forms and demonstrated strong psychometric properties in assessing internalized symptoms among clinical and non-clinical populations (Casillas and Clark, 2000; Lin et al., 2014; Osman et al., 2011). Mean scores were calculated with a Cronbach alpha of 0.94.

4.2.4. Covariates

The following covariates were included for the regression model based upon past research indicating their relevance to maternal depression (e.g., Liang et al., 2019; Schiller et al., 2021): *Participants' Age* (1 = 20′s, 2 = 30′s, 3 = 40′s, 4 = 40′s); Income (1 = below $20 K, 2 = $20 K to $30 K, 3 = $30 K to $40 K, 4 = $40 K to $50 K, 5 = $50 K to $60 K, 6 = $60 K to $70 K, 7 = above $70 K; *Education* (1 = high school or less, 2 = some college, 3 = college graduate, 4 = graduate degree); *Race* (0 = ethnic-racial minority, 1 = White); *Number of Children* (range = 1 – 6); *Martial Status* (0 = divorced, separated, windowed, 1 = never married). *Enduring Vulnerabilities* (Kessler et al., 1997) was also included as a covariate, which measures childhood vulnerabilities with 7 items (e. g., "Was anyone in your family violent toward another family member?"). Binary items were rated on yes = 1 or no = 0. Sum scores were calculated ($M = 2.19$, $SD = 1.90$), with 54.5% mothers reported two or more vulnerabilities.

5. Results

5.1. Preliminary analyses

Means, standard deviations, and bivariate correlations between studied variables were reported in Table 1. Family support and friend support were correlated ($r = 0.33$). Both had a moderate and positive correlation with parenting support and a low and inverse correlation with internalizing symptoms. Among all the covariates, income and enduring vulnerabilities demonstrated the most consistent correlations — single mothers with higher annual income and less exposure to adversity during childhood reported higher levels of family support and friend support, higher parenting support, and lower levels of internalizing symptoms. In addition, single mothers with higher educational attainment reported higher levels of friend support.

5.2. Variable-centered approach: moderation analysis

Separate hierarchical regression analyses were performed for parenting support and internalizing symptoms. Mean-centered family and friend support were first entered, and then we added the interaction term of these two independent variables in Step 2. Regression slopes of significant interaction terms were plotted using predicted values for representative high (1 standard deviation above the mean) and low (1 standard deviation below the mean) family support.

As indicated in Table 2, the overall model for parenting support ($R^2 = 0.44$, $p < .001$) and the main effects for family support ($b = 0.20$, $\beta = 0.34$, $p < .001$) and friend support ($b = 0.37$, $\beta = 0.43$, $p < .001$) were statistically significant (controlling for the effects of age, income, education, race, number of children, marital status, and enduring

Table 1

Means, Standard Deviations, and Bivariate Correlations for Studied Variables ($N = 200$).

	1	2	3	4	5	6	7	8	9	10	11
1. Family Support	–										
2. Friend support	0.33**	–									
3. Parenting Support	0.49**	0.57**	–								
4. Internalizing	0.16*	0.26**	0.21**	–							
5. Age	0.04	0.11	0.14	0.11	–						
6. Income	0.20**	0.17*	0.21**	0.35**	0.40**	–					
7. Education	0.13	0.21**	0.23**	0.09	0.40**	0.49**	–				
8. Race	0.16*	0.01	0.04	0.05	<0.01	0.03	0.08	–			
9. Child Number	0.10	0.01	0.05	0.08	0.15*	0.04	0.12	0.07	–		
10. Marital Status	0.09	0.10	0.11	0.01	0.27**	0.04	0.16*	0.03	0.17*	–	
11. Vulnerability	0.38**	0.28**	0.30**	0.16*	0.18*	0.20**	0.20**	0.08	0.02	0.12	–
Mean	3.31	3.36	3.53	2.26	2.25	3.24	2.59	0.88	1.74	.38	2.19
SD	1.08	1.08	0.95	0.69	0.83	1.75	0.96	0.33	1.00	.49	1.90

Note. SD = Standard deviation. * $p < 0.05$. ** $p < 0.01$.

Table 2

Hierarchical multiple regression analyses the interaction effects of family and friends social support on parenting support and internalizing symptoms among single mothers ($N = 200$).

DV	Parenting Support								Internalizing Symptoms							
	Step 1 R^2 =0.44, $p < .001$				Step 2 R^2=0.45, $\Delta R^2 = 0.01$, $p < .001$				Step 1 R^2 =0.19, $p < .001$				Step 2 R^2=0.23, $\Delta R^2 = 0.04$, $p < .001$			
IV	B	SE	β	*p*	B	SE	β	*p*	B	SE	β	*p*	B	SE	β	*p*
Age	0.05	0.07	0.04	.53	0.05	0.07	0.05	.47	0.02	0.06	0.03	.72	0.03	0.06	0.04	.62
Income	0.00	0.04	0.01	.91	0.00	0.04	0.01	.90	0.15	0.03	0.37	<0.001	0.15	0.03	0.37	<0.001
Education	0.06	0.07	0.06	.38	0.06	0.07	0.06	.33	0.09	0.06	0.12	.12	0.10	0.06	0.13	.09
Race	0.28	0.16	0.10	.09	0.26	0.16	0.09	.11	0.13	0.14	0.06	.34	0.16	0.14	0.08	.26
Child number	0.01	0.05	0.01	.91	0.01	0.05	0.01	.88	0.07	0.05	0.10	.14	0.07	0.05	0.11	.12
Marital status	0.03	0.11	0.01	.81	0.02	0.11	0.01	.83	0.02	0.10	0.02	.80	0.02	0.10	0.01	.84
Vulnerability	0.02	0.03	0.04	.50	0.02	0.03	0.04	.53	0.01	0.03	0.03	.66	0.01	0.03	0.04	.61
Family support	0.29	0.06	0.34	<0.001	0.30	0.05	0.34	<0.001	0.03	0.05	0.04	.57	0.02	0.05	0.04	.62
Friend support	0.37	0.05	0.43	<0.001	0.35	0.05	0.40	<0.001	0.13	0.05	0.21	<0.001	0.16	0.05	0.25	<0.001
Interaction					0.08	0.04	0.11	.045					0.11	0.04	0.19	.001

Note. B = unstandardized coefficient. SE = standardized error. β = standardized coefficient. IV = independent variable. DV = dependent variable. Interaction = family support × friend support.

vulnerabilities). Although the interaction term reached a statistical significance ($p = .04$), the low ΔR^2 (< 0.03; Cohen, 2013) indicated the interaction lacked practical significance. The simple slope analyses (Fig. 1A) demonstrated within one standard deviation of friend support, higher family support consistently predicted higher parenting support, corroborating the lack of meaningful interaction effect. In fact, only when friend support was very high (above 1.6 standard deviations), the simple slope between family support and parenting support changed to non-significance.

In contrast, the overall model for internalizing symptoms ($R^2 = 0.19$, $p < .001$) and the main effects for friend support ($b = 0.13$, $\beta = 0.21$, $p < .001$), but not family support ($b = 0.03$, $\beta = 0.04$, $p = .57$), were statistically significant. Among the controlling variables, income was the only significant covariate ($b = 0.15$, $\beta = 0.37$, $p < .001$). The interaction effect was also significant ($R^2 = 0.23$, $\Delta R^2 = 0.04$), $p = .001$, which was plotted in Fig. 1B. Simple slope analyses indicated that the slope for family support on internalizing symptoms was significantly different from zero when the conditional value for the friend support was high ($b = 0.14$, $\beta = 0.21$, $p = .02$), but it was not significantly different from zero when the conditional value for friend support was low ($b = 0.09$, $\beta = 0.14$, $p = .12$). Given some prior studies (e.g., Mallinckrodt et al., 2012) suggested a curvilinear relationship might exist between social support and psychological adjustment (i.e., excessive social support may be detrimental), we ran a sensitivity analysis with two added quadratic terms of family and friend support. Neither of the quadratic terms was significant, and only the parsimonious model without higher degree terms was presented.

5.3. Person-centered approach: latent profile analysis (LPA)

We conducted a latent profile analysis in *Mplus* to identify unobserved profiles of family and friend support. We estimated models with one to eight classes. Criteria for judging the adequacy of the selected profile (Masyn, 2013; Nylund et al., 2007), including Akaike information criteria (AIC), the Bayesian information criteria (BIC), and the adjusted BIC (with smaller numbers indicate better model fit), bootstrap likelihood ratio test (BLRT; a significant *p*-value indicates significant improvement over the model with one fewer profile), entropy (values closer to 1 indicate fewer classification errors), and sufficient profile sizes (minimum 5% of sample size per class), were presented in Supplemental Table 1. We selected a four-class solution. Although there were slight improvements in model fit after four classes, the addition of these profiles created less than 5% categories and did not yield meaningful interpretative values.

The first profile (*kinship network*), which was estimated to comprise 27.5% of the sample, endorsed high family support and low-average friend support. The second profile (*friendship network*), including 18.5% of the sample, endorsed low family support and high friend support. The third and smallest profile (*socially isolated*) accounted for 11.5% of the sample. This profile was characterized by both low family support and low friend support. The fourth and the largest profile class (*widely connected*), which was estimated to account for 42.5% of the sample, indicated high family support and high friend support (see Fig. 2). Most of the interclass distances (or Cohen's *d*) were large in effect size (>0.80; see Supplemental Table 2), further corroborating the validity of the LPA results (Masyn, 2013).

We further examined how each profile related to parenting support and internalizing symptoms using the 3-step approach in *Mplus*, which
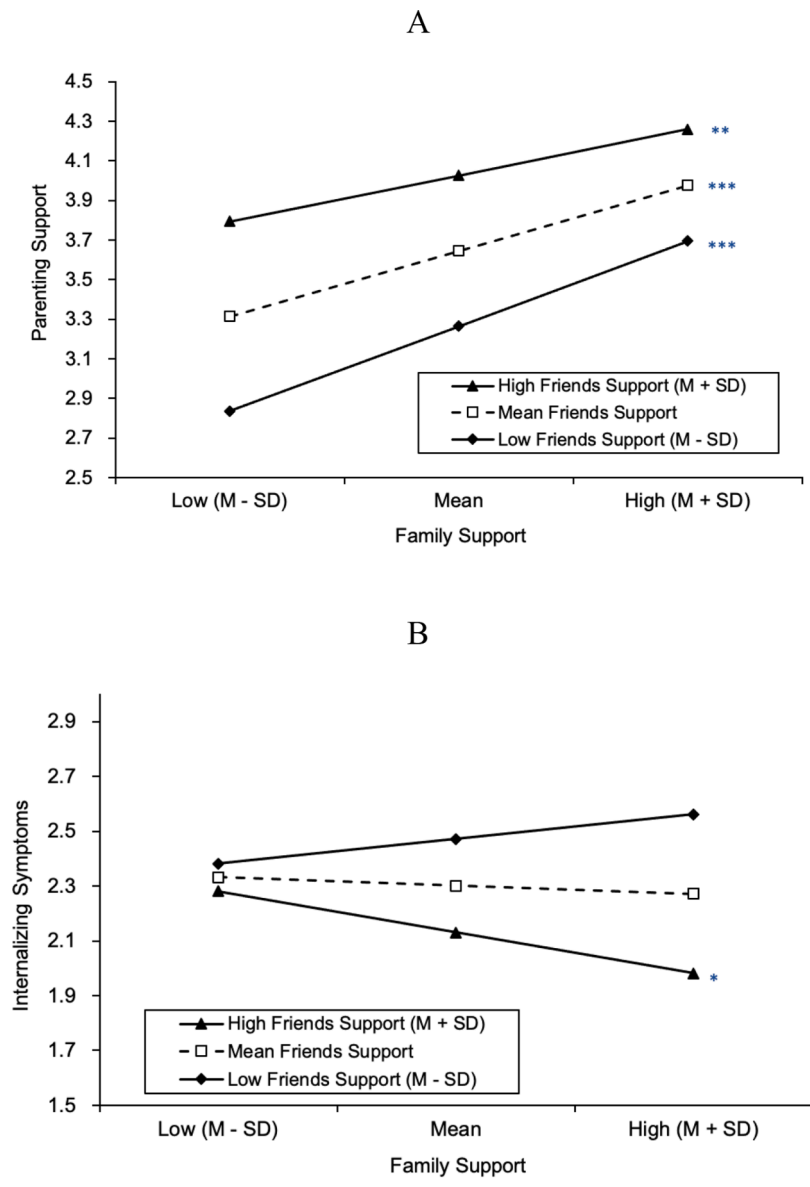
A

B

Fig. 1. Simple slopes for depressive symptoms among single mothers ($N = 200$)

Note. $* p < 0.05.$ $** p < 0.01.$ $*** p < 0.001.$

takes account of the measurement error in the most likely class in the model estimation. Means for each outcome variable by class were estimated and then compared pairwise (Table 3). Single mothers from the widely connected profile indicated the highest level of parenting support, followed by kinship network profile and friendship network profile, while the socially isolated profile reported the lowest level of parenting support. In contrast, the kinship network profile indicated a higher level of internalizing symptoms than the three other profiles. The widely connected profile displayed a lower level of internalizing symptoms than the kinship and the socially isolated profile.

As a post-hoc analysis to elucidate potential latent profile predictors, we also included the nine covariates in the 3-step approach in *Mplus*. The multinomial logistic regressions (Supplemental Table 3) indicated five out of 54 odd ratios were significant. White single mothers were less likely than racial minority single mothers to be in the friendship network profile as compared to the widely connected profile ($p < .001$) or the socially isolated profile ($p = .02$). Single mothers with higher income ($p = .046$) or higher education ($p < .001$) were less likely to be in the socially isolated profile compared to the widely connected profile. Lastly, single mothers who were never married were less likely than divorced,

separated, or widowed single mothers to be in the kinship network profile compared to the socially isolated profile.

6. Discussion

To the best of our knowledge, we provided the first study to elucidate the relative roles of family and friend support among single mothers in predicting domain-specific parenting support and internalizing symptoms. Variable-centered and person-centered analyses were utilized to provide two different vantage points for exploring this issue. In the variable-centered analyses, both family and friend support positively predicted parenting support, while only friend support negatively predicted internalizing symptoms. In addition, family and friend support synergistically interacted in predicting internalizing symptoms. The person-centered analysis identified four profiles: kinship network, friendship network, socially isolated, and widely connected. The widely connected profile had the most optimal outcome. Both socially isolated and kinship network profiles were presented with unique risks.

Single mothers with higher levels of friend support reported lower levels of internalizing symptoms. In contrast, family support was not
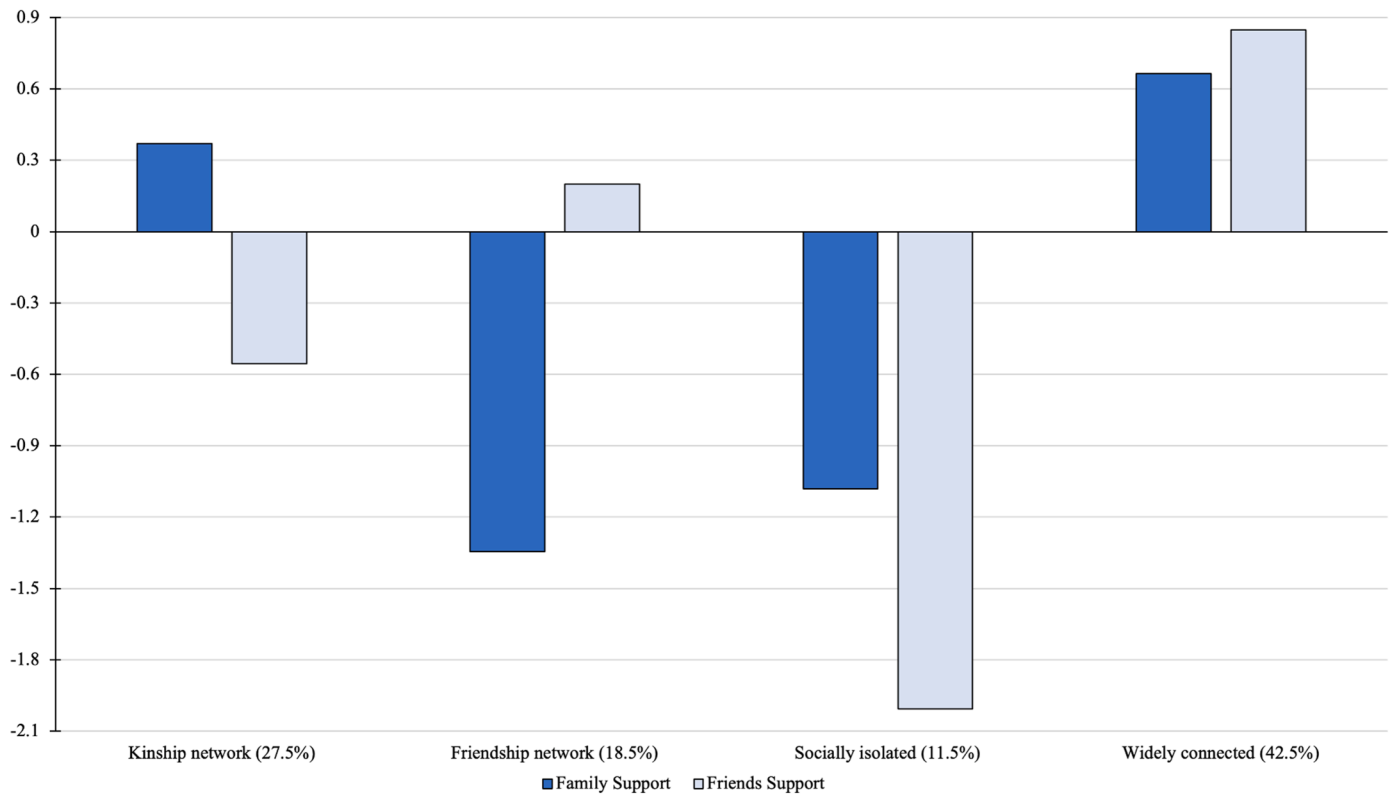
Fig. 2. Latent profiles for the mean-centered four-class solution ($N = 200$).

Table 3
Means, standard deviations, and cross-profile comparisons ($N = 200$).

	Profile 1 (27.5%)	Profile 2 (18.5%)	Profile 3 (11.5%)	Profile 4 (42.5%)	p	Pairwise comparison
Family support	3.68 (0.13)	1.97 (0.17)	2.23 (0.18)	3.98 (0.10)	< 0.001	4 > 1 > (2, 3)
Friend support	2.81 (0.14)	3.56 (0.15)	1.35 (0.10)	4.21 (0.08)	< 0.001	4 > 2 > 1 > 3
Parenting support	3.47 (0.13)	3.11 (0.19)	2.29 (0.19)	4.10 (0.08)	< 0.001	4 > (1, 2) >3
Internalizing symptoms	2.77 (0.15)	2.27 (0.14)	2.32 (0.15)	1.87 (0.16)	< 0.001	1 > (3, 2, 4)
						3 > 4

related to internalizing symptoms. This finding is inconsistent with our hypothesis regarding the central roles both family and friends would play to support single mothers' overall well-being. At the same time, it may not be entirely surprising, given literature among African American single mothers has suggested support from family members may come with additional costs such as emotional interference or control (Murry et al., 2001; Taylor and Conger, 2017). Our findings indicate this phenomenon may also be valid for a predominantly White sample, for whom the additional costs associated with family support may offset its benefits for single mothers' well-being. In contrast, friends may provide critical emotional support central to mothers' personal well-being (Luthar and Ciciolla, 2015), which has been particularly salient for single mothers who made connections with other single mothers Nelson (2000). Lastly, we found only when friend support was high/sufficient (0.80 standard deviation above the mean) can family support begin to augment (Cohen et al., 2014) friends' positive impact on single mothers' mental health. Thus, family and friends did not appear to compensate for each other. Friends may be an irreplaceable source of support for recourse for single mothers. Taken together, these set of findings underscored the importance of friends vis-à-vis family in supporting single mothers' well-being.

Both family and friend support significantly predicted higher levels of parenting support, suggesting general social support from family and friends may reasonably capture domain-specific parenting support. This

aligns with qualitative findings on single mothers who described the nature of their social support often involved with their parenting duties (McLanahan et al., 1981; Nelson, 2000). Additionally, we did not find a buffering (or augmentation) interaction, suggesting the effects of family and friends may be additive in nature as sources for parenting support (Cohen et al., 2014). However, it remains to be investigated if domain-specific support will have more predictive power than domain-general support with regards to domain-specific outcomes (Sheets and Mohr, 2009). In this case, parenting support may be a potential mediator through which family and friend support can influence parenting self-efficacy or parenting behaviors (e.g., Lee et al., 2009).

In the person-centered analysis, the four profiles that emerged support the notion that single mothers rely on different support network structures (McLanahan et al., 1981; Widan and Greeff, 2019). Instead of characterizing that all single mothers have reduced social support, our person-centered approach uniquely identified three profiles that were lower in family support, friend support, or both. It is worth noting in our sample, the largest profile (42.5%) emerged was characterized by high levels of family and friend support, highlighting the resilience among a large subset of single mothers in utilizing their informal support network.

As anticipated, the widely connected profile had the most parenting support. In contrast, the socially isolated profile had the lowest level of parenting support, with kinship or friendship networks having a similar

and medium level of parenting support. These results corroborate the findings from our variable-centered approach in suggesting the additive nature of family and friend support – thus, the more sources of support single mothers connect with, the stronger they will be supported in their parenting. Surprisingly, in terms of the internalizing symptoms, the widely connected profile and friendship network did not differ; and kinship network, rather than socially isolated network, was presented with the most internalizing symptoms. Thus, these results not only accord with our earlier variable-centered findings that emphasize the relative importance of friend support, but they may also imply that from a person-centered perspective, single mothers who rely on family members as the primary source of support may be at risk for internalizing symptoms. Again, it is not family is always harmful per se. Still, perhaps when single mothers *only* have family, their personhood may be reduced to motherhood, which renders them vulnerable to stress (Luthar and Ciciolla, 2015).

Lastly, our results point to intriguing findings regarding how demographic covariates relate to social support and internalizing symptoms among single mothers. Both variable-centered and person-centered analyses suggest higher SES (e.g., income and education) was overall associated with higher levels of family support, friend support, parenting support, and lower levels of internalizing symptoms, which is generally in alignment with the literature that depicts SES as a robust social determinant of health (Almeida et al., 2009; Lorant et al., 2003). Our findings regarding racial differences were less conclusive. Compared to ethnic-racial minority single mothers, White single mothers were more likely to be in the widely connected profile than friendship network profile; they were also more likely to be in the socially isolated profile compared to the friendship network profile. However, we collapsed all racial minority single mothers into one category due to the small subsample size, which may fail to capture more nuanced racial differences. Given the higher ratio of Black single mothers compared to other racial groups, empirical studies have primarily drawn from Black (and low-income) single mothers that highlighted the salient role of family support (Jones et al., 2007; Murry et al., 2001). Similarly, it has been argued that given collectivism and family values are emphasized in ethnic-racial minority communities (French et al., 2020), single mothers of color may have larger extended family networks and social support within their community network compared to White single mothers (Almeida et al., 2009). However, drawing from a large, diverse sample of urban parents, ethnic-racial minority parents did not appear to have stronger family support; Black, Hispanic, and Asian American parents all endorsed lower levels of friend support than White parents, after controlling for other demographics (Almeida et al., 2009). Future studies should continue to investigate these possible disparities and their underlying mechanisms.

6.1. Limitations

Several limitations should be considered in interpreting the findings. Our cross-sectional data limited causal inferences since we cannot rule out, for example, that single mothers with more internalizing symptoms might be less likely to seek out friends' social support. Longitudinal evidence suggested the bidirectional relations between social support and internalizing symptoms may also depend on the sources of social support (Racine et al., 2019; Ren et al., 2018). Although our sample was largely representative of the U.S. single mother population in terms of socioeconomic diversity,[1] participants were predominantly White (consistent with Indiana's population, 88.7% White). Thus, generalizations to the broader U.S. and certainly global single mother populations

need to be made with caution. Lastly, although we have advanced past research on single mothers' social support by studying the distinct influence of family and friends, this line of study continues to be dynamic and evolving. In addition to the main effects model, future research can continue to explore if other models may better explain the mechanisms of social support among single mothers (Cohen et al., 2001). Inclusion of formal support (i.e., services provided by professionals) in our measurement and more precision in assessing sources of support (e.g., support from other single mothers) may also paint a more comprehensive picture of single mothers' social support network. Social support from nonresident fathers (when applicable) is also important to study since financial and instrumental support seems to particularly benefit maternal and child well-being (Choi and Pyun, 2014; Jackson et al., 2013).

6.2. Implications for counseling and healthcare

Although more research is needed to replicate these findings from our study, several implications for mental health practice can be proffered when considering these results. First, interventions and preventions with highly stressed families have often focused on altering parenting skills or child behaviors but do not explicitly or directly target parental well-being (Luthar and Eisenberg, 2017; Zhou et al., 2021). Focusing on improving single mothers' well-being, such as bolstering their social support, is expected to contribute positively to their parenting behaviors, parent-child relations, and their children's adjustment (Taylor and Conger, 2017). Rather than universally prescribing social support for all single mothers, our findings highlight more clinical precisions are needed. Specifically, social support from family and friends should be balanced. Clinicians may want to be particularly cognizant of the potential harm for single mothers' well-being to rely solely on family support, even when they receive adequate parenting support. Single mothers are first and foremost humans, and their well-being should not be reduced to their (single) motherhood. In addition, more precisions are needed to target subpopulations of single mothers instead of assuming all single mothers have insufficient social support. The sizable subsample of the widely connected profile highlights the resilience of single mothers in connecting with their social support network. Lastly, considering the salient role of friends on both parenting support and internalizing symptoms, social support groups for single mothers may be a promising clinical intervention as it harnesses peer/friend support from a strength-based approach (Lipman and Boyle, 2005; Taylor and Conger, 2017). Several social support interventions have indicated preliminary efficacy in reducing parents' internalizing symptoms and children's behavioral problems and increasing parents' self-efficacy and satisfaction (e.g., (Chesak et al., 2020; Stuttard et al., 2014). More broadly speaking, social support intervention can be a potentially low-cost, scalable group intervention for diverse clinical and non-clinical populations, including single mothers (Dam et al., 2016; Wang et al., 2018).

7. Conclusion

This study highlights the need to examine different sources of social support for single mothers to understand the heterogeneity within single mothers. Overall results suggest although both family and friends are important sources of parenting support for single mothers, family and friend support may have distinct functions for single mothers' mental health. There are unique risks for depression among single mothers who only access family support, and family support can augment the benefits of friend support only when friend support is high. Thus, future research would benefit more from nuanced approaches to examine the dynamics by which family and friend support can benefit or deteriorate single mothers' mental health.

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[1] U.S. Census statistics estimate that 42.6% of single mothers have never been married (our sample had 38%), 53.6% have one child (55% of our sample had one child), and 29.2% of single mothers live in poverty (18% of our sample had incomes below $20,000 and 40% had incomes less than $30,000).

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Declaration of Competing interests

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.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jadr.2022.100319.

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