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"Just Because I'm an Only Child Doesn't Mean I Can't Have Siblings:" Psychological Kinship within Social Support Networks

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"JUST BECAUSE I'M AN ONLY CHILD DOESN'T MEAN I CAN'T HAVE SIBLINGS:" PSYCHOLOGICAL KINSHIP WITHIN SOCIAL SUPPORT NETWORKS

by

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Abstract

Pulling from the foundations of research on social support and resilience indicating that those who receive extensive social support are more resilient, this research, consisting of two studies, primarily examined the differences between individuals who are only children and individuals who have siblings in their formation of social support networks. While it is true that only children inherently have less immediate kin available, this research explored the formation of relationships in which non-kin come to be psychologically considered as kin, or psychological kinship. In Study 1, qualitative interviews were conducted in order to develop a working Kinship scale. Study 2, an online study conducted with 480 English-speaking adults, assessed self-reported resilience, social support, and experiences of psychological kinship. Contrary to original hypotheses, results indicated that while only children did not match people with siblings in their levels of social support and resilience, they did report experiencing equal amounts of psychological kinship. Overall, psychological kin relationships appear to be an important aspect of social support networks and therefore meaningfully contribute to one's resiliency.

"I came up with this one thing
And I don't believe I'm wrong
That nobody,
But nobody
Can make it out here alone."
-- Excerpt from "Alone" by Dr. Maya Angelou (1994)

"Alone" is a state, but it is also a feeling. And so it is true that most states of being are defined from within the self and therefore cannot be separated from emotion and perspective. It is this state, and the intense emotion associated with it, that Dr. Maya Angelou discusses in her poem "Alone." Her words do not only resonate emotionally and artistically. From a psychological perspective, her words can also be taken quite literally.

Despite the importance of independence and self-reliance, it is well established within the psychological literature that people need people. According to Maslow's (1958) hierarchy of needs, the need for affiliation comes before self-actualization, or self-understanding, and therefore before complete identity formation. For the majority of human beings, the solution to this need for affiliation lies partly within family relationships, particularly with siblings, who can be depended on for support throughout one's lifetime. However, there are individuals whose family structures do not include a sibling— "only children."

Within popular culture, the subject of 'being an only-child' is approached with varied, yet normally stigmatized analysis. Only children have been vilified as selfish and uncooperative, yet they have also been hailed as more intelligent and independent than children with siblings (Milevsky, 2015, June 10; Sandler, 2013, June 8). Considering that the percentage of childbearing women in the United States who have only children has increased from 10% in 1976 to 22% in 2014 (Pew Research Center, 2015a), the question of how only children form their social support networks becomes especially salient. With this increasing number of only-

children in industrialized countries, including as many as 16 million households in the United States (Vespa, Lewis, & Kreider, 2013), many parents and experts alike seem to want to know the 'right' answer about whether or not only children are doomed or advantaged. Be that as it may, when viewed objectively, it seems as if many of these experts may be looking for an answer that does not exist, creating a false dichotomy between two groups that are ultimately more similar than different.

There are numerous individual differences including socio-economic status, gender, and family environment that render true evaluation of these broad disparities between two variable groups nearly impossible. Instead, it would be beneficial for researchers to investigate the specific mechanisms by which only children and individuals with siblings turn out to be more similar than different. In an effort to focus on these mechanisms, the proposed research explores whether only children experience similar levels of social support as individuals with siblings as a result of relationships formed outside the biological/legal family structure. Consequently, this research also explores the implications of the presence, or lack thereof, of a robust social support network on a person's level of resilience to life adversity.

Review of the Literature

Decades of research have attempted to discern whether only children differ from children with siblings in distinctly adaptive or maladaptive ways, yet most research seems to find age-specific or inconclusive evidence at best (Falbo, 2012; Trent & Spitze, 2011). A study done by Kitzmann, Cohen, and Lockwood (2002) collected data related to sibling status and social competence from 139 children in an elementary school setting, and found that only children had similar numbers of close, quality friendships, but were generally less liked by their classmates.

Furthermore, these only children were cited to be more likely subjects of victimization, but also more aggressive toward their peers. However, it seems odd that within this sample only children would simultaneously be both victims and aggressors. Therefore, it is possible that the sample of only children from one specific elementary school in a university lab-school setting is not sufficiently representative of the larger population. In addition, Bobbitt-Zehere and Downey (2010) examined a sample of approximately 13,500 adolescents and found that any social skills deficits observed in early childhood among only children resolve before adolescence.

Some of the most extensive research on only children in terms of social adjustment comes from Toni Falbo's three large-scale meta-analyses of differences between only children and those who have siblings. Her first project (Falbo & Polit, 1986) examined the results of 115 studies, examining outcomes within five different categories: achievement, adjustment, character, intelligence, and sociability. Within this study, Falbo and Polit analyzed 39 studies of adjustment, 30 studies of sociability, and 26 studies of character that compared only children to non-only children. They found that in terms of adjustment and sociability, the two groups were not significantly different. Moreover, Falbo and Polit found that regardless of sibling status, only children are just as likely to have a desirable character as individuals with siblings, supporting the notion that positioning only children in a distinct category, or as a distinct type of personality, from individuals with siblings only creates a false dichotomy and furthers societal stigmatization. This finding was also reinforced by Trent and Spitze (2011) who noted that while only children saw relatives fewer times a year, this was the sole area in which only children significantly differed across age groups from individuals with siblings in terms of frequency and type of social activities. This trend can easily be explained by the fact that only children inherently have fewer traditionally defined relatives than individuals who have siblings.

Despite the overall similarity of only children and those with siblings, it does appear that only children are advantaged in a few areas. In a meta-analysis of 43 studies, Falbo and Polit (1986) reported that only children generally received better grades and achieved higher levels of education than non-only children. In addition, out of 16 personality characteristics, Polit and Falbo (1987) reported that only children had significantly higher levels on only two, achievement motivation and self-esteem. Furthermore, looking at literature on the influences of birth order and family size in relation to individual intelligence, Polit and Falbo (1988) found that only children were advantaged in their verbal abilities. However, these data must be considered in light of research showing that mothers with more education tend to have fewer children (Pew Research Center, 2015b). Therefore, these trends could be the result of a larger allocation of family resources when there is a single child and a highly educated mother, or the result of more focused, quality parent attention and interaction (Milevsky, 2015, June 10). Additionally, Falbo (2012) reported that these effect sizes were not significantly different from zero when comparing only children to firstborn children or people from two-child families. Therefore, these differences arise exclusively when comparing only children to children from relatively larger families, and could be the result of many other individual differences that are not accounted for in this literature, such as socio-economic status or family environment.

Conceptual Research Origins

The current literature on the connections between extended family relationships, social support and resilience, and on the differences in these areas between people who are only children and those who are not, all exists within fairly separate literatures. Therefore, these topics will be examined individually before being synthesized within this investigation.

Ultimately, the underlying question of this research is what motivates humans to cultivate, and at times seek out, companionate relationship formation. When investigating any form of motivation within the human species, it is best to turn toward the theories of the foundational psychologist Abraham Maslow and his hierarchy of needs. Maslow established what he termed the "hierarchy of needs" in the 1940's and 1950's in an effort to describe a complete theory of human motivation. This hierarchy includes the satisfaction of basic physiological, safety, love and belongingness, esteem, and self-actualization needs (Maslow, 1958). Maslow asserted that each of these needs is contingent upon the other in the order presented, such that if one's basic physiological needs are not being met, then it will be impossible for that person to focus on fulfilling his or her safety needs. This tenet remains true as one moves up the hierarchy. The third level of this hierarchy is where the majority of humans' life stressors originate (Maslow, 1958). Maslow posited that when people's needs for affiliation, love, and belongingness are not met, the result is often maladjustment and even psychopathology. While Maslow's theory may not account for every individual instance of human struggle, it is a useful and necessary foundational framework through which to view human motivation. It is at this third level of Malow's hierarchy that this research has its origins, as it attempts to answer the question of how individuals who are only children fulfill their love and belongingness needs in the absence of an extensive biological kin network.

Kinship

In an effort to account for how people, especially only children, fulfill Maslow's hierarchy, it is beneficial to consider the definition of kinship. Traditionally, kinship is thought of as biological relatedness, centered on incest avoidance and nepotism for the sake of reproducing

healthy offspring (Ackerman, Kenrick, & Schaller, 2007). This evolutionary approach to kinship as a form of genetic propagation often exists within a family unit and is confirmed through legal agreements such as marriage and adoption. In opposition to this approach, Bailey (1988) conceptualized kinship as a way in which humans organize their social worlds. Specifically, in addition to traditional kinship defined in terms of genetic relatedness, Bailey (1988; Bailey & Nava 1989) defined what he terms "psychological kinship" as treating and considering another person as family, regardless of genetic or legal relatedness. This conceptualization of valuing close others "as if" they were family emphasizes the perceptual, psychological nature of how individuals go about defining their relationships, expanding the possibilities of what can constitute family beyond societal norms. This conceptualization of psychological kinship also helps to alleviate the problem that Fischer (1982) described in his research related to the vagueness of the term "friend." Fischer noted that it appears to be an arbitrary term assigned to a number of people when no other societal label suits them better. With the implementation of psychological kinship, it is possible to better focus on the quality and types of relationships people rely upon for various support functions.

Ackerman et al. (2007) further explored the psychological parameters of kinship, but within an evolutionary perspective. Their studies required participants to think about people who were not genetically related to them in terms of sexual contact, and later, in terms of interpersonal intimacy. Their results demonstrated that women more than men associated genetically unrelated "close friends" as kin. Specifically, when comparing friends to strangers, women exhibited high levels of disgust when thinking about having sexual contact with close friends and also made more benevolent attributions associated with kinship towards them. In juxtaposition, men were more likely to treat friends similarly to strangers. Hence, while there are

gender discrepancies, it appears that kinship is determined by psychological categorizations of close others as kin.

Research from Park and Schaller (2005) alluded to the classification of psychological kin as the result of heuristic impressions. Their research looked at kinship by using reaction times and implicit association tasks to assess the role of attitude similarity in how individuals think about kin. They discovered that in comparison to a target individual with dissimilar attitudes, participants were much more likely to associate pleasant words and "kinship cognitions," or words within the semantic concept of family, with the target individual who possessed similar attitudes to themselves. Therefore, attitude similarity seems to be a cue for kinship; indicating that there is a psychological component to the organization of relationships based on variables beyond genetic relatedness. Psychological kin are more than merely friends, they are people who are associated with familial labels, and whom fulfill important love and belongingness needs within an individual's social network.

Social Support

One way in which Maslow's third level in the hierarchy of needs can be modernly represented is through the concept of social support. Social support refers to people's knowledge that they have close others in their lives who will help them in times of need and provide the social camaraderie and acceptance that Maslow argues is so important to well-being (Agneessens, Waege, & Lievens, 2006; Cobb, 1976; Cohen & Wills, 1985; Freeman & Ruan, 1997; Malsow, 1958; Morelli, Lee, Arnn & Zaki, 2015; Park & Schaller, 2005; Turner, 1981). Social support is commonly divided into three general categories: emotional, instrumental, and companionship/belonging (Agneessens et al., 2006; Cobb, 1976; Morelli et al., 2015; Turner,

1981). Emotional support encompasses feeling cared for and loved; instrumental support refers to tangible help that is needed in times of crises such as sickness or financial burden; and companionship/belonging support includes having people who one values spending time with (Agneessens et al., 2006; Cobb, 1976). While there is little research looking at the specific functions of these categories of support, a recent study by Wong, Wu, Gregorich, and Pérez-Stable (2014) investigated the influences of these types of social support on women's self-reported physical and mental health. The results of their research looking at over 1,000 female participants demonstrated that emotional support had the strongest correlation with both physical and mental health across all studied ethnicities (non-Latino White, Latino, African American, and Asian) except African Americans. Interestingly, there was no category of social support that was significantly correlated with mental and physical health for African Americans within this sample. These differences could be due, in part, to cultural attitudes regarding reporting mental and physical health problems.

Looking at social support as a whole, Sarason, Levine, Basham, & Sarason (1983) conducted four research studies in order to develop their Social Support Questionnaire. After establishing the validity of the questionnaire in their first study, their second study investigating relationships between the questionnaire and various personality measures concluded that having social support is negatively correlated with mental health problems such as anxiety and depression, and positively correlated with overall adjustment. Therefore, it is especially necessary to consider the robustness of social support networks, as mental health outcomes are closely related to how supported one feels. Acknowledging social support's connection to mental health, it is important to note that while a robust social support network is imperative and the number of individuals who participants reported as social supports was positively correlated with

extroversion, satisfaction with this support was not. Thus, while people's personality characteristics determine their needs for amounts of social support, a certain number of supports is not required in order for an individual to feel satisfied with his or her social support network.

Further investigating what factors contribute to satisfaction with one's social support network, Stokes (1983) found that the most powerful predictor of satisfaction with one's social network was the number of people in that network in whom participants felt they could confide. Exploring this finding further, Stokes' research demonstrated that there was a limit to the number of people in a network who could extend or boost this satisfaction. That number of confidants was seven. Beyond this number of confidants, satisfaction with one's social support network did not increase. In fact, this study demonstrated that networks with large numbers of people, of which few of the people were family members, actually resulted in decreased satisfaction with one's social support network. From this finding, it appears that at a certain point maintaining extensive numbers of relationships can actually cause stress that is detrimental to one's social support satisfaction. This research aligns with Sarason et al.'s (1983) research, and confirms that satisfaction with social support is not solely about the number of people one has in his or her network, but is instead, about a certain level of comfort and intimacy present in a relationship. This being said, it must be noted that Stokes' research also found that participants were dissatisfied with their social support networks if their networks were small and had a high percentage of relatives. Therefore, it seems that there is a middle ground in which a certain number of confidants who are not family members are required in order to have maximum satisfaction with one's social support network. This research further emphasizes the important and unique role that psychological kin could play within one's social support as confidants who are also non-relatives in a traditional sense.

Looking specifically at what types of support those without siblings utilize given their inherently smaller kin networks, Gondal's (2012) research examined patterns of roles within different social support categories, while comparing groups of individuals based upon their number of siblings. Gondal found that while those with none or very few siblings are more likely to rely upon parents, they do so specifically for instrumental support. Additionally, Gondal found that only children are more likely than those with siblings to have smaller social support networks and to turn to close friends for all forms of support, suggesting that only children may treat close friends as psychological kin. From this research, Gondal importantly concluded that the availability, or lack thereof, of siblings is an important factor in determining the ways in which people define their support networks. However, Gondal also confirmed that even with fewer kin members, robust social support networks still exist. Therefore, one's status as an only child does not preclude him or her from having commensurate amounts of social support to individuals who do have siblings.

In this same vein, Voorpostel and van der Lippe (2007) determined that support exchanges between siblings are dependent on a variety of factors, but that ultimately friends and siblings are more similar than different in the types of roles they fill. The type of support that one expects from a sibling seems to be reliant upon a number of factors including relationship quality and even geographic proximity. Expecting instrumental support from one another is a common facet of both friendship and siblinghood, yet differences arise when considering emotional support (Voorpostel & van der Lippe, 2007). Whereas friends are often expected to fulfill more than one role and provide both emotional and instrumental support, siblings are more often solely relied upon for instrumental support. It is only when there is an especially high relationship quality, as the result of regular interaction, that emotional support levels increase

between siblings. Voorpostel and van der Lippe further explained that as distance between siblings increased, it was more likely that emotional support was exchanged, indicating that as the availability of close-proximity instrumental support decreases, the sibling relationship changes to become a different source of support. This research therefore aligns with both Agneessens et al.'s (2006) and Gondal's (2012) research indicating that immediate kin most often fill the role of providing instrumental social support, but that those considered "friends" are relied upon to provide many different types of support even when siblings are present within the social support network.

All of these facets of social support interact to predict psychological, and at times even physical, well-being. Expanding on Maslow's (1958) Hierarchy, it follows that if one is unable to fulfill his or her love and belongingness needs, serious consequences for psychological functioning could result. In line with this, research from many sources indicates that social support is, unsurprisingly, most critical during periods of stress (Cobb, 1976; Freeman & Ruan, 1997; Turner, 1981). Cobb's (1976) research indicated that robust social support networks can protect individuals from specific threats such as arthritis, tuberculosis, and depression, and can also reduce the amount of medication an individual requires. Therefore, having people to share or alleviate the psychological burden associated with stressful life events can significantly improve one's overall health and happiness by serving as a type of buffer against negative life circumstances such as unemployment, loss of a loved one, recovery from physical illness or injury, and life transitions (Cobb, 1976). These socially supportive others help one to interpret and react to stress in more adaptive ways, allowing them to cope with adversity. These social support relationships are reciprocal in nature. Not only does the receiving of social support, particularly emotional support, predict well-being, but so does the giving of social support

(Morelli et al., 2015). Additionally, these two factors, psychological well-being and social support, interact so that causality goes in both directions (Freeman & Ruan, 1997). Hence, social support can be provided by many different types of people and helps to fill the human need for love and belongingness, influencing healthy functioning at both the mental and physical levels.

Resilience

When resilience is referenced in popular culture, it is commonly defined as 'bouncing back.' While this definition is not far from the truth, psychological resilience is better defined in terms of adversity and positive adaptation, or more specifically, positive adaptation in the face of adversity (Cohen & Wills, 1985; Fletcher & Sarkar, 2013; Tugade & Fredrickson, 2004). Fletcher and Sarkar (2013) defined adversity in terms of new and challenging life experiences, emphasizing that these life experiences do not necessarily need to be associated with adverse life events. Positive adaptation, on the other hand, is defined in terms of positive social functioning, yet the parameters defining this adaptive functioning must be considered relative to the context of the adverse event and the individual's developmental stage. For example, social competence in a war veteran might be a lack of clinically significant psychological distress as opposed to developing post-traumatic stress disorder. Therefore, resilience, in its most basic form, is centered more on integrating and practicing adaptive coping mechanisms such as humor, relaxation, and optimistic thinking as natural responses to stress (Cohen & Wills, 1985; Tugade & Fredrickson, 2004).

As has been discussed above, a central component of resilience is the ability to experience positive emotions even while facing stress (Cohen & Wills, 1985; Fletcher & Sarkar, 2013; Ong, Bergeman, Bisconti, & Wallace, 2006; Tugade & Fredrickson, 2004). It is not that

individuals with high trait resilience do not experience stress or adversity, but rather that this difficulty does not completely inhibit these individuals from experiencing positive emotions as well as negative ones (Ong et al., 2006; Tugade & Fredrickson, 2004). Ong et al. (2006) found this to hold true within a sample of recent widows. They found that widows with high trait resilience were better able to control their positive emotional experiences, regulate their emotions, and experience emotional complexity—feeling both positive and negative emotions. In addition, they exhibited decreased reactivity to daily life stressors as opposed to those with low resilience. Within this bereaved population, the experience and facilitation of positive emotions was a coping mechanism naturally employed by those with high psychological resilience.

Similarly to social support, higher resilience and the experience of positive emotions is not only associated with improved well-being mentally, but also physically. In their 2004 study, Tugade and Fredrickson assessed efficient emotion regulation by measuring cardiovascular recovery in those with differing levels of trait resilience. While participants' cardiovascular activity was being monitored, they were introduced to a negative emotion-inducing task and given a cognitive appraisal task. Later, participants filled out a self-report questionnaire assessing their general resilience levels and emotions during the task. Tugade and Fredrickson found that those with higher trait resilience exhibited higher levels of positive emotion combined with shorter durations of cardiovascular arousal. Therefore, resilient individuals not only exhibit less negative emotional arousal, they also exhibit less physiological arousal; indicating that overall they are more likely to remain in a state of homeostasis and not encounter as much life disruption in reaction to stress.

In order to examine what factors contributed to resilience, Bonanno, Galea, Bucciarelli, and Vlahov (2007) studied those who had experienced trauma as the result of the terrorist attacks

on in New York City on September 11, 2001. These researchers found that one's hardiness and one's perceived social support network were key to predicting one's resilience. Within their research, they operationalized hardiness as consisting of three elements: commitment to finding a purpose in life, belief that one is able to influence the outcome of events in his or her life, and the belief that one can grow from both favorable and adverse experiences. Therefore resilience after trauma seems to be about the cognitive framing of the event. Synthesizing these social support and hardiness predictors, it is logical to posit that having supportive others who can help those who are traumatized to psychologically appraise their experiences in ways that promote hardiness would contribute to resilience. Extrapolating from these findings, it is reasonable to suggest that these trends would extend to people's resilience regardless of the presence of trauma. In an everyday context, how one cognitively interprets life events is a key determinant to one's resilience.

Cohen and Wills (1985) looked further at the link between resilience and social support, by highlighting that a comprehensive social network directly contributes to these positively skewed appraisals that are characteristic of resilience. Having a robust social support network acts as a buffer to potential life stressors because people know that in times of distress they have individuals who they can rely upon to help them through difficulties emotionally and, when necessary, instrumentally (Cohen & Wills, 1985; Ong et al., 2006). Therefore, regardless of whether one has experienced trauma, the presence of a robust social support network may act as a buffer to the perception of stress and lower physiological arousal, promoting resilience.

Current Research

What remains to be examined is the synthesis of these disparate topics that would contribute to an understanding of how psychological kinship is related to the creation and maintenance of social support networks. Ultimately, this research aims to determine if psychological kinship relationships exist, if they fill the same roles as those of siblings, and if there are differences in the psychological consideration of these relationships in comparison to traditional family members. Furthermore, this research seeks to understand the relationship between a robust social support network and resilience. The current research would fill substantial gaps in the literature by focusing on understanding relationship formation among varying family compositions, as well as the connection between these relationships and broader social support structures.

Using the survey developed from Study 1's qualitative interviews, participants in Study 2 were asked to evaluate a number of close relationships within three different categories: closest family member, siblings (if applicable), and psychological kin. In addition, they were asked the degree of overall social support that these close relationships provided. Participants also completed self-report measures assessing their degree of psychological kinship within each relationship, their overall resilience, and their satisfaction with their social support network.

In this research, it is predicted that only children will report experiencing significantly higher levels of psychological kinship than those with siblings. Furthermore, it is posited that that individuals who identify as only children will show less of a difference between kinship derived from psychological kin and kinship derived from family members than individuals with siblings. Therefore, only children will see psychological kin as more similar to family members

than will individuals with siblings. However, when it comes to closest family kinship, this researcher expects to see no differences as a function of sibling status.

Furthermore, it is hypothesized that the amount of overall psychological kinship experienced is directly correlated with resilience, such that if one experiences more psychological kinship, then one will experience significantly higher levels of resilience. This is especially important when considering only children who inherently have smaller immediate kin networks. Specifically, it is predicted that there will be an interaction between sibling status and psychological kinship such that if only children experience low levels of psychological kinship, they will have significantly lower levels of resilience than individuals with siblings who experience low levels of psychological kinship.

In line with the literature presented in this study, social support is also predicted to be directly correlated with psychological kinship. Consistent with the model presented in Figure 1 demonstrating that once only children reach a certain level of social support they will resemble individuals with siblings, it is hypothesized that there will be no significant differences between only children and individuals with siblings in the amount of social support received, the level of satisfaction with one's social support network, and individual level of resilience. However, in the specific category of instrumental social support, it is predicted that only children will report receiving a significantly lower amount than individuals with siblings.

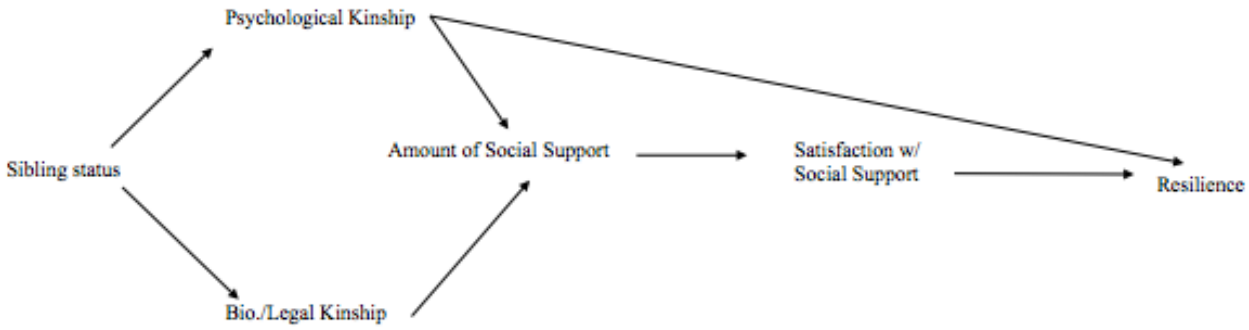

Figure 1. Causal model demonstrating how resilience and satisfaction can be accomplished through various different pathways to social support regardless of sibling status.

Looking at social support more closely, the extent of social support received by an individual will be directly correlated with the level of satisfaction he or she has with his or her social support network as well as with his or her level of resilience. Therefore, if one receives more social support, one will be more satisfied with his or her social support network and more resilient. Finally, it is hypothesized that people's level of satisfaction with their social support networks mediates the relationship between extent of social support received and resilience regardless of whether or not one has siblings (see Figure 2 for mediation model).

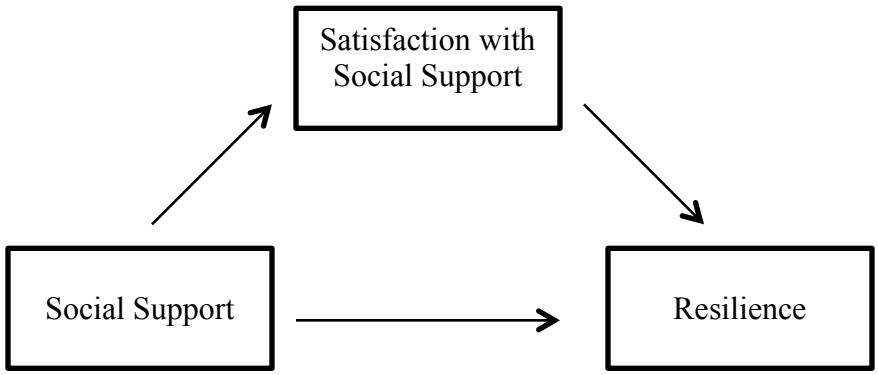

Figure 2. Satisfaction with social support mediates the relationship between social support and resilience.

The underlying assumption to be addressed in this research is that only children's social support networks are fortified by this capacity to form psychological kinship relationships, which in turn fortify levels of resilience. Hence their social support networks, their satisfaction with these networks, and their resiliency, are comparable to those of people with siblings. Therefore, while only children are more likely to have to find non-biological/legal relationships to make their social support networks similar to those of individuals with siblings, once they have formed these relationships, only children are no different from individuals with siblings in terms of their satisfaction with their social support networks and their levels of resilience.

Study 1

An exploratory qualitative study was conducted in order to improve the Psychological Kinship scale (Bailey, 1988; Bailey & Nava 1989) used in the main correlational study (Study 2) looking at social support network formation. Through in-person semi-structured interviews, adult participants were asked to discuss their experiences with and conceptualizations of family dynamics with the researcher.

Method

Participants. Participants in this study were 7 English-speaking adults ranging in age from 21 to 47. Participants were recruited by word of mouth within the researcher's social network and volunteered to participate. Of these 7 participants, 2 (29%) were males and 5 (71%) were females. Of the 5 females, 3 (60%) identified themselves as only children, while 2 (40%) reported having at least one sibling. Of the 2 males, both reported having at least 1 sibling.

Therefore, 3 (43%) participants identified as being only children, and 4 (57%) identified themselves as having siblings.

Materials. The materials in this study consisted of a series of semi-structured interview questions developed with the purpose of improving the sample Psychological Kinship scale items provided in Bailey's (1988) and Bailey and Nava's (1989) articles. This scale is intended to measure one's degree of psychological kinship with another person. Sample items of the Psychological Kinship scale were used due to the inability to locate the complete scale. The original scale has 20 items rated on a 5-point Likert Scale (1—*strongly disagree*, to 5—*strongly agree*). See Appendix A for the original Psychological Kinship scale. The interview focused on asking participants about their conceptualization of family and how their family structure factors into their support systems. See Appendix B for the full list of interview questions. Conceptualizations of family were investigated by inquiring about participants' relationships with their siblings, their relationships with close others in their lives who were not biologically or legally related to them, and what characteristics made them consider someone a family member.

Procedure. After giving informed consent, participants were led through the semi-structured interview questions. A main component within this semi-structured interview was introduced towards the end of the conversation when the researcher presented the participants with the original Psychological Kinship scale and asked them to circle items they particularly liked, and cross out items they did not like. The researcher also requested that participants discuss their opinions on said items with the researcher as they were doing this. The final component of this interview asked participants for their basic demographic information including age and gender. At the end of the interview, participants were debriefed and thanked.

Ethics

Participation in this study was completely voluntary and open to all English-speaking participants over the age of 18. This study did not target any protected populations. Additionally, the researcher did not ask participants to provide any sensitive information or deceive them in any way. The researcher recruited from a sample of people who she already knew. Therefore, lack of anonymity comes from the method of both recruitment and data collection. However, participant information in this study was kept completely confidential. Voice recordings were stored on a password-protected recording device for the duration of the transcription process and then deleted (within 96 hours of the interview). Additionally, participants were instructed that they could ask to have the researcher delete part or all of the recording at any time during or after the interview process. While the researcher knew the identities of the participants, there was no identifying participant information attached to the transcribed data and the identities of the participants remained confidential.

As with all research, there were potential risks to participating in this study, mainly the risk of heightened emotional arousal when being asked about perspectives on family. The interview questions were not different from ones that would be asked among friends in normal conversation. Additionally, risks were outweighed by the benefits of gaining insight into how various people came to psychologically consider people family members. Considering these elements, this study posed minimal risk to participants.

There were no direct benefits to participating in this study, any possible benefits came from having the opportunity to participate in meaningful research and from being exposed to a line of questioning that could have resulted in insight into personal experiences and beliefs. The responses from these interviews helped to improve the existing Psychological Kinship scale

adapted from items by Bailey (1988) and Bailey and Nava (1989). With the improvement of this scale, it has the potential to be used within a broader context both in research and clinical settings. If psychological kinship can be better assessed, it is possible to move forward to develop better and more nuanced interventions for individuals who might be struggling with the formation of their social support networks

Results

In order to garner conclusions from these qualitative data, the interviews were analyzed by the researcher to establish what general trends became clear in relation to the researcher's original questions of interest. These questions of interest included what essential elements go into an individual's consideration of someone as a family member, and if people who are not biologically or legally related to someone can be considered as family.

Experiencing Psychological Kinship. Out of the seven people interviewed, 5 (71.4%) responded with a definitive "yes" when asked if they had ever experienced psychological kinship, while 1 person responded with "not really," and 1 person responded with a definitive "no." Of the 5 people who responded "yes," most (4) of them reported they had "1-3 people" in their lives whom they considered to be psychological kin, when asked "how many of these relationships would you say you have in your life?" As is indicated by multiple participants giving a range of people whom they considered psychological kin, there may be a degree of flexibility in who is considered as psychological kin over time. The fifth participant reported having 5 people in her life whom she considered to be psychological kin. Of the people reported to be psychological kin, role relationships included: current close friends, childhood friends, a pseudo grandmother, pseudo cousins, previous significant others, and a long-term nanny. Long-

term friends (inclusive of both the "current close friends" and "childhood friends" categories) were the people most often labeled as psychological kin by six out of seven participants.

Both people who answered the question of having psychological kin in the negative had siblings. Therefore, all only children interviewed reported experiencing psychological kinship.

Evaluation of the Psychological Kinship Scale. During part of the interview, participants were asked to circle items on the original Psychological Kinship scale that they felt applied to the construct and cross out those that they did not. In order to better understand these responses, the researcher compiled item-by-item ratings. These responses were the driving force behind deciding which items should be kept in the scale, which items needed improvement, and which items should be thrown out altogether.

Out of the 20 original items in the scale, the participants evaluated 9 positively (see Table 1 for the full list of positively evaluated items). A combination of participant commentary on the items, and the aforementioned circling of items on the original scale determined these positive evaluations. For example, in relation to the first item on the table, one participant noted that "Yeah…them thinking of you as family also. It's rare that someone has the bond with you and wouldn't acknowledge you at least in equal level of esteem. You just couldn't have gotten that far." The language that the majority of participants used reflected that they understood the sentiment of the items. Many participants commented that while they may suggest minor improvements for how an item should be worded, they felt overall that it was an important part of being considered as a family member. These suggestions for improvements in the language were noted and later incorporated in the revised scale.

Negatively evaluated items were also carefully considered. Out of the 20 original items in the scale, participants evaluated 6 negatively (see Table 1 for the full list of negatively evaluated

items), expressing that they found the items to be generally confusing or unimportant to their idea of being a family member. These items were removed from the scale. The 5 items remaining in the original scale that were not evaluated to be especially negative, or especially positive, were cut from the scale as they elicited very little response from participants in any capacity relating to the concept of psychological kinship. The researcher therefore deemed these items to be of little relevance to the construct of interest. See Appendix A for both the original and edited scales. While no items maintained their exact wording, 7 items from the original scale only underwent minor language revisions.

Table 1

Evaluations of items from the Psychological Kinship scale

Positively Evaluated	**Negatively Evaluated**
To treat me like a member of the family	To be my friend
To be someone I can trust	To be willing to introduce me to his/her family
To feel that I am important in his/her life	To hug me if I need it
To comfort me if a loved one died	To be a loving person
To be someone I can confide in	To enjoy spending time with me
To share a feeling of 'kinship' with me	To want to be my friend
To still like me if I do something wrong	
To be available when I need him/her	
To have faith in me	

Additional Considerations. Other important sentiments that came up in the majority (six out of seven) of interviews surrounding the concept of family were commentaries on the distinctiveness of an immediate family relationship. Distinctive elements of these relationships included that instrumental support was always associated with immediate family members; that family relationships "just are," generally require less maintenance, and are more stable; and that family members have a certain understanding of people's history and how they got to be where

they are as a person. Furthermore, participants agreed that often the function of family members is to be a "reality check" for when one's actions or behaviors get out of hand, and that the unconditional support of family provides a type of safe zone for making mistakes. Often those identified as psychological kin overlapped in many of these 'family qualifications,' but five out of seven participants still mentioned having a boundary for these psychological kin as opposed to their immediate and 'real' family. For example, one participant commented that "there have been definite people who I open up to like family, and are really close friends, but I think I still kind of have that boundary in my head." This particular participant was not an only child. Regardless, the sentiments reflected in her commentary were brought up by most participants in relation to the distinction between their immediate family members and the other people with whom they are close in their lives. To account for these sentiments, items such as "would stick up for me" and "is honest with me when it's needed" were added to the scale to reflect these unique family attributes (see Appendix A for revised Kinship scale).

All of this being said, it does appear that there is something distinctive and important about psychological kin. The majority of participants (five out of seven) identified reciprocity within the relationship as an imperative aspect that went into qualifying someone as psychological kin. Therefore, though immediate family members "just are," regardless of relationship quality, psychological kin relationships seem to be centered on mutual positive regard and social support. This element of reciprocity was incorporated into the new scale through two items, "Is a supportive person in my life," and "Thinks of me as a supportive person in his/her life." While not under the category of immediate family, people identified as psychological kin can still be counted within the more general category of family. Participants were able to identify people in their lives with distinctive traits whom they often considered to be

both family and friend, and in this way it can perhaps be best phrased that psychological kin are chosen family.

In terms of scale improvements, the positive and negative evaluations obtained from participants along with their commentaries, explanations, and suggestions for why items were or were not important were imperative in determining scale alterations. In consideration of their responses, the researcher altered wording to increase the clarity of items, deleted items that were deemed irrelevant to the construct of interest, and looked to common themes within the participants' interviews in order to create new items that would be better measurements of kinship. The new scale, deemed the Kinship Scale (see Appendix A for full scale), consists of 16 items, 7 of which are entirely new and developed from the common themes discussed above. The remaining items were developed from the 9 positively evaluated items; 7 items were altered to improve clarity of language, and 2 of which were altered to improve the item's conceptual merit. For example, though the item "To still like me if I do something wrong" was evaluated positively by participants, many participants pointed out that "To still *love* me if I do something wrong" was more indicative of family relationships. In addition, entirely new items such as "wants the best for me, and is a supportive person in my life" came from the common themes of safety, honesty, and good intentions brought up by participants.

Discussion

The aim of these qualitative interviews was to improve and alter the original Psychological Kinship scale to make it more representative of what elements are fundamental to being considered as a family member. Hence, it should be noted that the resulting Kinship scale

measures kinship. It is when this scale is administered to someone who is not a traditional kin member that the construct being measured becomes psychological kinship.

Family is something that is universal, and yet at the same time is highly variable and individualistic. Relationships, by their very nature, are difficult to draw definitive conclusions about, but this study focused on the commonalities across participants within their conceptualizations of family. As shown earlier, psychological kinship is a phenomenon experienced by the majority of participants, and experienced by all participants who identified themselves as only children. These results indicate that psychological kinship is far from something specific to only children, but rather is a common aspect of social support for most people.

Many of the people identified by participants as psychological kin share a long history with said participants. They were childhood friends, neighbors, a pseudo-grandma, a long-term nanny, and, of course, dear friends. From this, it may be surmised that to be considered a family member when one is not born as such means going beyond normal friendship, and arriving at a state of mutual understanding and unconditional support. As mentioned earlier, participants did not talk about psychological kin as members of their immediate families, but rather thought of them as important to their support systems, but still in a separate category. As evidenced from the participant commentaries discussed above, it seems that there is something about the structure of immediate family that creates a very distinct mental boundary between those who are immediate family members, and those who are 'other.' But within these others, there seem to be many categories: psychological kin, extended family, friends, colleagues, acquaintances, etc. These categories, while not explicitly differentiated by participants, seemed to depend upon traditionally assigned roles (mother, cousin, boss, colleague etc.), but also on levels of

interpersonal intimacy. Many participants expressed feeling closer to their psychological kin than with members of their extended family who they may only see occasionally and in a formal, group setting. Therefore while most psychological kin are not considered within the same category as immediate family members, psychological kin are still considered as part of an extended family category, and perhaps even considered more as family than traditionally related extended family members such as cousins.

Despite these categories, these data by no means indicated that transcending these categories is impossible, but instead is only done with particular individuals. The best general demonstration of this concept exists within the act of marriage. In most marriages, a couple may start off as friends, move to being romantic partners, and finally get married and possibly start a family of their own. In this way, someone who was once a friend does very much become an immediate family member. Still, this process involves a level of intimacy and day-to-day contact that most other relationships do not have. Family is a highly individualized and variable concept, but by focusing on repeated themes and sentiments discussed by participants, the researcher was able to create a kinship scale that centers on some of the underlying facets of what it means to be a family member.

As with all research investigations, this study has its own set of limitations. The primary limitation within this study is its very small sample size. However, the qualitative nature of this study, combined with the time constraints related to being a preliminary study to a larger, secondary study contributed to the size of the sample. Another aspect of this small sample size is that the participants interviewed in this study all came from relatively intact families and upper-to-middle class backgrounds. Moreover, while the participants interviewed were representative of most permutations of gender and sibling status, no male only children were interviewed.

Therefore, while many perspectives on family are missing from this small study, hopefully the feedback received was sufficient to improve the existing Psychological Kinship scale adapted from items by Bailey (1988) and Bailey and Nava (1989) and proceed with the larger, secondary study.

Conclusions from these qualitative interviews resulted in the significant amendment of the original Psychological Kinship scale. These changes improved face validity while also ensuring that the scale could be applied broadly in order to measure all forms of kinship whether that be familial or psychological. The resulting modifications allowed the researcher to more accurately measure the desired construct within the context of the second study within this work. Additionally, the interviews helped the researcher to hone her research focus for a secondary study about psychological kinship, social support networks, and resilience among only children and individuals with siblings.

Study 2

This study attempted to determine if only children experience similar levels of social support and resilience to individuals with siblings as a result of relationships formed outside the biological/legal family structure.

Method

Participants. The participants in this study were 480 anonymous, English-speaking adults (over the age of 18). Participants were recruited from both Amazon's Mechanical Turk (M-Turk), an online work distribution service run through Amazon, and Reddit, a social network service that functions like an online bulletin board. M-Turk allows workers to choose and

complete tasks and receive compensation for doing so. In the psychological field, M-Turk is commonly used as a way to gather participants for studies from a more heterogeneous sample than would otherwise be found from college student samplings.

Participants in this study were 252 (54.55%) female, 207 (44.81%) male, and 3 (.01%) other/agender. Of the female participants in this study, 40 (15.87%) identified as only children, while 212 (84.13%) reported having at least one sibling. Of the male participants in this study, 68 (33.85%) identified as only children, and 139 (67.15%) reported having at least one sibling. Of the non-binary gender respondents, 1 (33.33%) identified as an only child, while 2 (66.67%) reported having at least one sibling. Therefore, overall, 109 (23.59%) of this sample identified as only children, and 353 (76.41%) identified themselves as non-only children. In terms of age distribution, 60 (55%) of only children were between the ages of 21-29, as opposed to 115 (31.25%) of individuals with siblings. The remaining only child participants had similar distributions to those with siblings across age categories. Looking at all participants, 17 (3.56%) were between the ages of 18 and 20, 175 (36.69%) were between the ages of 21 and 29, 151 (31.66%) were between the ages of 30-39, 75 (15.72%) were between the ages of 40-49, 31 (6.50%) were between the ages of 50-59, and 19 (3.98%) were 60 or older.

MTurk participants were compensated $0.50 for the approximately 15 minute study. Participants recruited from online interest groups were given the chance to enter a raffle in order to win a $20 Amazon gift card.

Materials. The materials in this online survey primarily consisted of measures of three constructs, an individual's level of resilience, the extent of social support received by the individual, and the degree of kinship one feels with other people.

Resilience. The 25-item Resilience Scale developed by Wagnild and Young (1993) assesses self-reported resiliency in individuals. Participants were asked to rate the extent to which they agreed or disagreed with presented statements on a 5-point Likert scale (1—*disagree*, 5—*agree*). See Appendix C for the full scale. The scale endpoints were altered from the original 7 points to 5 points in order to maintain consistency throughout the study. This scale shows good internal, test-retest, and overall reliabilities at or above .81 (Killien & Jarett, 1993, as cited in Wagnild & Young, 1993; Wagnild & Young, 1993; Wagnild, personal communication, November 3, 2015).

Social Support. The 12-item Interpersonal Support Evaluation List (ISEL -12; Cohen, Mermelstein, Kamarck, & Hoberman, 1985) assesses the extent of perceived social support an individual receives. This scale divides social support received into three categories: appraisal (or emotional) support, belonging (or companionship) support, and tangible (or instrumental) support. Each item is rated on a 4-point Likert scale (1—*definitely false*, 4—*definitely true*). See Appendix D for the full scale. A study (Merz et al., 2014) examining the ISEL-12 in Spanish speaking populations found good internal consistency reliability in both Spanish and English speaking populations with Cronbach's alphas above .70. In a sample of English responders, the internal consistencies for subscales assessing appraisal (α =. 71) and belonging (α = .76) were adequate, while the consistency for tangible support (α =. 66) was slightly below acceptable (Merz et al., 2014). Despite the tangible support subscales' low internal consistency, the ISEL-12 remains the best available option for assessing social support in an efficient and accurate manner.

In order to measure the type(s) of support each close other predominantly provides the participant, a single item was created based on Agneessens et al.'s (2006) and Gondal's (2012) role relation typology questions. See Appendix E for full text of item. The measure was intended

to assess the presence of emotional support, companionship/belongingness support, and instrumental support, and is a simple, check-all-that-apply format consisting of two example activities in each of the aforementioned categories. Within each subcategory of social support, role typology items were given a score of "1" (if one or both boxes were checked for that category of social support) and "0" (if no items were checked) for each item. Finally, composite variables were created for each of the three subcategories of social support for each type of person (closest family member, psychological kin, and siblings) by averaging the ratings. The measure has good face validity.

Another single item was created to assess the participant's overall satisfaction with his or her social support network. The item asked participants to "Please rate how satisfied you are overall with your social support network" on a 5-point Likert-type scale (1—*Not at all satisfied*, 5—*Extremely satisfied*).

Psychological Kinship. The Kinship Scale, developed and adapted from sample items provided in Bailey's (1988) and Bailey and Nava's (1989) research, and improved upon through qualitative interviews conducted by the researcher (Study 1), asked participants to fill out the scale items while thinking about one specific person in their lives. See Appendix A for the full scale. The scale has 16 items rated on a 5-point Likert Scale (1—*strongly disagree*, 5—*strongly agree*). Internal consistency in Bailey's (1988) original 60-item scale was good with 53 items correlating at .001 or better, and 4 items at .005 or better. However, item-total correlations were below adequacy, with only 11 items having correlations greater than .70. With the improvements made on the scale through the addition, rewording, and deletion of items, the face validity, internal validity, and internal reliability of this scale were increased. As it stands, research in this

area is emerging and the use of the scale and modifications may be beneficial to the field in the future.

To measure the overall experience of the psychological kinship phenomenon, psychological kinship was defined, and then a single item asking participants if they "feel [they] have experienced psychological kinship in [their] relationships with important close others in [their] lives" was administered. This item was measured on a 5-point, Likert-type scale (1—*No, not at all*, 5—*Most definitely*). See Appendix F for full text of item.

Procedure. Participants recruited from both M-Turk and only child interest groups were directed to follow a SurveyMonkey link to the actual online study. SurveyMonkey is an online service that allows people to create and administer surveys. Before any participant was allowed to complete the survey, he or she was asked to read an informed consent document and confirm that he or she was 18 or older and voluntarily consented to participate in the research.

Participants were then directed to complete the resilience measure followed by the social support measure. The third component of this survey was the most complex. Participants filled out the Kinship Scale a maximum of seven times. The first time this scale was completed, participants were instructed to think of the person they considered to be their "closest family member." Participants then completed the experience of psychological kinship measure to determine the extent to which they had experienced psychological kinship. Next, participants were asked to list the initials of everyone with whom they had experienced psychological kinship. They then selected up to three people from this list, excluding current romantic partners, and completed the same Kinship scale with reference to each individual. Lastly, participants were asked if they have siblings. If they selected "yes," they were then directed to list the initials for up to 3 siblings, filling out the Kinship scale for each one they listed. Included at the end of

each of these kinship scales was the social support typology item. Next, participants were given the single-item social support satisfaction measure.

The final component of this survey asked participants for basic demographic information including age, gender, and sibling status. If participants reported having siblings, they were asked to list their sibling's gender(s), the age differences between themselves and their sibling(s), and whether those siblings are older or younger. At the end of the survey, debriefing information was presented and participants were compensated.

Ethics

Participation in this study was completely voluntary and open to all English-speaking participants over the age of 18. While not excluding older adults over the age of 65, this study did not target any protected populations. Additionally, the researcher did not ask participants to provide any sensitive information or deceive them in any way. While demographic information such as age and gender was collected, no information that could potentially identify an individual was requested of the participant. Taking into consideration that this was an online study, and to ensure anonymity, the researcher specifically chose not to collect IP addresses by turning off any features that would enable the data collection program to do so. For participants who were Reddit volunteers, some identifying information was necessary in order to distribute the raffle prize. These volunteers were asked to go to a separate survey to provide information for how they would like to receive compensation should they win the raffle. In this case, the identities of some participants were no longer anonymous, but remained confidential. Regardless, the compensation form was a separate entity from the study survey, and therefore all participant data remained anonymous.

As with all research, there are potential risks that should be considered before asking people to participate in a study. Specifically, in this study, there was risk of slight emotional discomfort at being asked about one's social support structure, but this discomfort did not exceed what a person would be likely to experience in everyday life. Furthermore, these risks were outweighed by the benefits of gaining insight into the different pathways by which individuals form their social support structures and develop resilience. Participants may also have benefited from having the opportunity to participate in meaningful research, and from the small amount of compensation provided. While this research was not able to definitively answer the question of whether or not only children and children with siblings are different from one another, it may add to knowledge of how people go about forming their social support networks, and in particular, if only children, as a result of their familial status, use the adaptive mechanism of psychological kinship as a method of forming similar social support networks to individuals with siblings. In a society in which the number of only-child families is increasing, it is important to understand whether only children are capable of achieving similar levels of social support and resilience and how they do so. Ultimately, this study was carefully structured by the researcher to gain insight into the formation and benefits of companionate relationship patterns while posing minimal risk to participants.

Results

A new scale measuring kinship was created Study 1 and used by the researcher in the current study. In order to measure the scale's reliability, the researcher computed a series of Cronbach's α's for each of 7 composite scores derived from the kinship scales administered

throughout the survey. All resulting α's were above .96, which would be considered excellent reliability.

All variables also were examined for violations of normality. Outliers that skewed normality were identified for both resilience and psychological kinship. Extreme outliers that skewed normality were excluded for both resilience (all cases with scores less than 2.37) and psychological kinship (all cases less than 1.94). These exclusions improved normality. In all analyses directly examining gender, non-binary identifying individuals, of which there were 3, were excluded as there were not enough individuals within this category to draw sufficiently powered statistical conclusions.

In general, participants scored highly on the measured variables (resilience, social support, psychological kinship, closest family member kinship, and satisfaction with social support). See Table 2 for descriptive statistics and intercorrelations between variables. As hypothesized, all variables of interest were positively correlated with one another.

Table 2

Intercorrelations between main outcome variables

	Resilience	Social Support	Fam.Kinship	Psych. Kinship	Sib. Kinship	Satisfaction
Resilience	**3.91**	.38	.49	.44	.20	.40
	.54	<.001	<.001	<.001	<.001	<.001
Social Support		**3.03**	.55	.46	.34	.59
		.62	<.001	<.001	<.001	<.001
Family Kinship			**4.51**	.60	.39	.41
			.67	<.001	<.001	<.001
Psych. Kinship				**4.30**	.34	.41
				.66	<.001	<.001
Sibling Kinship					**4.05**	.45
					1.08	<.001
Satisfaction						**3.94**
						.996

Note. Along the diagonal in bold are the means (above) and standard deviations (below) for each variable. Correlation coefficients between each pair of variables are listed in the corresponding row and column. The significance for each correlation is listed below the correlation coefficients.

Gender Differences. Though no gender differences were predicted, exploratory analyses were conducted. Independent samples t-tests examining the relationships between gender and the variables of interest revealed that men reported significantly lower levels of overall social support, emotional support, closest family member kinship, psychological kinship, and experience of psychological kinship than women[1], all t[458]'s >2.31, all p's <.0211.

[1]Multiple Regressions examining the interactions between gender, sibling status, and all of the main variables of interest demonstrated non-significant results.

Table 3

Comparisons of main variables as a function of sibling status

	Sibling	Only child	*t*
Resilience	3.95 (.54)	3.80 (.53)	2.29**
Social Support	3.06 (.62)	2.83 (.64)	3.24**
Emotional Support	3.17 (.70)	2.86 (.76)	3.78**
Companionship	2.96 (.73)	2.79 (.78)	2.19**
Instrumental Support	3.04 (.69)	2.84 (.63)	2.64**
Family Kinship	4.56 (.63)	4.22 (.84)	3.90**+
Psych. Kinship	4.34 (.63)	4.13 (.72)	2.61**+
Satisfaction	3.98 (1.01)	3.54 (1.15)	3.62**+
Experience of Psych. Kinship	4.02 (1.24)	3.76 (1.35)	1.76+
Number of psych. kin listed	3.27 (2.74)	2.87 (2.24)	1.39

Note. Means (standard deviations) are listed for each variable.
** p<.05
+Levene's test significant, <.05; so equal variances not assumed.

Kinship. It was originally predicted that the amount of overall psychological kinship experienced among only children would not significantly differ from the amount experienced by individuals with siblings. However, as can be seen in Table 3, only children reported significantly lower levels of psychological kinship than those with siblings. Given the aforementioned relationship between gender and psychological kinship, further analyses were conducted to explore the extent of gender's influence on psychological kinship. A Multiple Regression examining psychological kinship as a function of sibling status and gender revealed that while gender remains significant, $F(1, 445) = 15.64$, $p<.001$, $\eta^2 = .03$, sibling status weakened to a point of non-significance, $F(1, 445) = 3.80$, $p=.052$, $\eta^2 = .008$. Therefore, while it appeared from the t-test presented in Table 3 that only children and those with siblings had

significantly different amounts of psychological kinship, the regression results help to clarify the underlying cause of this finding. The differences in amounts of psychological kinship between the two groups can be explained by the aforementioned gender differences found among males. Thus, the original hypothesis was supported, as only children and individuals with siblings do not differ in the amounts of psychological kinship that they experience when gender is controlled.

Furthermore, it was originally thought that when the construct was described within the survey, only children would report experiencing significantly more familiarity with psychological kinship and also report having more psychological kin. As can be seen in Table 3, these hypotheses were not supported. Only children reported no more familiarity with the concept of psychological kinship and listed similar numbers of people whom they considered to be psychological kin as individuals with siblings. It is also of interest to note that, contrary to the researcher's initial hypothesis, closest family member kinship was significantly less for only children than for individuals with siblings.

A 2x2 Mixed Model Analysis of Variance (ANOVA) was used to examine psychological kinship as a function of relationship type (which varies within participants) and sibling status (which varies between participants). It was hypothesized that the difference between the amount of kinship experienced with psychological kin and the amount of kinship experienced with family members would be significantly less for only children than for individuals with siblings. If this hypothesis were supported, it would imply the only children treat their psychological kin more like their close family members than individuals with siblings do. There was a significant difference between closest family member kinship and psychological kinship, $t[478]=8.77$, $p<.001$, $d=.40$. These data demonstrate that overall, people experience significantly more kinship

with their closest family member than with their psychological kin. However, the interaction between siblings status and relationship type was found to be non-significant and the original hypothesis was not supported[2], t[149.86]=.22, p=.845, d=.03. There difference between amount of kinship experienced with one's closest family member and one's psychological kin did not vary as a function of sibling status.

Social Support. It was initially hypothesized that there would be no significant differences in the amount of social support reported by only children as compared to those with siblings, except in the subcategory of instrumental support. As shown in Table 3, there were differences in all forms of social support between groups. However, because instrumental support was originally predicted to be less for only children than for individuals with siblings, this hypothesis was supported. It was also predicted that there would be no differences in an individual's satisfaction with his or her social support network as a function of sibling status. As shown above, this hypothesis was also not supported.

As is presented in Table 2, both sibling kinship and psychological kinship positively correlate with social support. To gain a more nuanced understanding of the predictors of social support, a Multiple Regression looking at social support as a function of sibling kinship and psychological kinship was conducted for those participants who reported having siblings. The data demonstrated that both sibling kinship, $F(1, 351) = 21.40$, $p<.001$, $\eta^2 = .06$ and psychological kinship remained significant, $F(1, 351) = 29.29$, $p<.001$, $\eta^2 = .08$. This pattern suggests that sibling kinship alone is not enough to make one's social support network robust, psychological kinship must also be present. Thus, psychological kin are imperative members of the social support networks of those who do have siblings.

[2] Levene's test significant; therefore unequal variances assumed.

Resilience. As shown in Table 2, resilience and psychological kinship are positively correlated. Furthermore, data from Table 3 established that both psychological kinship and resilience significantly differ between only children and those with siblings. It was originally hypothesized that there would be a stronger correlation for the relationship between amount of psychological kinship received and resilience among only children than for individuals with siblings. To test this hypothesis, a Multiple Regression was used to examine resilience as a function of sibling status and psychological kinship. However, the interaction between sibling status and psychological kinship was shown to be non-significant, $F(1,443) = .47$, $p=.494$, $\eta^2=.001$.

In order to examine the predictors of resilience more closely, a Multiple Regression was conducted analyzing resilience as a function of sibling kinship, psychological kinship, and gender. This analysis was only tested for those who have siblings so as to be able to investigate the influence of sibling kinship on resilience. Gender was included as a fixed factor to add predictive value and insure that gender differences did not account for significance in this analysis as they did above. The Multiple Regression revealed that while sibling kinship was non-significant, $F(1,340) = 1.24$, $p=.266$, $\eta^2=.004$, psychological kinship, $F(1,340) = 44.60$, $p<.001$, $\eta^2=.12$ and gender, $F(1,340) = 7.07$, $p=.008$, $\eta^2=.02$ were significant. Hence, these data indicate that psychological kinship is critical to resilience even when one does have siblings. Sibling kinship does not uniquely contribute to one's resilience over and above that which is predicted by psychological kinship and one's gender.

Exploring the relationship between social support and resilience further, the researcher tested the hypothesis that satisfaction with one's social support network mediated the relationship between the extent of one's social support network and one's resilience (see Figure 3

for model of this relationship). According to Baron and Kenny (1986), to establish mediation, one must first establish a significant correlation between the primary predictor variable and the dependent variable. In the case of this meditational analysis the significant relationship between social support and resilience was confirmed above. In accordance with Baron and Kenny's second step of mediation, significant relationships between the mediator and both the predictor and dependent variables were also established above. Baron and Kenny's third step of mediation requires that in a multiple regression with the mediator and the predictor variable predicting the dependent variable, the relationship between the mediator and the dependent variable remains significant while the relationship between the predictor and the dependent variable either becomes non-significant or is reduced. In accordance with this third step, a Multiple Regression investigating resilience as a function of social support and satisfaction revealed that the relationship between extent of social support received and resilience weakens $F(2,463) = 25.14$, $p<.001$, $\eta^2=.051$, while the relationship between satisfaction with social support and resilience remains significant, $F(2,463) = 25.14$, $p<.001$, $\eta^2=.051$. While both relationships remained significant, a Sobel's test using correlation coefficients showed that there was a significant mediation, $t=4.66$, $p<.001$, 36.64% of the total effect mediated satisfaction (see Figure 3 for coefficients).

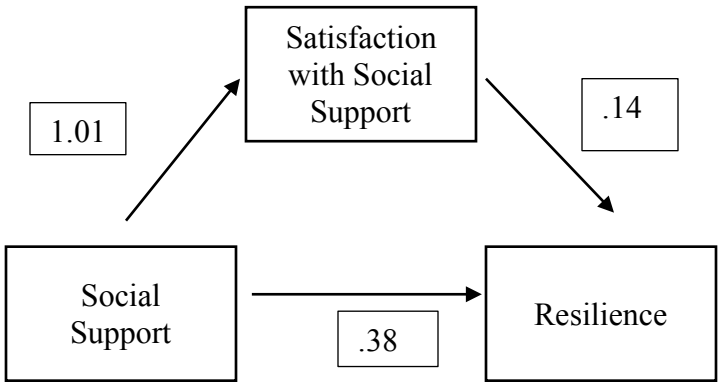

Figure 3. Satisfaction with social support mediates the relationship between social support and resilience. Correlation coefficients shown next to arrows.

General Discussion

Throughout both studies, participants reported identifying with the concept of psychological kinship, or treating people who are not biologically or legally your family as if they were. Data from both studies indicate that psychological kin are important members of people's social support networks. Furthermore, results from Study 2 confirmed the results from Study 1 such that kinship experienced with psychological kin is significantly lower than kinship experienced with one's closest family member. Thus, psychological kin do appear to represent a distinct but important category from immediate family members.

The primary hypothesis of this study, that only children are more likely to utilize psychological kinship relationships was not supported. Based on the data, only children did not report utilizing psychological kinship any more than individuals with siblings did. Instead, this study demonstrated that only children and individuals with siblings reported equally high amounts of kinship with those they selected as psychological kin. These findings emphasized that psychological kin are imperative to one's social support networks and level of resilience regardless of one's sibling status.

The importance of psychological kin for all people was accentuated when examining individuals who have siblings separately from only children. The data indicate that both sibling kinship and psychological kinship are imperative to social support. This suggests that siblings provide lower levels of support than originally hypothesized, and that sibling support is not adequate to fulfill one's social support needs. Given this trend, it appears that only children, on a purely measureable level, could be not very different from those with siblings in terms of

support. However, because only children are significantly different from individuals with siblings on measures of social support, it seems plausible that the presence of siblings can provide people with a sort of 'safety net' within their social support networks that only children simply do not have. Consequently, because only children and individuals who have siblings demonstrated equal amounts of psychological kinship, individuals with siblings are adding to an intrinsic social support network that includes siblings, while only children must build a social support network that begins with inherently fewer kin.

Moreover, the Multiple Regression examining resilience among individuals with siblings as a function of sibling kinship, psychological kinship, and gender demonstrated that sibling kinship does not significantly predict resilience when psychological kinship and gender are also examined as predictors. Therefore psychological kin are imperative to one's level of resilience regardless of sibling status. While the reasoning for why siblings are important to predicting one's level of social support, but not one's level of resilience extends beyond this research, it is possible that while siblings do provide support and function as the aforementioned 'safety net,' they do not contribute to helping one to facilitate adaptive coping mechanisms in the face of adversity. In the future, it would be interesting to explore these different contributing factors to social support and resilience in more detail.

At the outset of this study, it was posited that psychological kinship relationships would supplement the social networks of only children, resulting in similar levels of both social support and resilience for both groups. However, when the study was conducted, only children as a group reported lower levels of resilience, social support, emotional support, companionship, instrumental support, and satisfaction with their social support networks. Before continuing into the reasoning for these differences, it should be noted that the relationship between social

support and resilience is indeed mediated by satisfaction. These results are in line with previous research (Cohen & Wills, 1985; Fletcher & Sarkar, 2013; Tugade & Fredrickson, 2004) suggesting that people are resilient because they have an extensive enough support network to ensure that even during times of stress, they experience positive emotions and have people to help them navigate adversity. These data indicate that positive appraisal of this network's value is required in order to be resilient. For this reason, both social support and satisfaction with one's social support network are highly correlated with resilience. Thus, it appears that all variables only children have significantly lower levels on, are either directly or indirectly related to having lower amounts of social support. Hence, while the initial pathway between social support, satisfaction with this support, and resilience was correct, the initial part of the model failed; only children's social support deficit was not surmountable through psychological kinship.

It is important to understand the differences between these groups for the simple reason that our society is changing. Women are having fewer children, and are doing so later in their lives. These elements contribute to the fact that the number of only-child families is steadily rising (Pew Research Center, 2015a). If knowledge about how only children go about forming their support networks is not disseminated, then it is difficult to help and encourage only children to seek out the social support they need. As it stands, it appears that only children have lower levels of social support than people who have siblings. Therefore, finding ways to increase the robustness of only children's support networks will be an important future endeavor.

Furthermore, the differences that arose between genders in this study suggest that men are at a disadvantage when it comes to social support. It is not solely within non-familial relationships that differences were found. Gender differences were found even for one's kinship with his or her closest family member. While not specifically investigated in this research, the

data suggest that females maintain different relationships from men, and benefit from these relationships more. It is especially interesting to note that the specific subcategory of social support that men were significantly lower in was emotional support. This suggests that men have difficulty forming and maintaining emotionally intimate relationships with close others and with family members. In opposition to research by Simon and Nath (2004), demonstrating that men experience more positive emotions than women as the result of their higher social positioning, these low-resilience and social support tendencies hint at the intensity of societal standards placed upon men when it comes to emotionality and intimacy in general. These findings suggest that even if men express more positive emotions, there may be something amiss when it comes to connecting with and feeling supported by other people. The discrepancy between expression of positive emotions and lower levels of resilience among men will be an important direction for future research.

As with all studies, this research has limitations. Inevitably, family dynamics are complex and impossible to standardize across participants. Though this makes the research more representative of the larger societal population, it also makes capturing, measuring, and comparing levels of kinship in various relationships difficult and relative to the perspective of each participant. With a sample size of 480, the researcher hoped to account for this variability, though as with all samples, it is impossible to fully capture the circumstances of an entire population. Problems representing an entire population also arose when considering the sample of participants. The sample was unbalanced in that there were more individuals who identified having siblings (n=353) than only children (n=109). This sample also came from online sources, and is therefore limited to individuals who use the Internet and are within the M-Turk worker force or use Reddit. Additionally, the largest group of respondents (37.4%) were within the 21-

29 age range. Specifically, 55.5% of only children were within this age range. Given that for many people this age range is typically a period of transition and change, the results could have been affected. Additionally, within the group of only children, there were more males (68) than females (40). Because there were no male only children present in Study 1, this could have influenced the Kinship Scale construction in a significant way.

Despite the new Kinship Scale's excellent reliability, there is no guarantee that it perfectly measured only the psychological kinship construct and did not incorporate other closely related concepts such as social support. Furthermore, it is possible that despite the fact that only children and individuals with siblings reported similar levels of psychological kinship, the psychological kinship relationship might still be considered differently by only children. For instance, it may be possible that while only children are looking for a true familial relationship to supplement their smaller family size, individuals with siblings are satisfied with having people whom they consider to be "like family" and labeled as psychological kin, but whom would not be considered as such by only children. In other words, it is possible that the standards to be considered psychological kin may be different between only children and those with siblings, and that this study was unable to capture those differences. In the future, it will be important to investigate these conceptual differences further.

It also must be considered that all variables were results of self-report measures. Therefore, it is possible that when asked about the extensiveness of their social support networks and their satisfaction with their social support networks, only children engaged in unprompted self-comparison with people they know who do have siblings, thereby reporting lower levels on both variables. Often people, especially those in a minority group, evaluate themselves by comparing to the majority (Brewer & Weber, 1994). For people with siblings, who are still the

majority in the population, this degree of self-comparison would not necessarily be evoked. Finally, a major limitation to this research is that it is correlational and therefore causation cannot be established. While in the future it might be interesting to manipulate some element of participants' psychological kinship relationship formation through vignettes, non-self-report measures, or other quasi- experimental methodologies, at this time, research demonstrating that these correlations exist was a necessary first step.

As has already been mentioned, in the future, it will be important to take this research further. First and foremost, it would be beneficial to continue this study with more only children of various ages included in the sample. Beyond this, a first step would be to more extensively examine the actual process of developing psychological kinship relationships, including the possible influence of stigmatization associated with being an only child. Finally, an "end-goal" measurement that has yet to be fully explored and understood within the populations of only children and individuals with siblings is mental health, specifically in terms of clinical diagnoses and the severity of those diagnoses. While this research project examined the psychological kinship relationships people do form, it does not investigate the implications for only children who are not able to form these psychological kinship relationships beyond looking at their overall levels of resilience. Considering clinical diagnoses further, it is important to acknowledge that forming these psychological kinship relationships could be an extremely difficult process for some people whose personalities and/or social skills are not inclined toward intimate relationship formation outside of the family structure. Acknowledgement of both the necessity of psychological kinship relationships in social support networks and the simultaneous difficulties associated with forming these relationships will be important for the development of future interventions dealing with these problems in a clinical setting.

This research also has future implications for child custody cases. If psychological kinship was factored into court proceedings when deciding with whom children will spend their time in either divorce or maltreatment cases, children might be better placed with individuals as either partial or full guardians with whom they are psychologically more close and secure. Similarly, step and half siblings in divorce proceedings should potentially be considered similarly to full biological siblings when deciding where children will live, and whether or not they will be split up. If these issues were considered, the well-being of children and families would be better integrated into the legal system by examining family dynamics more holistically.

As a result of kin availability, which can also be seen as lack of siblings in this research, it does appear that only children have to work harder than individuals with siblings to have robust social support networks. Still, these differences emphasize the important role of psychological kinship and the complexity of how one goes about defining his or her family members. While something common to most individuals, family is not something than can be easily defined or categorized for the very reason that it is category based upon relationships, which vary within each dyad even within the same household. What this research is able to demonstrate, is that without psychological kin relationships, both only children and those with siblings would be decidedly more disadvantaged in terms of both social support and resilience. Additionally, the fact that overall social support and resilience levels were high for both groups examined in this study suggests that psychological kinship is an important phenomenon that while possibly less commonly acknowledged, is still entirely natural. Dr. Maya Angelou stated "That nobody, / But nobody/ Can make it out here alone;" this research indicates that she was correct. If human beings do not have support in their lives, they simply cannot be expected to thrive.

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