

Potential Social Capital and Psychological Distress for Intermarried Persons

A Dissertation

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Abstract

Based on Bourdieu's social capital theory, two studies were conducted to investigate potential social capital and psychological distress for intermarried persons. Study 1 investigated potential social capital for intermarried persons. Study 2 examined the association between potential social capital and psychological distress. The two studies utilized the same data – the 2001 IHIS – including 11,483 intramarried persons and 1,392 intermarried persons. Generalized linear models were used for analyses. Study 1 found that interracial married persons were likely to have less potential social capital than intramarried persons. Study 2 found that the association between potential social capital and psychological distress was stronger for interracial married persons and intermarried persons with non-White spouse than for intramarried persons. The association was weaker for intermarried persons with White spouse than for intramarried persons. The study findings partially supported the previous literature raising a concern about a lack of potential social capital and consequent psychological distress for intermarried persons. The results supported the context-dependent nature of social capital posited by Bourdieu (1986).

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Introduction

Although people tend to marry within their cultural group (endogamy) traditionally, there has been significant increase in intermarriages referring to marital unions in which spouses come from a different racial, ethnic, or national background (Bratter & Eschbach, 2006; Breger & Hill, 1998a; Kalmijn & van Tubergen, 2010) in the United States. Wang (2012) reported that about 15% of new marriages in 2010 were intermarriages and about 8% of all married couples in the U.S. were intermarried in 2010. It is a significant increase compared to the percent of intermarriage in 1980 (3.2 %; Wang, 2012). Due to increasing immigration from Latin America, Asia, and other parts of the world, it is expected that the number of intermarriages will increase accordingly in the future (Lee & Edmonston, 2005).

There are two streams of literature to investigate intermarriage. One is in sociology and demography and it assumes (either stated explicitly or subtly) that the greater the percent of intermarriage between certain racial/ethnic groups, the stronger social acceptance between them (Eeckhaut, Lievens, van de Putte, & Lusyne, 2011; Lee & Edmonston, 2005). Accordingly, most of the studies on intermarriage in this stream have investigated intermarriage as an outcome variable, an indicator of existing racial/ethnic boundaries (Goldstein, 1999). For example, the low rate of marriages between non-Hispanic Whites and Blacks are considered as the existence of strong social boundaries, while, the higher marriage rates between non-Hispanic Whites and Asians or non-Hispanic Whites and Hispanics are often interpreted as social integration (Hohmann-Marriott & Amato, 2008). A limitation in the literature is that it is not sufficient to argue that the increase of intermarriage is evidence of social acceptance of intermarriages. The

rate of intermarriages shows individual decision-making of marriage, but it may not reflect social acceptance because the individual decision of intermarriage may be made regardless of social opposition.

Another research stream is in family studies and family therapy. Research in this stream has mostly investigated the effect of intermarriage at the individual or couple level and reported continuously that intermarried persons often confront social opposition to intermarriage and experience lack of social support and interactions, and consequently, they are often psychologically distressed (Charsley, 2005; Joanides, Mayhew, & Mamalakis, 2002; Molina, Estrada, & Burnett, 2004; Roer-Strier & Ben Ezra, 2006). A limitation of the studies is using small clinical or convenient samples (Bratter & Eschbach, 2006) because there is a possibility that samples in these studies may not represent intermarried persons in the general population.

In either stream of literature, what has not been investigated is whether intermarried persons are accepted (or not accepted) in the same manner as intramarried persons by their social groups. In addition, there exists a lack of knowledge about whether intermarried persons are psychologically more distressed than intramarried persons as a result of social opposition. The purpose of this study is to fill this gap in the literature; it investigates social capital for intermarried persons, which reflects social acceptance (Bourdieu, 1986) and the association between social capital and psychological distress for them in comparison with intramarried persons.

The Integrative Health Interview Series data (IHIS, Minnesota Population Center and State Health Access Data Assistance Center, 2010) of 2001 was used for analyses.

The data included total 12,875 married persons composed of 11,483 intramarried persons and 1,392 intermarried persons.

The purpose is addressed with two studies. Study 1 investigates potential social capital for intermarried persons. Study 2 examines the association between potential social capital and psychological distress. Generalized linear models were used for analyses. A general discussion of the two studies is presented after the two studies are presented.

Study 1: Potential Social Capital for Intermarried Persons

In recent decades, the number of married persons who choose their mates outside their own racial or ethnic groups has increased in the United States. According to Pew research center report (Wang, 2012), about 15% of all new marriages were intermarriages and 8.4 % of all married couples were intermarried in the United States in 2010. This intermarriage trend challenges the norm of endogamy, the preference of choosing mates in similar racial, ethnic, and socio-cultural groups.

Since the endogamy norm is strong in families (Kalmijn, 1998), intermarried persons often confront disapproval or rejection of their marriages by relatives, friends, and communities (Molina et al., 2004). The opposition from relatives, friends, and communities can lead to lack of support that could buffer stress under adversity (Cohen & Willis, 1985; Lin & Hung, 2007) and may decrease intermarried persons' accessibility to social resources (Hohmann-Marriott & Amato, 2008; Kalmijn, 1998; Sniderman & Hagendoorn, 2007).

Social capital has been used as an umbrella term that describes social relationships within groups of people including social support, access to social resources, and social networks (Almedom, 2005; de Silva, McKenzie, Harpham, & Huttly, 2005; Narayan, 1999; van Der Gaag & Webber, 2008). According to Bourdieu (1986) social capital refers to accessible resources embedded in durable social networks. Social capital is composed of social relationships that create both access to resources and the availability of a volume of resources. Individuals may want to utilize social capital to achieve their interests and well-being, but social capital is not distributed evenly within a social institution and access to social resources is determined within a social context

(Bourdieu, 1986). Considering the opposition from society, intermarried persons may not be able to have equal access to social resources relative to intramarried persons.

Although previous research highlighted the importance of interactions with relatives and communities for well-being of intermarried persons (Charsley, 2005; Joanides et al., 2002; Roer-Strier & Ben Ezra, 2006) and indicated potential lack of social capital for them (Hohmann-Marriott & Amato, 2008; Kalmijn, 1998; Sniderman & Hagendoorn, 2007), studies have rarely tested social capital possessed by intermarried persons empirically, especially using quantitative research methods. This study will investigate social capital of intermarried persons which reflects social acceptance using a population-based sample to fill the existing gap in the literature. The Integrative Health Interview Series data (IHIS, Minnesota Population Center and State Health Access Data Assistance Center, 2010) of 2001 will be used for analyses.

Theoretical Framework: Social Capital Theory

Social capital is one of the popular concepts in the current social science literature (Kawachi, Subramanian, & Kim, 2008; Portes, 1998; Szreter & Woolcock, 2004).

Although the definitions of social capital vary from researcher to researcher, the core of the concept is that it describes social relationships within groups of people (de Silva et al., 2005; Narayan, 1999). Portes (1998) indicated that “To possess social capital, a person must be related to others, and it is these others, not himself, who are the actual source of his or her advantage” (p.7). Thus, how individuals perceive their social capital represents how they appraise others as reliable social connections (Barrera, 1986; Cohen et al., 2000).

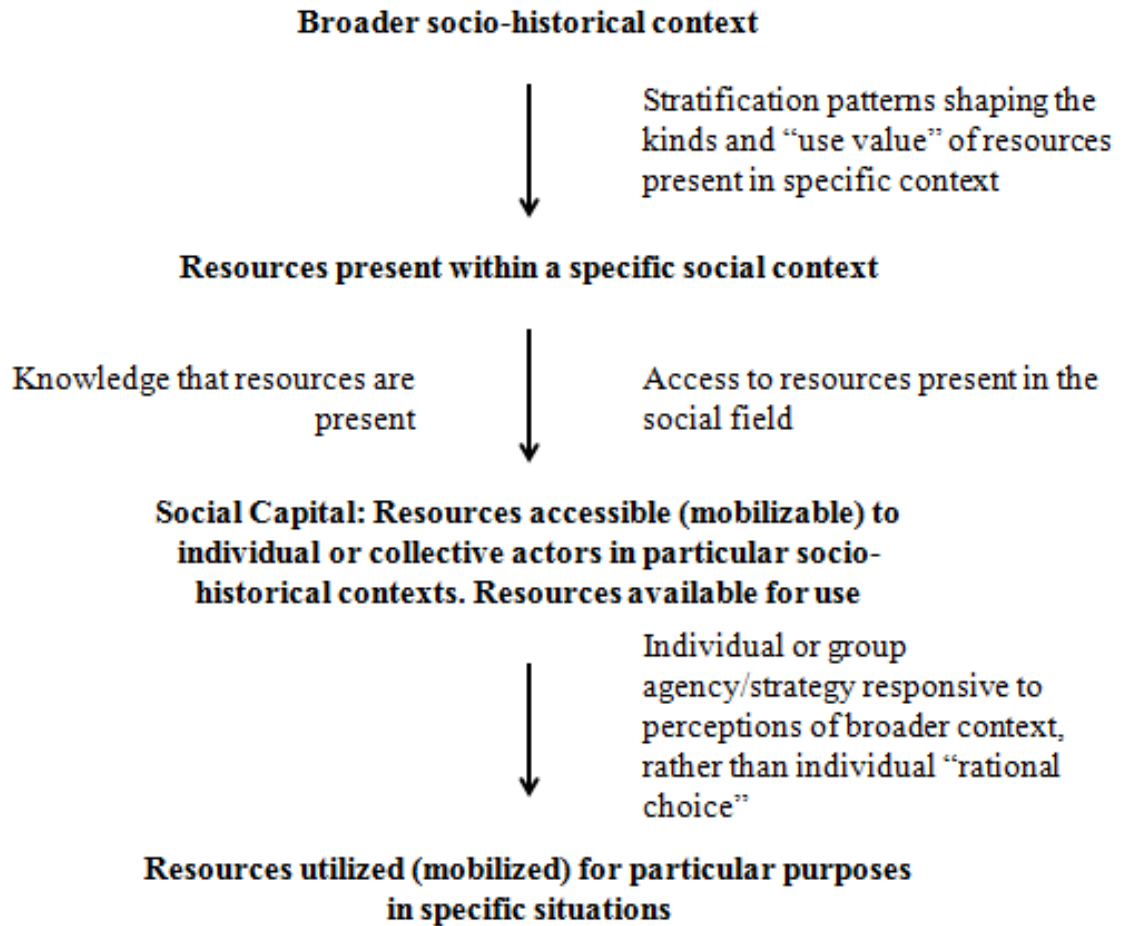
There are three prominent social capital theorists who contributed the most to the development of social capital research: Pierre Bourdieu, James Coleman, and Robert Putnam (Adam & Rončević, 2003; Grix, 2001; Moore, Shiell, Hawe, & Haines, 2005; Wall, Ferazzi, & Schryer, 1998). The ideas of Bourdieu and that of Coleman are based on sociology and consider social capital as an individual's benefit from social relationships (Moore et al., 2005; Portes, 2000). Bourdieu defined social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group – which provides each of its members with the backing of the collectivity-owned capital, a “credential” which entitles them to credit, in the various senses of the word (Bourdieu, 1986, p. 248).” According to Coleman (1988), on the other hand, social capital is defined by its function. He said “it is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors – whether persons or corporate actors – within the structure” (Coleman, 1988, p. 162).

On the contrary, Putnam's idea of social capital is rooted in political science and it approaches social capital in terms of a public asset of communities or nations (Moore et al., 2005; Portes, 2000). Putnam (1993) stressed social capital as a public asset and defined social capital as “features of social organization, such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit (Putnam, 1995).” The biggest difference of Putnam's definition from Bourdieu and Coleman is the consequence of social capital. For Putnam it is the success of democracy, while

Bourdieu and Coleman emphasized how social capital could predict individual achievement and well-being (Foley & Edwards, 1999).

This study will adopt Bourdieu's definition due to the following reasons. First, his definition is considered as the most theoretically refined (Adam & Rončević, 2003; Foley & Edwards, 1999; Portes, 1998; Ryan, Sales, Tilki, & Siara, 2008). According to Bourdieu (1986) social capital is composed of access to social resources and the volume of the resources. He clearly explained that social resources can be converted into social capital only if they are accessible through social relations. Second, Bourdieu highlighted the context-dependent nature of social capital (Foley & Edwards, 1999). He asserted that access to social resources is not distributed evenly within a social institution. Thus, individuals should constantly invest in establishing or reproducing their social relationships to secure the profits of membership, otherwise, their access to collectively-owned resources might be denied (Bourdieu, 1986). The assertion fits the general hypothesis of unequal access to social resources for intermarried persons within their social groups. If intermarried persons have equal access to social resources compared to intramarried persons, it may represent that they are accepted as "insiders" rather than "outsiders" within their social groups (Grix, 2001). Lastly, unlike Coleman's focus on formal social organizations as sources of social capital, Bourdieu gave equal emphasis on kinship and constructed social organizations (Foley & Edwards, 1999). Considering kinship has a crucial impact on intermarried persons' well-being (Molina et al., 2004), the current study needs to include kinship as a significant source of social capital.

Figure 1. Model of Social Capital



Note. The original chart is from Foley & Edwards (1999).

Figure 1 is a model of social capital illustrated by Foley and Edwards (1999) based on Bourdieu's social capital theory. The top of figure 1 represents the uneven distribution of social resources in a specific social context. The kinds of and use value of social resources are shaped in a given social context and access to social resources is decided in the context (context-dependent nature of social capital). The second arrow addresses knowledge of resource presence and access to present resources are required to convert social resources into social capital. If individuals know the presence of social resources and can access the social resources, it means that they possess social capital that is available for use. The bottom of the figure denotes that the possession of social capital does not mean that individuals always use social capital immediately. Thus, mobilizable resources (social capital) and utilized resources for particular purposes are distinguishable.

As illustrated in Figure 1, social capital consists of social resources and access to them. Foley and Edwards (1999) argued that measures of access are a better indicator of one's potential social capital than other measures of existing social resources. Since one must have access to social resources in order to convert it into social capital (Bourdieu, 1986), having more means of access represents a possession of greater social capital available for use. The current study will apply the Foley and Edwards' model as a theoretical framework and potential social capital will be measured by access measures accordingly.

The sources of potential social capital vary. Social ties to family, relatives, friends, and significant others are important sources of social capital (McKenzie, Whitley, & Wiech, 2002; Wellman & Frank, 2001; Woolcock & Narayan, 2000). In addition,

constructed social institutions such as voluntary associations, religious institutions, and communities also serve as sources of social capital (Eastis, 1998; Schulman & Anderson, 1999; Wood, 1997). Social relations as the basis of social capital can be classified into three types: (a) intimate social relationships, (b) participation in formal organizations, and (c) leisure activities based on social contact (House, Umberson, & Landis, 1988). Social relations increase potential of individual well-being by providing social, economic, and political advantages (Furstenberg, 2005; Lin & Erickson, 2008).

Bourdieu (1986) assumed that access to social resources is not distributed evenly, and consequently, not all community members benefit from social resources. Access to the social resources of social institutions might be available exclusively to members who are obedient to social norms and those having commonalities with other members (McKenzie et al., 2002; Turner, 1999). Thus, intermarried persons who violated the endogamy rule might experience disapproval and be denied access to the social resources of their social groups.

Furstenberg (2005) argued that spousal family and community backgrounds also serve as the foundation of social capital. According to Furstenberg (2005), spouses are likely to generate greater social capital when their relatives and communities share similar cultural backgrounds. Intermarried persons often report that they experience lack of support and feel marginalized from their partner's communities (Kalmijn & van Tubergen, 2009; Molina et al., 2004; Roer-Strier & Ben Ezra, 2006). Because persons having different racial and ethnic backgrounds from majority of a community are more likely to be considered a threat to the cohesive community (Sniderman & Hagendoorn, 2007), people tend to make distinctions between "Us and Them" based on their racial and

ethnic groups (Tselious & Eisler, 2007). If intermarried persons are marginalized from the boundary of “Us” of their partner’s racial or ethnic groups, it may be hard for them to access resources of their in-law families and communities (Borgatti, Jones, & Everett, 1998; McKenzie et al., 2002).

There are racial and ethnic variations in social capital. Since cultural norms such as expectations and norms about interpersonal relationships differ by racial and ethnic groups, there may exist differences in how individuals seek and utilize social resources (Kim, Sherman, & Taylor, 2008; Taylor, Sherman, & Kim, 2004). Kim and McKenry (1998) compared social capital among Blacks, Asian Americans, non-Hispanic Whites, and Hispanics, and found that there were different levels of social capital and patterns of seeking social capital among the groups. For example, Blacks preferred social interactions in religious communities and local institutions compared to Hispanic Whites, on the other hand, non-Hispanic Whites were more likely to be open to non-family members to ask for help in crisis (Kim & McKenry, 1998).

Finally, research has shown that gender, age, socioeconomic status, immigrant status, number of children at home, and general health are closely associated with potential social capital. For example, gender role influences social relationships, especially kinship, which makes a difference in potential social capital between male and female (House et al., 1988). Older persons could be more isolated from relatives compared to younger persons (Boisjoly, Duncan, & Hofferth, 1995). Persons with higher level of education, family income and employed persons tend to have larger social networks and more contact with network members, and consequently, have more potential social capital (Cobb & Kasl, 1977; Fischer, 1982; Veroff, Douvan, & Kulka,

1981). Immigrants might have fewer potential social capital relative to natives (Bratter & Eschbach, 2005; Charsely, 2005; Kao, 2005), but their intense involvement in same-ethnic immigrant groups could increase their potential social capital (Kao, 2005). Having more children at home might decrease parents' involvement in social activities, but it could increase support exchange among relatives and friends (Zhang, 2010). Health is positively associated with participation in group activities, but could be negatively associated with contact with relatives (Boisjoly et al., 1995). Therefore, these variables were used as covariates in analyses.

Literature Review

Trend of Intermarriages

According to Kalmijn (1998), intermarriages have been an attractive issue for scholars since it reflects boundaries among groups in a society. He asserted that intermarriage is an indicator of social boundaries which reflects members' acceptance of different racial and ethnic groups as social equal. Consequently, there has been a rich literature on describing the demographic characteristics of intermarried persons and patterns of intermarriages to examine social changes in racial and ethnic boundaries (Kalmijn, 1998; Kalmijn & van Tubergen, 2010; Lee & Edmonston, 2005).

Literature on intermarriages has focused mainly on four racial/ethnic groups: non-Hispanic Whites, Blacks, Asians, and Hispanics (Bratter & King, 2008; Kalmijn & Van Tubergen, 2000; Qian, 1997; Qian et al., 2001; Zhang & van Hook, 2009). In 2000, about seven percent of all married couples in the U.S. were intermarried: the rate of intermarriage for non-Hispanic Whites was 2.7 %, 7.0% for Blacks, 16.0% for Asians, and 14.0% for Hispanics (Lee & Edmonston, 2005). Marriages between non-Hispanic

Whites and Blacks have been investigated the most due to historical conflicts and racism between the groups (Batson, Qian, & Lichter, 2006; Chito Childs, 2005; Yancey, 2007) although the percent of the intermarriages is relatively small. On the contrary, intermarriages regarding Asians and Hispanics have caught attention recently in accordance with the diversified U.S. population and the higher rates of intermarriages in those groups (Bratter & King, 2008; Zhang & van Hook, 2009). Most intermarriages in the U.S. involve a White spouse and a non-White spouse, which is a typical intermarriage (Lee & Edmonston, 2005). Whereas, intermarriages between both spouses from racial/ethnic minority groups are relatively infrequent (Lee & Edmonston, 2006; Wang, 2012).

There is a significant gender difference in intermarriage by race and ethnicity. Among Blacks, men are more likely to intermarry than women, whereas, women tend to intermarry more than men among Asians (Lee & Edmonston, 2005; Wang, 2012). On the contrary, there is no significant gender difference in intermarriages among Whites and Hispanics (Lee & Edmonston, 2005; Wang, 2012).

There are geographical differences in the rate of intermarriage in the U.S. The rate of intermarried couples in all married couples is the highest in the West and the lowest in the Midwest (Lee & Edmonston, 2005; Wang, 2012). There also exist geographical differences in the racial/ethnic composition of intermarriage. Intermarriages between Whites and Blacks were the most prevalent in South and those between non-Hispanic Whites and Hispanics were the most prevalent in the West (Lee & Edmonston, 2005; Wang, 2012). The patterns correspond with the geographical distributions of racial and ethnic minority groups (Wang, 2012). Where intermarried

persons live may influence how they interact with community because it determines whether they are local minority beyond being minority from a larger societal perspective (Negy & Snyder, 2000).

Social Acceptance and Opposition to Intermarriage

Research in family studies and family therapy, interview-based qualitative research, have constantly reported social rejection or negative reactions for intermarried persons (Chito Childs, 2005; Killian, 2001; Khatib-Chahidi, Hill, & Paton, 1998; Hibbler & Shinew, 2002; Rosenblatt & Stewart, 2004; Yancey, 2007). They reported that intermarried persons frequently experienced opposition from family, friends, and communities. A limitation of the studies is that they mostly used small clinical or convenient samples (Bratter & Eschbach, 2006). Participants in the studies might have experienced stronger social opposition, which motivated them to participate in research. Considering that those participants might not be a representative sample of intermarried persons, social opposition to intermarriage in general population could be less prevalent than the previous studies indicated.

Though the Gallup poll of public acceptance of intermarriage (Ludwig, 2003) reported that the majority of Black, Hispanic, and non-Hispanic White respondents would approve intermarriages for their children or grandchildren, it also indicated that many people still do not support intermarriage. For example, 30% of non-Hispanic White respondents were opposed to intermarriage, which is about three times of that of Black and Hispanic respondents. Lewis and Yancey (1995) also found that intermarried non-Hispanic Whites were less supported by their families compared to intermarried Blacks or Mexicans.

With regard to age, only 45% of those who were age 65 or older would approve of intermarriage, whereas more than 80% of those under age 30 would accept it (Ludwig, 2004). These percentages indicate two points. First, it shows that a substantial number of people (e.g., 55% of those age 65 or older) still oppose to intermarriage. Second, the different attitudes toward intermarriage between generations might cause intergenerational tension and conflict around intermarriages.

According to Goldstein's estimation (1999), nearly one-fifth of adult Americans have kin in intermarriage. Kinship is mostly involuntary by nature, which means having a kin relationship with a person from a different racial/ethnic group may not always be favorable but forced for family members (Goldstein, 1999). Studies reported that many intermarried persons experience difficulties in their relationships with relatives (Bustamante et al., 2011; Hibbler & Shiness, 2002; Joanides et al., 2002; Khatib-Chahidi et al., 1998; Killian, 2001; Molina et al., 2004; Roer-Strier & Ben Ezra, 2006; Rosenblatt & Stewart, 2004).

Intermarried persons often experience negative reactions and disapproval from their relatives when they announce their decision to marry a partner from a different racial or ethnic group (Khatib-Chahidi et al., 1998; Killian, 2001; Joanides et al., 2002; Molina et al., 2004; Rosenblatt & Stewart, 2004). The initial disapproval of intermarriage is likely to be weakened after marriage (Joanides et al., 2002; Rosenblatt & Stewart, 2004), but in some cases, rejection from relatives remains even after marriage (Hibbler & Shiness, 2002; Joanides et al., 2002). Consequently, intermarried persons often suffer from lack of support from relatives (Hibbler & Shiness, 2002).

Relatives are primary sources of social capital for married persons (Molina et al., 2004). If relatives are not supportive of intermarried persons, it may lead to an absence of a stress buffer to adversity (Cohen & Willis, 1985; Lin & Hung, 2007). In addition, relationships with relatives can be a major source of stress for intermarried persons (Bustamante et al., 2011). Even if intermarried persons could hang out with their relatives, they are likely to experience isolation and marginalization within families (Bustamante et al., 2011; Hibbler & Shiness, 2002; Joanides et al., 2002). In addition, Hohmann-Marriott and Amato (2008) indicated that intermarried persons were having distressing relationships with their parents and in-laws. A lack of shared language or having different cultural backgrounds could trigger isolation or exclusion from spouse's family members (Bustamante et al., 2011; Roer-Strier & Ben Ezra, 2006).

Immigrant status, which is generally accompanied by international marriages, also affects social interactions of intermarried persons. About 30% of interracial or interethnic married couples in the U.S. involved a non-citizen spouse in 2010 (Wang, 2012). Immigrant spouses are more likely to experience challenges than their non-immigrant spouses due to different socio-cultural environments. In addition, the physical absence of their own social networks is salient if they did not immigrate accompanied with their families of origin (Baltas & Steptoe, 2000). Consequently, in-law families play an important role in their well-being. They may help immigrant spouses' adjustment to their socio-cultural environments by conveying cultural norms to the spouses (Roer-Strier & Ben Ezra, 2006). On the other hand, if they are reluctant to support intermarriages and have conflicts with the intermarried couples, it may threaten the stability of the couple relationship (Horowitz, 1999; Joanides et al., 2002).

Friends and communities are another important source of social capital for intermarried persons. Intermarriages often lead to negative reactions from friends and communities due to different cultural beliefs, values, and traditions in mate selection (McFadden & Moore, 2001; Zebroski, 1999). Intermarriages could be considered a violation of “goodness of fit” with regard to social standards of mate selection (Lewandowski & Jackson, 2001, p. 289) and opposition to intermarriages from friends and communities are based on the social norms of goodness of fit which regulate mate selection (Forgas, 1993; Lewandowski & Jackson, 2001).

Killian (2002) also found strong opposition to intermarriage from close friends in her qualitative study of intermarried couples. In her study, participants mentioned that even their friends who were intermarried did not support their choice of intermarriage and tried to reinforce the endogamy rule. Hibbler and Shiner (2002) also found that friends of intermarried persons disengaged from them, which had a significant impact on their social activities. In their study, the rejection from their friends significantly shrank the range of social networks of intermarried persons. They found that intermarried persons were less likely to participate in public leisure activities because of uncomfortable reactions of friends and community. If friends react positively to intermarriage, it contributes to the increase of intermarried persons’ capacity of withstanding social opposition (Bryant & Conger, 1999; Sprecher & Felmlee, 2000). The approving social network of friends provides emotional and instrumental support when it is required (Clark-Ibáñez & Felmlee, 2004).

Intermarried persons often report their experiences of negative social reactions from their neighborhoods, workplaces, and churches (Hibbler & Shiner, 2002; Molina et

al., 2004). Commonly experienced negative reactions are such as angry stares, verbal attacks, disapproving expressions and people taking a second look (Kilian, 2001; Rosenblatt & Stewart, 2004). Strong external strains from communities may cause social isolation and the decline of physical and emotional well-being of the intermarried persons (Bratter & Eschbach, 2006; Hibbler & Shiner, 2002; Molina et al., 2004).

Research Questions and Hypotheses

Although literature is rich in describing the patterns of intermarriages and raising a concern about lack of social capital for intermarried persons, few studies have focused on social capital for intermarried persons. The purpose of this study is to garner an in-depth understanding of social capital for intermarried persons. Specifically, the current study will investigate whether intermarriage affects access to social resources representing potential social capital by comparison with intramarried persons. Research questions and hypotheses of the study are as follows:

Research question 1: Is there a difference in potential social capital between intramarried and intermarried persons?

Hypothesis 1: Intermarried persons are likely to have less potential social capital compared to intramarried persons.

Bourdieu (1986) stated that social capital is not distributed evenly in a society. I expect that intermarried persons are likely to have less potential social capital than intramarried persons based on previous research indicating social disapproval of intermarriage. If Hypothesis 1 is supported, it would mean that intermarried persons are not approved as insiders of their society, thus not having the same access to social resources with intramarried persons. In my knowledge, the only study stating a lack of

social capital for intermarried persons using quantitative data is the study about relational quality in intermarriage and cohabitation by Hohmann-Marriot and Amato (2008), but social capital was not a focus of the study nor tested controlling for other demographic characteristics in their study. Thus, answering the research question will demonstrate whether results from qualitative research indicating lack of social capital for intermarried persons are supported by a population-based sample of intermarried persons.

Research question 1 will be investigated in two ways: (a) using intermarriage as a single entity regardless of whether it is interracial, interethnic, or international in analytic model; and (b) using the three aspects of intermarriage (i.e., interracial, interethnic, and international marriages) as types of intermarriage and enter them as separate variables in analytic model. In the U.S., social acceptance or disapproval of being interracial, interethnic, or international married might be different from one another (Fu, Tora, & Kendall, 2001), and consequently, it would affect intermarried persons' potential social capital. The former analysis will provide us evidence of whether intermarried persons have less potential social capital relative to intramarried persons due to social disapproval of intermarriage, and the latter will reveal if the three types of intermarriage are regarded differently from each other with regard to social disapproval of intermarriage.

Research question 2: Does being intermarried with non-Hispanic White spouse influence potential social capital?

Hypothesis 2: Intermarried persons with non-Hispanic White spouse are likely to have more potential social capital relative to intermarried persons with non-White spouse.

Previous literature indicated that spouse's race/ethnicity is an important factor for social capital. Most intermarriages involve a non-Hispanic White spouse, which is a

typical intermarriage (Lee & Edmonston, 2005). If intermarriage with non-Hispanic White spouse is considered as a good-fit within a community due to its prevalence, it might lead to greater acceptability to the intermarriage in the community relative to intermarriage with a minority spouse. Thus, I expect that intermarried persons with non-Hispanic White spouse are more likely to have potential social capital than those with non-White spouse due to the greater acceptability. If Hypothesis 2 is supported, it would mean that intermarried with non-Hispanic spouse is more accepted than intermarried with non-White spouse by social groups, which is another social context for intermarried persons.

Method

Data

This study used data from the Integrated Health Interview Series (IHIS), which is based on the U.S. National Health Interview Survey (NHIS). The NHIS data are collected annually through personal household interviews. There are three components of the NHIS: the Family Core, the Sample Adult Core, and the Sample Child Core. The Family Core collected information about household composition, socio-demographic characteristics, and the basic indicators of health status from all household members. The Sample Adult and Child Cores randomly selected one sample adult and one sample child (if any children under age 18 were present in the household) to collect information about health issues in detail (Centers for Disease Control and Prevention, 2003). In this study, only the Family Core and the Sample Adult Core components were used. Since the survey included only one Sample Adult per household, dyadic analyses were not available, which is a limitation of the proposed study.

The IHIS is a web-based data which recoded the NHIS from 1969 to the present using consistent and simplified coding schemes (Johnson, Blewett, Ruggles, Davern, & King, 2008). The purpose of the IHIS is to increase consistency of the NHIS in terms of topics and variables over time, which makes the IHIS a user-friendly dataset compared to using the original NHIS (Minnesota Population Center and State Health Access Data Assistance Center, 2011). The IHIS data of 2001 was used since it provides information on potential social capital. Because potential social capital items were surveyed only in 2001, it only allowed for cross-sectional analyses, which is another limitation of the current study. I used the IHIS instead of the original NHIS 2001 since I expect that a longitudinal study might be available if the NHIS collects similar information in the future and then using the IHIS would make it efficient to facilitate the longitudinal study.

The IHIS 2001 consisted of 38,932 households. Among them, I first selected data of households of married couples. A married couple was defined based on the relationship to household reference person. There might be more couples in a household considering the number of married participants in the survey, but it was not available to clarify who were couples if one was not a spouse of the household reference person since family relationship was coded based on the relationship to householders. Thus, sample individuals in the current study were either household reference persons or their spouses who were in legal marital relationship. Then, I selected participants who responded to the Sample Adult Core questionnaires including potential social capital questionnaire (“respondents” hereafter).

The NHIS collected the information of race and ethnicity following the guideline from the Office of Management and Budget (OMB, 1997). Race refers to individuals’

physical characteristics such as skin color and ethnicity is usually defined as cultural traits such as language and religion (Lee & Edmonston, 2005). The standards for the classification of federal data on race and ethnicity suggested using ethnicity as separate from race identification for collecting federal data. In the 2001 survey, race was classified by eight racial groups according to general perception of physical characteristics: White, Black, Alaskan native/American Indian, Chinese, Filipino, Asian Indian, other Asian, and other race. Ethnicity was asked as a separate question from race and respondents identified whether they were non-Hispanic or from one of nine Hispanic origins (Mexican, Mexican-American, Puerto Rican, Cuban/Cuban American, Dominican, Central or South American, other Latin American, other Spanish, and multiple Hispanic). I selected three racial/ethnic groups, non-Hispanic Whites (Whites from here on), non-Hispanic Blacks (Blacks from here on), and Mexican/Mexican-American (Mexicans from here on) because they were the most investigated racial/ethnic groups in literature (Bratter & King, 2008; Kalmijn & Van Tubergen, 2000; Qian, 1997; Zhang & van Hook, 2009) and had sample size large enough for statistical analyses. Although Mexican/Mexican American was not regarded as a racial group in the survey, the group was considered as an independent group since Mexican ethnicity has been considered mutually exclusive from other racial groups in literature on intermarriage (Bratter & Eschbach, 2006; Kalmijn, 2012; Qian, 1997; Rosenfeld, 2002). Homosexual couples were excluded due to their small size ($n = 5$). As a result, the sample included a total of 12,875 respondents.

Measures

Among the variables used in the study, potential social capital variables were reported only by respondents and other variables were reported by both respondents and their spouses.

Potential social capital

The IHIS 2001 included six questions about potential social capital. According to Bourdieu (1986), social capital is composed of access to social resources and the volume of the resources. Foley and Edwards (1999) argued that measuring access to social resources would reflect one's potential social capital well. In the current study, potential social capital is defined as accessible resources of relatives, friends, and community. The operational definition of potential social capital is one's access to social resources reflecting the possession of social capital; potential social capital was measured by one's contacts with relatives, friends, or neighbors and participation in community activities or events representing accessible social relations. Respondents were asked "During the past 2 weeks, did you (a) get together with any relatives not including those living with you, (b) talk with any relatives on the telephone not including those living with you, (c) get together socially with friends or neighbors, (d) talk with friends or neighbors on the telephone, (e) go to church, temple, or any other place of worship for services or other activities, and (f) go to a show or movie, sports event, club meeting, class or other group event?" Responses were dummy variables, either yes (1) or no (0). Potential social capital variable was generated by counting the number of yeses for the six questions, ranged from 0 to 6 (Mean = 4.65, *SD* = 1.31).

Intermarriage

Intermarriage variable was created using both spouses' race, ethnicity, and nationality. The respondents with spouse having different race, ethnicity, and/or nationality were coded as intermarried persons. These three aspects (i.e., race, ethnicity, and nationality) which define intermarriage were then used as types of intermarriage in further analyses. Another variable related to intermarriage used in the study is whether having a White spouse for intermarried persons. The following explains how variables race, ethnicity, nationality, intermarriage and its types, and intermarried with White spouse were measured or generated.

Race. Participants were asked to select one or more racial category to which they identified. Among respondents about 81% of them were Whites and 9% of them were blacks. Among the spouses of respondents, about 88% of them were Whites and 9% of them were Blacks. The spouses of respondents of the other races (i.e., Alaskan native/American Indian, Chinese, Filipino, Asian Indian, other Asian, and other race) were less than 1% for each.

Ethnicity. Ethnicity was identified based on Hispanic ethnicity. Participants were required to select their ethnic origin among 10 ethnic groups previously mentioned. Among the respondents of the study, 10% of them were Mexicans and the other 90% were non-Hispanic ethnicity. In terms of race, Mexican respondents in the study identified as White. Among the spouses of respondents 89% of them were non Hispanic origin, about 10% were Mexican, and other Hispanic ethnicities were less than 1% for each.

Respondents' racial/ethnic group was used as a covariate by facilitating two dichotomous variables, Black and Mexican, with White as reference group.

Nationality. Nationality was identified based on whether participants were born in the U.S. or other regions (foreign-born). Thus, participants were categorized either (a) U.S. born, or (b) immigrant. About 89% of the respondents were U.S. born and about 88% of their spouses were U.S. born. There could exist intermarried couples among the sample consisting of two non U.S. born spouses from different nations (i.e., France and German). However, those couples were not identifiable based on the data.

Intermarriage. The intermarriage variable was created using the variables of race, ethnicity, and nativity. First, the types of intermarriage were generated using the three variables. If respondents and their spouses reported different races, the couple was coded as *interracial* married couple (0 = intramarried, 1 = interracial married). If respondents and their spouses reported different ethnicities (i.e., White or Black respondents with a spouse having Hispanic ethnicity, or Mexican respondents with a non-Hispanic spouse or spouse having different Hispanic ethnicity) the couple was coded as *interethnic* married couple (0 = intramarried, 1 = interethnic married). If one spouse was an immigrant and the other was a U.S. born, the couple was coded as *international* married couple (0 = intramarried, 1 = international married). Then, intermarriage variable was generated based on the three types of intermarriage: respondents who were categorized as intramarried if all the three types were defined as intramarried persons and the others were defined as intermarried (0 = intramarried, 1 = intermarried). The operational definition of intermarried persons in the study is that persons who are in interracial, interethnic, and/or international marital relationship and from White, Black, or Mexican

groups. There were 340 respondents whose marriages were interracial, 488 respondents whose marriages were interethnic marriage, and 876 respondents whose marriages were international. The number of total intermarried persons was 1,392. Since some participants were in more than one type of intermarriage (e.g., interracial and international married), the summed number of the three types of intermarried persons exceeds the number of total intermarried persons. There was no collinearity among the three types of intermarriage. See Table 1 (p. 27) for the detail distribution of intermarried persons according to the three types of intermarriage.

In terms of race identification, there was a concern if some Mexican respondents were misidentified as interracial married in case their Hispanic spouse identified themselves as other race (Lee & Edmonston, 2005). As mentioned above, all Mexican respondents identified as White and only five of their Hispanic spouses identified as other race. Although these five couples reported different race from their spouse, I coded those five cases as intramarried since all the five spouses identified Mexican ethnicity.

Intermarried with White spouse. Intermarried with White spouse was generated to indicate whether an intermarried person had a non-Hispanic White spouse and dummy coded-variable (0 = intramarried or intermarried with non-White spouse, 1 = intermarried with White spouse). Among intermarried persons in the sample, about 45% of them were intermarried with non-Hispanic White spouse (White spouse from here on). Those who were intermarried with White spouse also included White respondents since White international married respondents could have a White spouse.

Table 1. Distribution of Intermarriage by Type

Type of Intermarriage	Frequencies	%
Interracial ^a	177	12.72
Interethnic ^b	282	20.26
International ^c	665	47.77
Interracial and interethnic	57	4.09
Interracial and international	62	4.45
Interethnic and international	105	7.54
Interracial, interethnic, and international	44	3.16
Total	1,392	100.00

Note. ^aInterracial marriage: Interracial marriage refers to a marriage between spouses from different racial groups. ^bInterethnic marriage: Interethnic marriage refers to a marriage between spouses from different Hispanic ethnicities or between non-Hispanic and Hispanic spouses. ^cInternational marriage: International marriage refers to a marriage between U.S. born spouse and immigrant spouse.

Covariates

Gender. *Gender was used as a dichotomous variable (0 = male, 1 = female). Among the respondents, 52.90% were female and the other 47.10% were male.*

Age. The range of age of respondents was from 18 to 85 years old. Mean age of the respondents was 47.56 years old ($SD = 15.32$).

Education. Respondents were asked their highest level of school completed or degree received. There were 22 response categories in the survey: never attended/kindergarten only, 1st to 12th grade with no diploma (12 categories), high school graduate, GED or equivalent, some college without degree, associate degree in occupational, technical, or vocational program, associate degree in academic program, Bachelor's degree, Master's degree, profession school degree, and doctoral degree. Since the original categories were not ordinal, I recoded them into 4 categories based on previous studies using the same survey (i.e., Bratter & Eschbach, 2005, 2006): (a) less than high school, (b) high school, (c) some college, and (d) college or advanced degree. About 46% of the respondents had less than high school education, 28% had high school education, 17% had some college education, and 9% had college or advanced degree. The latter three were treated as dichotomous variables using less than high school as reference group.

Employment. Respondents were asked about their working status during the past week.

The National Center for Health Statistics created imputed variables for missing data of family income and personal earning using multiple-imputation methodology.

Employment status was one of the imputed variables. Employment variable had two categories: employed and unemployed. The IHIS categorized respondents as employed if they reported working for pay in the past week and others were categorized as

unemployed. Employment was thus used as a dichotomous variable in analyses (0: unemployed and 1: employed). About 70% of respondents were employed.

Family income. Respondents were asked the amount of total combined family income in the previous year from all sources including wages, salaries, Social Security or retirement benefits, and help from relatives, before taxes. The range of family income was none to \$70,000 and over. It was coded as an interval variable in the original survey with 11 income level categories (see Table 2 on p. 35). As similar with employment status family income was imputed to replace missing data by the National Center of Health Statistics. Mean family income was about \$52,382 ($SD = 24,200.18$) when the median of each income category was used to represent the continuum of income levels. Log-transformed median of each category was used for analyses because family income was not normally distributed.

Number of children. Number of children under age 18 at home was calculated based on the relationship with respondents reported by members of household. The range of number of children was from 0 to 11 (Mean = 0.90, $SD = 1.17$).

General health. Participants were asked, “Would you say your health in general is excellent, very good, good, fair, or poor?” The response ranged from 1 (poor) to 5 (excellent). Mean of general health was 3.84 ($SD = 1.04$).

Region of residence. Region of residence was coded during survey process. The location of the housing unit of respondents was categorized into 4 regions corresponding to the U.S. regions categorized by the Census Bureau. Four regions were *Northeast* (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania), *Northcentral/Midwest* (Michigan, Ohio, Indiana,

Illinois, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, and Nebraska), *South* (Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Mississippi, Alabama, Texas, Arkansas, Oklahoma, and Louisiana), and *West* (Washington, Alaska, Oregon, California, Hawaii, Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah and Nevada). About 17% of the respondents lived in Northeast, 25% in Northcentral/Midwest, 37% in South, and 21% in West. Region of residence was used as three dichotomous variables with Northeast as reference region.

Analyses

The descriptive statistics of the variables and the comparison between intermarried and intramarried persons were performed as preliminary analyses. The dependent variable, potential social capital, was not normally distributed (see Figure 2 on p.32) and therefore, the classical linear regression model was not appropriate to be used in the study. Thus, I applied a generalized linear model (GLM). GLMs relax the assumptions of linear regression model, the normal distribution of response variable and the linear relationship between dependent and explanatory variables (Wu, 2005). The matrix form of GLM is written $E(Y) = \mu = g^{-1}(\eta)$ where $g(\cdot)$ is the link function. The form has three components which characterize GLMs (Hardin & Hilbe, 2012):

1. The random component: Y , a random component for the response variable has a distribution which belongs to the exponential family.

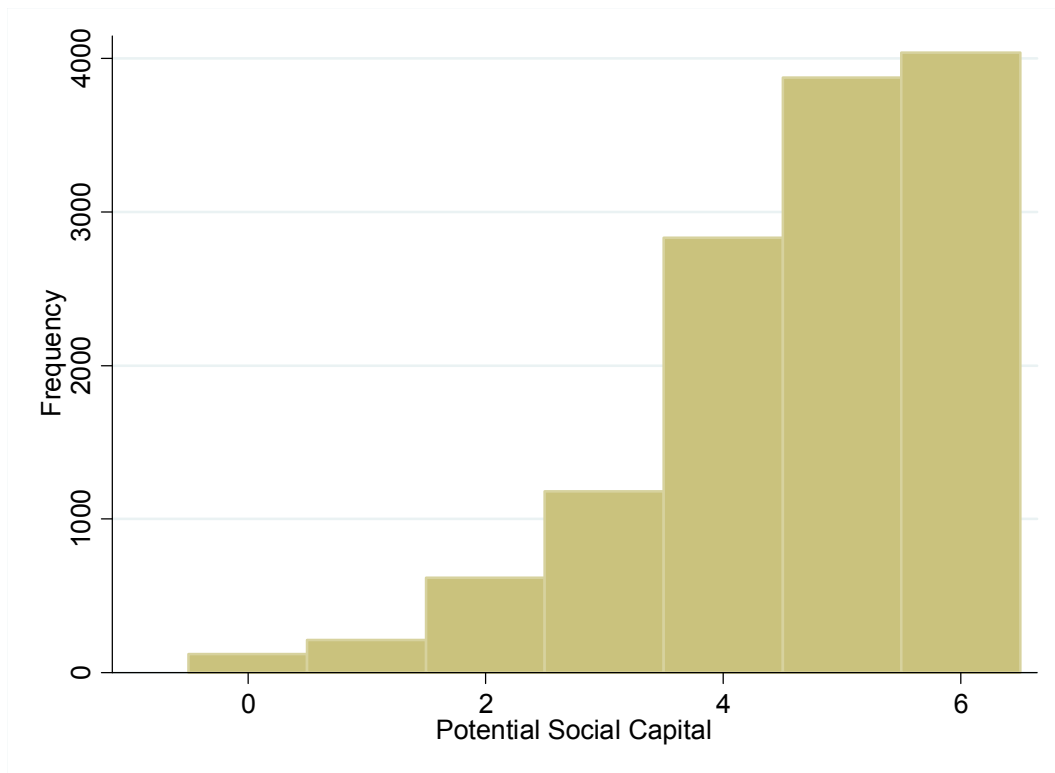
2. The linear systematic component: η is a linear predictor which is a linear combination of explanatory variables X and the corresponding parameters β , $\eta = X\beta$.

3. Link function: link function $g(\cdot)$ relates the linear predictor to the expected response, $g(\mu) = \eta$.

The basic principle of GLMs is that the random component with non-normal distribution can be explained by linear predictors through a link function which connects the mean $\mu = E(Y)$ to the linear predictor $X\beta$.

I employed a GLM with Poisson distribution and identity link to examine Research questions 1 and 2. Since the potential social capital variable was generated by counting the number of accesses, I tested Poisson and negative binomial distributions to identify the optimal GLM and found that Poisson distribution was preferred. Among link functions applicable to Poisson distribution, identity link had the best model fit in terms of deviance, Akaike information criterion (AIC), and Bayesian information criterion (BIC). A model with lower values of deviance, AIC and BIC is preferred (Hardin & Hilbe, 2012). Multicollinearity among the explanatory variables was not present in the data. Correlations among the variables used in the GLM are displayed in Appendix 2. Stata 12.1 was used for analyses.

Figure 2. Distribution of Potential Social Capital



Missing data

There were some missing data in the sample for nationality ($n = 15$), education ($n = 90$), and general health ($n = 12$). A total of 111 respondents had missing data. I imputed missing data using multiple imputation and compared the results of a generalized linear model with missing data and missing-imputed data. It revealed that the average relative variance increase due to non-response after missing imputation was 0.2% and the largest fraction of missing information about coefficient estimates due to non-response was 1%. In addition, most of differences in coefficient estimates occurred in the third or fourth decimal place. Since the additional information I could gain from missing imputation was relatively small and missing imputation made it difficult to attain the information on model fit statistics for generalized linear models, I used the sample without missing data for analyses. Using listwise deletion can be a simple and efficient way to deal with missing data if the discarded cases are not significantly influential (Schafer & Graham, 2002).

Results

Characteristics of Sample

The comparison of the demographic characteristics between intramarried and intermarried persons is also presented in Table 2 (p. 35). There were more female respondents in both intramarried and intermarried groups (53.03% and 51.72%, respectively). The majority of intramarried persons were White (82.85%), but only about 65% of intermarried persons were Whites. Within intramarried persons, Blacks were about 9% and the other 8% were Mexicans. Whereas, within intermarried persons, Mexicans were about 25% of the respondents and the other 10% were Blacks. The

difference in the percentages of the racial/ethnic groups between intramarried and intermarried persons was statistically significant, $\chi^2 (2) = 409.72, p < .001$. Most of the intramarried persons were U.S. born (91.49%), but only 69% of intermarried persons were U.S. born, $\chi^2 (2) = 653.85, p < .001$. Intermarried persons were likely to have higher educational attainment relative to intramarried persons, $t(12,873) = 3.67, p < .001$. Intermarried persons were more likely to be employed compared to intramarried persons, $\chi^2 (2) = 34.91, p < .001$. Mean family income of intramarried persons was \$52,346 ($SD = 24,207.05$) and that of intermarried persons was \$52,679 ($SD = 24,150.08$), which were not significantly different from each other. About 17% of intramarried persons lived in Northeast, 27% in Northcentral/Midwest, 37% in South, and 19% in West. On the other hand, about 37% of intermarried persons lived in West, 15% in Northeast, 14% in Northcentral/Midwest, and 34% in South. The difference in the percentages of regions between intramarried and intermarried persons was statistically significant, $\chi^2 (3) = 276.88, p < .001$. The mean age of intermarried persons was about 44 years old ($SD = 14.94$) and was younger than that of intramarried persons (Mean = 48.00, $SD = 15.31$), which was statistically significant, $t(12,873) = 9.46, p < .001$. Intermarried persons were likely to have more children at home (Mean = 1.04, $SD = 1.20$) relative to intramarried persons (Mean = 0.89, $SD = 1.17$), which was a statistically significant difference, $t(12,873) = 4.69, p < .001$. Intermarried persons also had better general health (Mean = 2.95, $SD = 1.02$) compared to their counterparts (Mean = 2.83, $SD = 1.04$), which was also a statistically significant difference, $t(12,873) = 4.02, p < .001$.

Table 2. Demographic Characteristics (N = 12,875)

Variable	Total sample		Intramarried ^a		Intermarried ^b	
	N	(%)	n	(%)	n	(%)
Male	6,065	47.11	5,393	46.97	672	48.28
Female	6,810	52.89	6,090	53.03	720	51.72
White	10,422	80.95	9,514	82.85	908	65.23
Black	1,166	9.06	1,033	9.00	133	9.55
Mexican	1,287	10.00	936	8.15	351	25.22
U.S. born	11,464	89.04	10,506	91.49	958	68.82
Education						
Less than high school	5,875	45.63	5,297	46.13	578	41.52
High school	3,596	27.93	3,194	27.82	402	28.88
Some college	2,221	17.25	1,964	17.10	257	18.46
College/advanced degree	1,183	9.19	1,028	8.95	155	11.14
Employed	9,064	70.40	7,989	69.57	1,075	77.23
Family income						
\$ 0 - \$ 4,999	167	1.30	143	1.25	24	1.72
\$ 5,000 - \$ 9,999	242	1.88	217	1.89	25	1.80
\$ 10,000 - \$ 14,999	446	3.46	393	3.42	53	3.81
\$ 15,000 - \$ 19,999	616	4.78	550	4.79	66	4.74
\$ 20,000 - \$ 24,999	801	6.22	735	6.40	66	4.74
\$ 25,000 - \$ 34,999	1,561	12.12	1,398	12.17	163	11.71
\$ 35,000 - \$ 44,999	1,405	10.91	1,257	10.95	148	10.63
\$ 45,000 - \$ 54,999	1,419	10.94	1,246	10.85	163	11.71
\$ 55,000 - \$ 64,999	1,203	9.34	1,067	9.29	136	9.77
\$ 65,000 - \$ 74,999	985	7.65	867	7.55	118	8.48
\$ 70,000 or more	4,040	31.38	3,610	31.44	430	30.89
Region						
Northeast	2,165	16.82	1,955	17.03	210	15.09
Northcentral/Midwest	3,252	25.26	3,057	26.62	195	14.01
South	4,761	36.98	4,289	37.35	472	33.91
West	2,697	20.95	2,182	19.00	515	37.00
	Mean	SD	Mean	SD	Mean	SD
Age	47.56	15.32	48.00	15.31	43.90	14.94
Number of children	0.90	1.17	0.89	1.17	1.04	1.20
General health	3.84	1.04	3.83	1.04	3.95	1.02
Potential social capital	4.65	1.31	4.67	1.30	4.52	1.37

Note. ^a: n = 11,483. ^b: n = 1,392.

Intramarried persons tended to have more potential social capital on average (Mean = 4.67, *SD* = 1.30) compared to their counterparts (Mean = 4.52, *SD* = 1.37), which was a statistically significant difference, $t(12,874) = 4.08, p < .001$, although the effect size was small (adjusted Cohen's $d = .13$). The mean scores of potential social capital for each type of intermarriage were slightly different among interracial, interethnic, and international married persons (Mean = 4.35, *SD* = 1.42; Mean = 4.57, *SD* = 1.37; Mean = 4.52, *SD* = 1.34, respectively). The mean for interracial persons was significantly lower than that for intramarried persons, $t(12,357) = 4.44, p < .001$, and the mean for international married persons was also significantly lower than that for intramarried persons, $t(12,357) = 3.31, p < .001$, both with small effect size (adjusted Cohen's $d = .25$ and $.14$, respectively). Whereas, the mean for interethnic married persons was not significantly different from that for intramarried persons. Analysis of variance was not performed among the three types of intermarriage because the types were not mutually exclusive groups to each other, rather used as the indicators of intermarriage aspects with regard to race, ethnicity, and nationality.

Association between Potential Social Capital and Intermarriage

Model 1 in Table 3 (p. 38) presents the result of identity-linked Poisson model of potential social capital. The coefficients are interpreted as count difference in potential social capital for a one-unit increase in explanatory variable. With other covariates held constant, intermarried persons were likely to have 0.18 less potential social capital relative to intramarried persons ($p < .05$), which supported Hypothesis 1. Intermarried with White spouse, on the other hand, was not significantly associated with potential social capital. Thus, Hypothesis 2 was not supported. Female respondents tended to

have 0.24 more potential social capital than male respondents ($p < .001$). Blacks and Mexicans were likely to have more potential social capital than Whites ($\beta = 0.25$ and 0.27 , respectively; $p < .001$ for both). More educated persons were likely to have more potential social capital. Compared to respondents having less than high school education, high school graduates were likely to have 0.20 more potential social capital ($p < .001$), those with some college education tended to have 0.35 more potential social capital ($p < .001$), and those with college or advanced degree tended to have 0.40 more potential social capital ($p < .001$). General health and log of family income were also positively associated with potential social capital ($\beta = 0.20$ and $\beta = 0.13$, respectively; $p < .001$ for both).

I tested interaction effects of intermarriage and intermarried with White spouse with the covariates, and the only significant interaction found was between age and intermarriage ($\beta = -0.02$). However, model fit statistics (i.e., deviance, AIC, and BIC) did not support that including the interaction term in Model 1 could significantly improve model fit to the data by providing larger values of deviance, AIC, and BIC than those of Model 1. Due to the minimal coefficient of the interaction term and lack of support to the model with the interaction from the model fit statistics, I retained Model 1 without any interaction terms.

Table 3. Identity-linked Poisson Model of Potential Social Capital

Variable	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)
<i>Covariates</i>		
Female	0.24 (0.04)***	0.23 (0.04)***
Age	0.00 (0.00)	0.00 (0.00)
Black	0.25 (0.07)***	0.26 (0.07)***
Mexican	0.27 (0.08)***	0.25 (0.08)**
Immigrant	-0.14 (0.07)	-0.15 (0.08)
Education ^a		
High school	0.20 (0.05)***	0.20 (0.05)***
Some college	0.35 (0.06)***	0.35 (0.06)***
College/advanced degree	0.40 (0.07)***	0.41 (0.07)***
Employment	-0.04 (0.05)	-0.04 (0.05)
Log of income	0.13 (0.03)***	0.13 (0.03)***
Number of children	0.04 (0.02)*	0.04 (0.02)*
General health	0.20 (0.02)***	0.20 (0.02)***
Region ^b		
Northcentral/Midwest	0.02 (0.06)	0.02 (0.06)
South	0.05 (0.06)	0.05 (0.06)
West	-0.07 (0.06)	-0.07 (0.07)
<i>Intermarriage</i>		
Intermarried	-0.18 (0.08)*	-
White spouse	-0.01 (0.12)	-0.12 (0.11)
Interracial married	-	-0.35 (0.12)**
Interethnic married	-	-0.05 (0.11)
International married	-	-0.03 (0.10)
Constant	2.07 (0.35)***	2.08 (0.35)***
Df	12,858	12,856
Deviance	5501.56	5497.27
Log-likelihood	-24282.10	-24279.96
AIC	3.77	3.77
BIC	-116164.80	-116159.60

Note. ^a. Reference group: less than high school. ^b. Reference group: Northeast.

Another model replicating Model 1 using the three types of intermarriage (interracial, interethnic, and international) was estimated to determine whether the effect of intermarriage on potential social capital differed with respect to type of intermarriage (Model 2 in Table 3). The covariates in Model 2 were same with those used in Model 1. Although the results of model fit statistics did not support that Model 2 improved Model 1 significantly (see Table 3), I presented Model 2 because of the following two reasons: first, the results of model fit statistics revealed nearly equal support to Model 1 and 2 except the strong support to Model 1 of BIC, and second, investigating the effect of intermarriage on potential social capital in depth is the interest of this study. Anderson and Burnham (2006) also stated that selecting a too simple model relying on the results of fit tests could fail to reveal interesting real effects.

When the effects of interracial, interethnic, and international marriages were assessed separately, interracial marriage was the only significant intermarriage type affecting potential social capital. Interracial married persons were likely to have 0.35 less potential social capital than intramarried persons. Intermarried with White spouse was not statistically significant in Model 2. The effects of the covariates remained very similar with those in Model 1. In an additional analysis (not shown), I tested interaction terms but neither the interactions of the three types of intermarriage with the covariates nor the interactions with intermarried with White spouse were significant.

Discussion and Implications

Previous research had raised a concern about lack of social capital for intermarried persons due to social disapproval of intermarriage, but it has not been investigated in depth whether intermarried persons actually have less social capital

relative to intramarried persons. The study aimed to investigate the relationship between intermarriage and potential social capital by using two identity-liked Poisson generalized linear models.

Based on Bourdieu's definition, potential social capital was defined as accessible potential resources of relatives, friends, and community and examined by measuring one's contacts with relatives, friends, and communities, which represent accessible social relations in the current study. According to Bourdieu (1986) social capital is not distributed evenly in society. Rather, social capital possessed by individuals is determined within their social context (Foley & Edwards, 1999) and social resources might be available only for those who are obedient to social norms (McKenzie et al., 2002; Turner, 1999). Intermarriage is a violation of endogamy which has been considered an important social norm (Kalmijn, 1998). The current study investigated whether intermarried persons have less potential social capital due to social disapproval of intermarriages caused by their violation of endogamy norm.

The results of this study corresponded with Bourdieu's social capital theory. Bourdieu asserted that one's access to social resources could be denied if he or she could not secure the membership of their social groups. The result of Model 1 revealed that intermarried persons were likely to have less potential social capital relative to intramarried persons. It implies that being intermarried may restrict intermarried persons' equal access to social resources of their groups presumably by social disapproval of their intermarriages. However, the further investigation of the association between intermarriage and potential social capital regarding the types of intermarriage (Model 2) revealed that only being interracial married significantly reduced one's potential social

capital. Potential social capital for interethnic or international married persons was not significantly different from that for intramarried persons. Intermarried with White spouse, a typical pattern of intermarriage, was not significantly associated with potential social capital, although I hypothesized that intermarried persons with White spouse would be likely to have more potential social capital than those with non-White spouse due to its greater acceptability in intermarriages.

The results partially supported the concern about lack of social capital for intermarried persons in literature because it was valid only for interracial married persons. Consequently, it raises a question as to whether or not all intermarriages are disapproved by society. Probably, each type of intermarriage is perceived differently in social context and that perception determines whether intermarried persons are approved to access to social resources.

Nevertheless, the results do not suggest that the most problematic marriage is interracial marriage between non-Hispanic Whites and Blacks as previous studies indicated (Baston, Qian, & Lichter, 2006; Chito Childs, 2005; Yancey, 2007) because the rate of interracial marriage between non-Hispanic Whites and Blacks was only 32%. As an ancillary test of this result, I calculated the predicted mean of potential social capital of interracial married persons by the combinations of racial groups, holding other variables of Model 2 at their means. The lowest potential social capital was predicted for non-Hispanic White respondents with spouse from other minority racial groups (i.e., Alaskan Native/American Indian, Asian, and other race; Mean = 4.24) and the highest was predicted for Mexican respondents (identified as White in terms of race) with Black spouse (Mean = 4.50). The predicted mean of potential social capital for non-Hispanic

White respondents with Black spouse was 4.27, whereas that for Black respondents with non-Hispanic White spouse was 4.41. Appendix 2 provides the detail of predicted potential social capital for non-Hispanic White, Black, and Mexican respondents by their intermarriage status. The result provides support for the findings of Lewis and Yancey (1995) that intermarried Whites are less supported than intermarried Blacks and Mexicans.

Although being interracial married revealed its negative impact on potential social capital, it is hard to simply conclude that interracial married persons experience crucial lack of social capital. The result was statistically significant, but the magnitude of difference was very small: interracial married persons were likely to have 0.35 less potential social capital than intramarried persons which is about 27% of the SD of potential social capital. In addition, considering the recent increase of intermarried persons having higher educational attainment and income relative to intramarried persons (Wang, 2012), the disadvantage in potential social capital due to being interracial married might be compensated by their advantages in socioeconomic status. The intermarried persons in the current study also had higher educational attainment and family income relative to intramarried persons.

Meanwhile, interracial married persons may perceive that they experience critical disapproval of interracial marriage because the lesser potential social capital they experienced is mostly attributed to lower physical contact with relatives (see Appendix 3). Disapproval from relatives could be more influential on their subjective perception of social capital than that from friends and communities. As Foley and Edwards (1999) illustrated in Figure 1, individuals must acknowledge the presence of available resources

and be able to access to them to convert social resources into social capital. If disapproval from relatives overwhelms interracial married persons, which might interrupt interracial married persons to acknowledge available social resources of friends and community, they would not be able to convert the social resources of friends and community into social capital even though they have access to them.

The results of the study also indicated the difference in potential social capital regarding racial and ethnic groups. It was revealed that Blacks and Mexicans tend to have more potential social capital than whites controlling for other variables. Predicted potential social capital (see Appendix 2) revealed that Blacks and Mexicans tended to have more potential social capital than Whites when they were intramarried. It corresponds with the racial and ethnic variations in social capital found in previous literature (Kim et al., 2008; Taylor et al., 2004). Among those intermarried, Mexicans were likely to have the most potential social capital followed by Blacks and Whites. It provides a support to the findings of previous studies that Whites approve intermarriages the least (Lewis & Yancey, 1995; Ludwig, 2003).

With regard to the other covariates, being female, more educated, having higher income, and in good health were associated with potential social capital, which correspond with previous studies (Cullen & Whiteford, 2001; Li, 2010). However, I did not find the association between being immigrant and potential social capital. In addition, although there were significant differences in intermarriage rate by region, there was no geographical difference in potential social capital or interaction between region and intermarriage when controlling for other covariates.

There are limitations in this study. First, the data used in the current study does not provide detailed information about marriage such as the duration of marriage or first marriage/remarriage. Consequently, it was not possible to control for this aspect of marriage in estimating the influence of interracial marriage on potential social capital. In addition, the data was available only for cross-sectional analyses, so I could not examine the long-term effects of intermarriage. For example, it is still unknown whether low potential social capital for interracial married persons remains, increases or decreases over time. Future study is needed to investigate the long term effect of intermarriage on intermarried persons' potential social capital. Lastly, the current study could not investigate the effect of intermarriage at a dyadic level. Future research needs to explore whether intermarried spouses possess the similar level of potential social capital as a couple or potential social capital is determined at individual level.

In attempting to investigate whether intermarriage affects potential social capital for intermarried persons, this study found that interracial married persons tend to possess less potential social capital than intramarried persons. It contributes to the literature by assessing the impact of intermarriage on potential social capital empirically and provides partial support to previous research concerning lack of social capital for intermarried persons.

Study2: Psychological Distress for Intermarried Persons

Previous studies have reported that intermarried persons often experience significant psychological distress which is caused by lack of social relations and support from their relatives, friends, and communities. Negative relationships with relatives are a major source of stress for intermarried persons (Bustamante, Nelson, Henriksen, & Monakes, 2011), and the opposition from friends and communities can also lead to instability of couple relationships (Horowitz, 1999; Joanides, Mayhew, & Mamalakis, 2002).

Social capital is a potential protector against psychological distress (Almedom, 2005; Sartorius, 2003) because individuals having adequate social capital are likely to make less negative appraisals of stressful environments (Cohen, Gottlieb, & Underwood, 2000; Cohen & Hoberman, 1983; Wethington & Kessler, 1986). Thus, if intermarried persons have enough social capital, they would be more resilient under social opposition (Bryant & Conger, 1999; Sprecher & Felmlee, 2000).

As mentioned in the previous research (Study 1) intermarriage is more prevalent in certain racial/ethnic groups (Qian, 1997; Qian, Blair, & Ruf, 2001). One might assume that intermarried persons from a racial/ethnic group in which intermarriage is more prevalent are likely to have lower psychological distress compared to those from a racial/ethnic group with a low rate of intermarriage. However, the association between psychological distress and intermarriage is more complex than the effect of simple rate of intermarriage in a racial/ethnic group (Bratter & Eschbach, 2006). For example, combinations of one's own and spousal race/ethnicity and gender generate various patterns of psychological distress among intermarried persons (Bratter & Eschbach,

2006). Bratter and Eschbach (2006) found that within a White-Black couple, the increase of psychological distress was significant only for the White partner, not for the Black partner. Especially, White wives with Black husbands were likely to experience severe psychological distress.

Previous studies have rarely focused on the association between social capital and psychological distress for intermarried persons in depth. Rather, previous literature presumed that intermarried persons' experience of psychological distress is caused by their limited social capital. The current study investigates the association between potential social capital and psychological distress for intermarried persons to fill the gap in literature. Potential social capital refers to accessible potential resources of relatives, friends, and community in the current study. The study further examines whether the association between potential social capital and psychological distress differs between intramarried and intermarried persons.

Conceptual Framework

Social capital is considered a potential protector against psychological distress (Almedom, 2005; Sartorius, 2003) and previous studies found that individuals who possess a high level of social capital tend to have lower psychological distress (Cohen & Willis, 1985; de Silva, McKenzie, Harpham, & Huttly, 2005). Especially, perceived availability of social capital is crucial to the negative association between social capital and psychological distress (Cohen et al., 2000). Those who perceive that they have potential social capital are less likely to be affected by stress since they make less negative appraisals of stressful environments (Cohen et al., 2000; Cohen & Hoberman, 1983; Wethington & Kessler, 1986). In contrast, those who do not possess potential

social capital are likely to be exposed to more psychosocial stressors, and therefore, experience more psychological distress (Cullen & Whiteford, 2001).

Perception of possessing potential social capital results in building a sense of belonging, security, and self-worth (Cohen et al., 2000) because the perception is individuals' appraisal of their social relationships as positive, stable, and secure (Baumeister & Leary, 1995; de Silva et al., 2005; Leary & Downs, 1995). Considering that intermarried persons often experience rejection or marginalization from their social groups, possessing potential social capital might mean more than access to social resources; it could be interpreted as social acceptance of intermarriage. In that sense, it could be assumed that the impact of potential social capital on psychological distress would be greater for intermarried persons than that for intramarried persons. Meanwhile, potential social capital might have a positive association with psychological distress. In fact, there is a concern that a high level of social capital can have a negative influence on psychological distress because of the high level of social constraint (Whitney & McKenzie, 2005). In that case, having more potential social capital could bring more psychological distress for intermarried persons.

Most of studies investigating the impact of social capital on psychological distress used Putnam's concept of social capital which assumes that trustfulness of community and the resources possessed by community would decrease community members' psychological distress (de Silva et al., 2005; Osborne, Baum, & Ziersch, 2009). However, in their literature review study, de Silva and colleagues (2005) could not find a common pattern of the association between social capital and psychological distress among studies measuring social capital in Putnam's way. In addition, Foley and Edwards (1999)

criticized Putnam's concept of social capital for not considering the uneven distribution of access to social capital among community members. Thus, the current study tests the association between potential social capital and psychological distress by applying Bourdieu's concept of social capital which highlights access to social resources and uneven distribution of social capital in society as used in Study 1.

As mentioned previously in Study 1, access to social resources of relatives, friends, and communities represents potential social capital available for use (Foley & Edwards, 1999). The current study assumes that potential social capital is negatively associated with psychological distress based on the majority of previous research (Almedom, 2005; Cohen & Willis, 1985; de Silva et al., 2005; Sartorius, 2003). Considering the Bourdieu's assertion that possessing social capital is a consequence of maintaining secured membership from social groups, possession of potential social capital might mean social acceptance of intermarriage, as well as potential buffer against psychological distress for intermarried persons. Thus, I hypothesize that the strength of the association would differ between intramarried and intermarried persons. In specific, I expect that the association between potential social capital and psychological distress would be stronger for interracial married persons based on the finding of Study 1 in which the tendency of less potential social capital for interracial married persons was revealed.

Literature Review

Previous literature in intermarriage has used mostly two approaches to understand psychological distress for intermarried persons; one is examining general psychological distress such as depression, anxiety, or stress (Baltas & Steptoe, 2000; Bratter &

Eschbach, 2006; Bustamante et al., 2011) and the other is examining marital satisfaction or marital dissolution as a reflection or manifestation of psychological distress (Bratter & King, 2008; Chan & Smith, 1996; Eeckhaut et al., 2011; Fu et al., 2001; Negy & Snyder, 2000; Zhang & Van Hook, 2009).

General Psychological Distress for Intermarried Persons

Studies examining general psychological distress of intermarried persons (Baltas & Steptoe, 2000; Bratter & Eschbach, 2006; Bustamante et al., 2011) report that intermarried persons are more likely to experience psychological distress such as depression, anxiety, and stress. For example, Baltas and Steptoe (2000) found that intermarried persons reported a higher level of depression and anxiety than did intramarried persons in their study of Turkish and British intermarriages.

Bustamante et al. (2011) categorized the sources of stress for intermarried persons in literature: (a) cultural differences in values and beliefs, (b) negative social reactions, (c) different styles of communication, (d) religious and ethnic beliefs, and (e) different perceptions of cultural differences. A major source of stress Bustamante et al. found in their qualitative study is relationships with relatives. For example, family events were stressful for intermarried persons because of isolation from their in-laws (Bustamante et al., 2011).

Bratter and Eschbach (2006) investigated psychological distress for intermarried and cohabiting persons using the National Health Interview Survey (NHIS) 1997 - 2001. They compared psychological distress of intermarried and cohabiting persons with those who were intramarried or cohabiting. The study revealed that gender, race or ethnicity of both partners, and socioeconomic status were associated with the variations in

psychological distress among persons in interracial relationships. They found that not all intermarried persons automatically experience more psychological distress due to intermarriage.

In addition, Bratter and Eschbach hypothesized significant psychological distress for White intermarried persons with non-White spouses based on Merton's status-caste exchange theory (1941) assuming that intermarriage occurs by the exchange between socioeconomic status and racial caste in the U.S. (i.e., Whites as the high-caste group and Blacks as the low-caste group). To be specific, they hypothesized that non-White intermarried persons with White spouse would not experience severe psychological distress because they are a part of the high cast group, whereas, White intermarried persons with non-White spouse would experience more psychological distress because of the loss of White racial privileges which is a penalty of joining to a lower caste group. The results of the study revealed that intermarried persons with non-White spouses in many racial ethnic groups were likely to be more distressed. Their study found the complex effects of intermarriage on psychological distress with regard to socioeconomic status, too. For instance, psychological distress for White intermarried women was partially explained by their low socioeconomic status and high socio-economic status of intermarried Hispanics contributed to lower their psychological distress (Bratter & Eschbach, 2006).

Proxy of Psychological Distress for Intermarried Persons

Another stream of literature investigated whether being intermarried is more stressful than intramarried by examining marital relationship and dissolution as proxies of psychological distress. As discussed in Study 1, intermarried persons might have

difficulties in their marital relationship due to cultural differences or lack of support for the marriage from relatives, friends, and communities (Baltas & Steptoe, 2000; Molina et al., 2004; Negy & Snyder, 2000). However, previous studies reported mixed results.

Fu and colleagues (2001) compared marital happiness between intermarried and intramarried persons in Hawaii. They specified the aspects of intermarriage by race, national origin, and language, and examined the influence of interracial marriage and that of intercultural marriage (i.e., marriage between spouses having different national origins and/or languages) on marital happiness. They found that interracial married wives were significantly less happy than intramarried wives, but did not find the same pattern for interracial married husbands. Intercultural married persons, on the other hand, did not show a difference in marital happiness from intramarried persons. The result also revealed that educational attainment and the approval to marriage from relatives and community were positively associated with wives' marital happiness and the number of children was negatively associated with it.

In contrast, Negy and Snyder (2000) could not find any significant difference in marital satisfaction between intermarried and intramarried persons. They compared marital satisfaction of Mexican American-White intermarried couples with that of Mexican American intramarried couples and non-Hispanic White intramarried couples. Except for higher distress concerning child rearing, intermarried couples did not show significant differences in marital satisfaction from intramarried couples.

There is an assumption that intermarriages are less stable than intramarriages due to stress from social opposition (Eeckhaut et al., 2011; Kalmijn, 1998). Cultural differences, lack of approval and support from families are factors of instability of

intermarriages, which are commonly discussed in research (Eeckhaut et al., 2011; Molina et al., 2004; Zhang & van Hook, 2009). Eeckhaut et al. (2011) asserted that intramarriages are more stable than intermarriages because intramarriages fulfilled the cultural goodness of fit in mate selection, which are likely to be built on the presence of social support from the beginning of the relationship. Nonetheless, many intermarried couples are very devoted to their relationships, which could mitigate the negative influence of external social stress, cultural differences and weak social support (Eeckhaut et al., 2011).

Research Questions and Hypotheses

Although previous research mentioned that intermarried persons may experience lack of social capital and psychological distress due to rejection and marginalization from their relatives, friends, and communities, the association between potential social capital and psychological distress for them has not been investigated in depth. The purpose of this study provides a more in-depth understanding of the association between potential social capital and psychological distress for intermarried persons by comparison with intramarried persons. More specifically, this study examines the interaction effect between potential social capital and intermarriage on psychological distress using the variables about intermarriage (i.e., intermarriage; interracial, interethnic, and international marriages; intermarried with a White spouse) in analytic models as moderators which alter the strength of the association between potential social capital and psychological distress (Frazier, Tix, & Barron, 2004). Research questions and hypotheses of the study are as follows:

Research question 3: Are there differences in experiencing psychological distress due to intermarriage?

Study 1 found that intermarried persons, especially interracial married persons were likely to have less potential social capital relative to intramarried persons. Research question 3 will assess if there exists a similar pattern for experiencing psychological distress.

Research question 4: Does the association between potential social capital and psychological distress differ between intramarried and intermarried persons?

Hypothesis 3a: Potential social capital is negatively associated with psychological distress for both intramarried and intermarried persons, but the association will be stronger for intermarried persons than for intramarried persons.

Hypothesis 3a is based on the idea that intermarried persons would highly value their potential social capital since they might interpret it as social acceptance of intermarriage and consequently, potential social capital would have stronger negative influence on psychological distress for them relative to intramarried persons.

Research question 3 and 4 will be investigated in two ways: (a) using intermarriage as a single indicator regardless of whether it is interracial, interethnic, or international in analytic models; and (b) entering the three types of intermarriage into analytic models. As Study 1 revealed, social disapproval of intermarriage may not be the same across the three types of intermarriage. Then, the influence of intermarriage on psychological distress and the strength of the association between potential social capital and psychological distress might vary across the three types of intermarriage. Based on

the result in Study 1, I expect that interracial marriage would reveal its unique influence on the association relative to interethnic and international marriages (Hypothesis 3b).

Research question 5: Does being intermarried with White spouse influence the association between potential social capital and psychological distress?

Hypothesis 4: The association between potential social capital and psychological distress is stronger for intermarried persons with non-White spouse compared to intermarried persons with White spouse.

A previous study (Bratter & Eschbach, 2006) found that intermarried persons with non-White spouse tended to experience more psychological distress, whereas, intermarried persons with White spouse did not experience more psychological distress than intramarried persons. The difference between that study and the current study is that White intermarried persons could also have White spouse because intermarriage in the current study includes international marriages as well as interracial marriages. I expect that the association between potential social capital and psychological distress would be stronger for intermarried persons with non-White spouse relative to intermarried persons with White spouse. Based on the findings from Bratter and Eschbach (2006), there might exist little room for potential social capital to decrease psychological distress as buffer for intermarried persons with White spouse relative to those with non-White spouse if they do not experience more psychological distress due to their intermarriages.

Method

Data

Data from 2001 Integrated Health Interview Series (IHIS, Minnesota Population Center and State Health Access Data Assistance Center, 2011) was again utilized for

Study 2. The same participants used in Study 1 were again used in Study 2: there were total 12,875 participants and 11,483 of them were intramarried and the other 1,392 were intermarried.

Measures

Psychological distress. Psychological distress was assessed by Kessler-6 non-specific psychological distress scale. Kessler-6 scale is a brief measure of serious mental illness developed for the NHIS (Kessler et al., 2002) which is a basis of the data used in the study. The scale consisted of the following six questions: “During the past 30 days, how often did you feel (a) that everything was an effort; (b) hopeless; (c) nervous; (d) restless or fidgety; (e) so sad that nothing could cheer you up; and (f) worthless?” Responses were none of the time (1), a little of the time (2), some of the time (3), most of the time (4), and all of the time (5). The Cronbach α score for the six items was .84. The scores were summed and ranged from 6 to 30. The mean potential social capital for the total sample was 8.24 ($SD = 3.45$).

The same measures of potential social capital, intermarriage, intermarried with white spouse, and covariates in Study 1 were again used in Study 2.

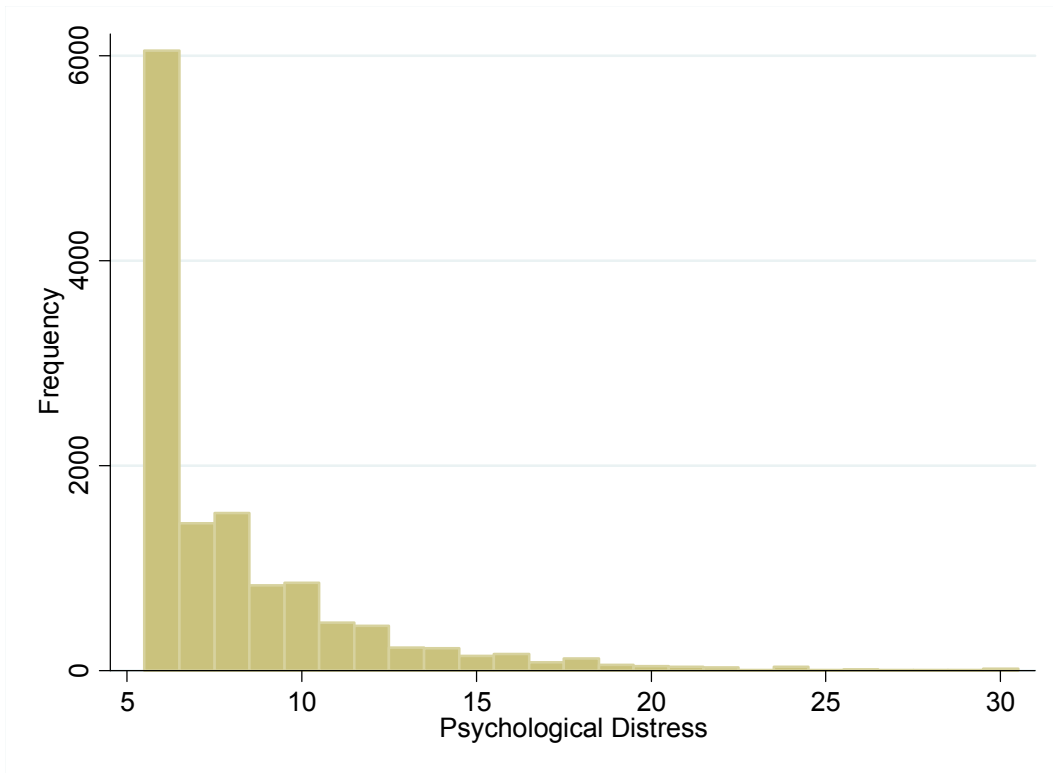
Analyses

Two generalized linear models were used to estimate the effects of intermarriage and potential social capital on psychological distress since the dependent variable, psychological distress, did not have the normal distribution (see Figure 3 on p. 57).

Gamma distribution is considered appropriate when the distribution of response variable is positively skewed (Gill, 2000). The current study used a log-linked gamma model which is used with data in which the response is greater than 0 (Hardin & Hilbe, 2012). I

also tested other links such as reciprocal and identity links, but log link had the best model fit in terms of deviance, AIC, and BIC.

Figure 3. Distribution of Psychological Distress



Results

The mean score of psychological distress for intramarried persons was 8.23 ($SD = 3.45$) and that for intermarried persons was 8.29 ($SD = 3.45$). Although intermarried persons tended to report slightly higher psychological distress than intramarried persons, it was not a statistically significant difference, $t(12,874) = 0.59$, $p = .56$. The mean scores of psychological distress for each type of intermarriage were slightly different among interracial, interethnic, and international marriages (Mean = 8.66, $SD = 3.74$; Mean = 8.41, $SD = 3.45$; Mean = 8.14, $SD = 3.37$, respectively). The difference between intramarried and interracial married persons was statistically significant, $t(11,821) = 2.23$, $p < .05$, with small effect size (adjusted Cohen's $d = .13$): interracial married persons tended to experience more psychological distress than intramarried persons. Whereas, the means of psychological distress for interethnic married and international married persons were not significantly different from that for intramarried persons. Analysis of variance was not performed among the three types of intermarriage since intermarried persons in each group were not totally exclusive to each other.

Among Models in Table 4 (p. 60), Model 2 and 3 are the main interests of the study. Model 1 in Table 4 presents the result of the log-linked Gamma model of psychological distress without interaction terms (baseline model). Since log link was used, I presented exponentiated coefficients representing the ratio of change in the outcome as well as coefficients of the model. The result revealed that there was no effect of intermarriage on psychological distress with other covariates held constant. Intermarried with White spouse was not significantly associated with psychological distress, either. Potential social capital had negative effect on psychological distress;

each additional increase in social capital was associated with 4% decrease in psychological distress, $\exp(-0.05) = 0.96$, $p < .001$.

Females tended to have 6% higher psychological distress than males ($\exp(0.06) = 1.06$, $p < .001$). Each additional year in age was associated with 0.4% decrease in psychological distress ($\exp(-0.004) = 0.996$, $p < .001$). Blacks and Mexicans were likely to have 7% lower psychological distress than Whites ($\exp(-0.07) = 0.93$, $p < .001$ for both). Employed persons tended to have 2% lower psychological distress than non-employed persons ($\exp(-0.02) = 0.98$, $p < .01$). Each additional increase of log income was associated with 3% decrease in psychological distress ($\exp(-0.03) = 0.97$, $p < .001$). Each additional increase of general health was also associated with 10% decrease in psychological distress ($\exp(-0.10) = 0.90$, $p < .001$).

I tested interaction effects of intermarriage and intermarried with White spouse with potential social capital and other covariates. It was revealed that potential social capital significantly interacted with intermarriage and with intermarried with White spouse (Model 2). I did not find any other significant interactions among the variables used in Model 1. Although the results of goodness-of-fit tests did not support that including the interaction terms improved Model 1 and Model 1 was more parsimonious than Model 2, I presented Model 2 because of the following two reasons: first, the results of model fit statistics gave nearly equal support to Model 1 and Model 2 except the strong support to Model 1 of BIC, and second, the need of investigating the effects of intermarriage and potential social capital on psychological distress in depth could be more important than fitting a model to data based on the result of fit tests (Anderson & Burnham, 2006).

Table 4. Log-linked Gamma Model of Psychological Distress

Variable	Model 1	
	Coefficient (SE)	Exp (coef.)
<i>Covariates</i>		
Female	0.06 (0.01)***	1.06
Age	-0.00 (0.00)***	1.00 ^a
Black	-0.07 (0.01)***	0.93
Mexican	-0.07 (0.01)***	0.93
Immigrant	-0.01 (0.01)	0.99
Education ^b		
High school	0.00 (0.01)	1.00
Some college	-0.00 (0.01)	1.00
College/advanced degree	0.01 (0.01)	1.00
Employment	-0.02 (0.01)**	0.98
Log of income	-0.03 (0.01)***	0.97
Number of children	-0.00 (0.00)	1.00
General health	-0.10 (0.00)***	0.90
Region ^c		
Northcentral/Midwest	0.01 (0.01)	1.01
South	-0.01 (0.01)	0.99
West	-0.00 (0.01)	1.00
Potential social capital (PSC)	-0.05 (0.00)***	0.96
<i>Intermarriage</i>		
Intermarried	0.01 (0.01)	1.01
White spouse	0.01 (0.02)	1.01
Interracial (IR) married	-	-
Interethnic (IE) married	-	-
International (IN) married	-	-
<i>Interactions</i>		
Intermarried X PSC	-	-
IR married X PSC	-	-
IE married X PSC	-	-
IN married X PSC	-	-
White spouse X PSC	-	-
Constant	3.18 (0.06)***	
Df	12,856	
Deviance	1340.63	
Log-likelihood	-39896.78	
AIC	6.20	
BIC	-120316.20	

Note. ^a. Exponentiated coefficient = 0.996. ^b. Reference group: less than high school. ^c. Reference group: Northeast.

Table 4. Log-linked Gamma Model of Psychological Distress (continued)

Variable	Model 2		Exp (coef.)	Model 3		Exp (coef.)
	Coefficient	(SE)		Coefficient	(SE)	
<i>Covariates</i>						
Female	0.06	(0.01)***	1.06	0.06	(0.01)***	1.06
Age	-0.00	(0.00)***	1.00 ^a	-0.00	(0.00)***	1.00 ^a
Black	-0.07	(0.01)***	0.93	-0.08	(0.01)***	0.93
Mexican	-0.07	(0.01)***	0.93	-0.07	(0.01)***	0.93
Immigrant	-0.01	(0.01)	0.99	-0.01	(0.01)	0.99
Education ^b						
High school	0.00	(0.01)	1.00	0.00	(0.01)	1.00
Some college	-0.00	(0.01)	1.00	-0.00	(0.01)	1.00
College/advanced degree	0.00	(0.01)	1.00	0.01	(0.01)	1.00
Employment	-0.02	(0.01)**	0.98	-0.02	(0.01)**	0.98
Log income	-0.03	(0.01)***	0.97	-0.03	(0.01)***	0.97
Number of children	-0.00	(0.00)	1.00	-0.00	(0.00)	1.00
General health	-0.10	(0.00)***	0.90	-0.10	(0.00)***	0.90
Region ^c						
Northcentral/Midwest	0.01	(0.01)	1.01	0.01	(0.01)	1.01
South	-0.01	(0.01)	0.99	-0.01	(0.01)	0.99
West	-0.00	(0.01)	1.00	-0.00	(0.01)	1.00
Potential social capital (PSC)	-0.05	(0.00)***	0.96	-0.05	(0.00)***	0.96
<i>Intermarriage</i>						
Intermarried	0.10	(0.05)*	1.10	-		-
White spouse	-0.20	(0.07)**	0.82	-0.15	(0.07)*	0.86
Interracial (IR) married	-		-	0.16	(0.07)*	1.18
Interethnic (IE) married	-		-	-0.03	(0.06)	0.97
International (IN) married	-		-	0.05	(0.06)	1.05
<i>Interactions</i>						
Intermarried X PSC	-0.02	(0.01)*	0.98	-		-
White spouse X PSC	0.05	(0.01)***	1.05	0.04	(0.01)**	1.04
IR married X PSC	-		-	-0.03	(0.01)*	0.97
IE married X PSC	-		-	0.01	(0.01)	1.01
IN married X PSC	-		-	-0.02	(0.01)	0.98
Constant	3.18	(0.06)***		3.19	(0.06)***	
Df		12,854			12,850	
Deviance		1339.23			1338.02	
Log-likelihood		-39896.08			-39895.47	
AIC		6.20			6.20	
BIC		-120298.70			-120262.10	

Note. ^a. Exponentiated coefficient = 0.996. ^b. Reference group: less than high school. ^c. Reference group: Northeast.

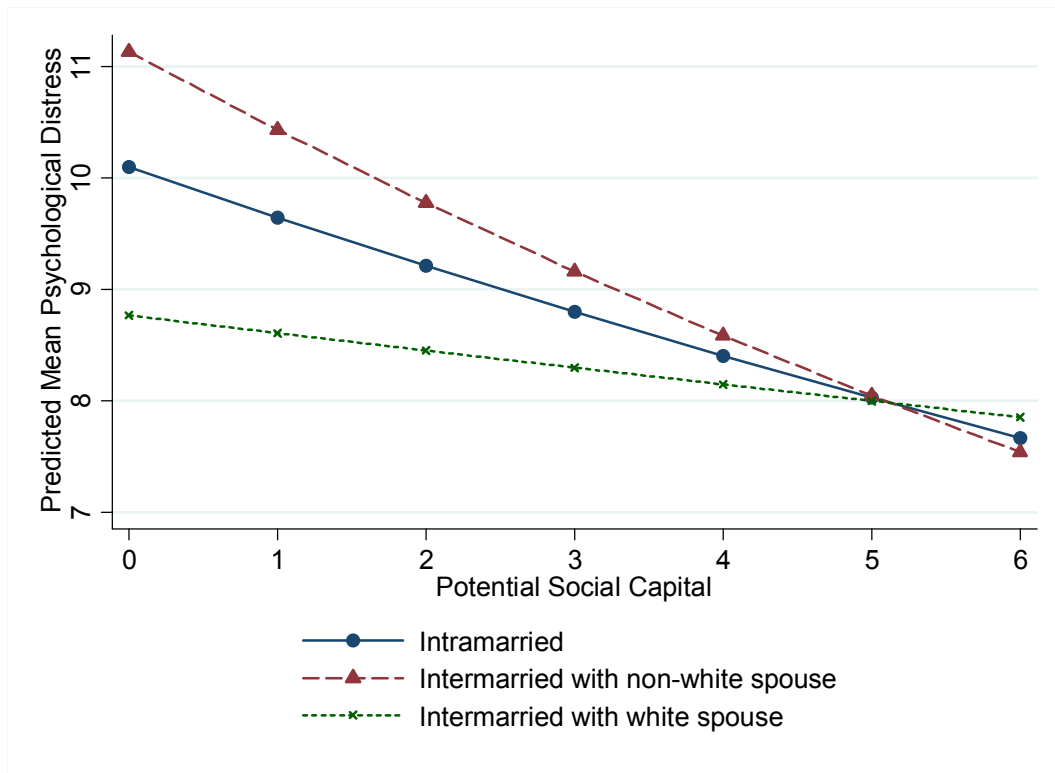
In Model 2, intermarried persons were likely to be more psychologically distressed than intramarried persons. Assuming their potential social capital was 0 (controlling the interaction effect of intermarriage with potential social capital), intermarried persons tended to experience 10% higher psychological distress than intramarried persons ($\exp(0.10) = 1.10$, $p < .05$). On the contrary, being intermarried with White spouse decreased psychological distress by 18% holding potential social capital at zero ($\exp(-0.20) = 0.82$, $p < .001$).

Interactions of potential social capital with intermarriage and with intermarried with White spouse revealed the varying effects of potential social capital on psychological distress. To understand the varying effects of potential social capital, its conditional effect (i.e., its coefficients at the value of 0 for the other variable) and related interaction terms (“intermarried X potential social capital” and “intermarried with White spouse X potential social capital”) should be considered together (Gill, 2001). I calculated the semi-elasticity of potential social capital to do so. A semi-elasticity is the percentage of change in the dependent variable for change in the explanatory variable (Hilbe, 2011), which is the percentage change in psychological distress due to the change in potential social capital. For intramarried persons, potential social capital was associated with 4.6% decrease in psychological distress holding other variables constant at their means. For intermarried persons, each additional increase in potential social capital was associated with about 4.4% decrease in psychological distress holding other variables constant at their means. In sum, the strength of the association between potential social capital and psychological distress seemed almost similar between intramarried and intermarried persons. However, with regard to the race of the spouse,

the interaction terms revealed that the strength of the association between potential social capital and psychological distress for intermarried persons differed by whether they had a White spouse. For intermarried persons with non-White spouse, each additional increase in potential social capital was associated with 6.5% decrease in psychological distress. Whereas, for intermarried persons with White spouse, each additional increase in potential social capital was associated with 1.8% decrease in psychological distress.

Figure 4 (p. 64) provides a graphical presentation of the relationship between potential social capital and psychological distress for intramarried persons, intermarried persons with non-White spouse, and those with White spouse. It revealed that the negative effect of potential social capital on psychological distress was the strongest for intermarried persons with non-White spouse, followed by intramarried persons. The effect was modest for intermarried persons with White spouse relative to the other two groups. Among those having potential social capital under score 5, intermarried persons with non-White spouses were likely to be the most psychologically distressed followed by intramarried persons and intermarried persons with White spouse. In addition, the differences in psychological distress among the three groups became smaller as potential social capital increased. At potential social capital score 5, the predicted mean of psychological distress was about the same across the three groups. Among those having potential social capital score 6, intermarried persons with White spouse were tended to experience more psychological distress relative to intramarried persons and intermarried persons with non-White spouse.

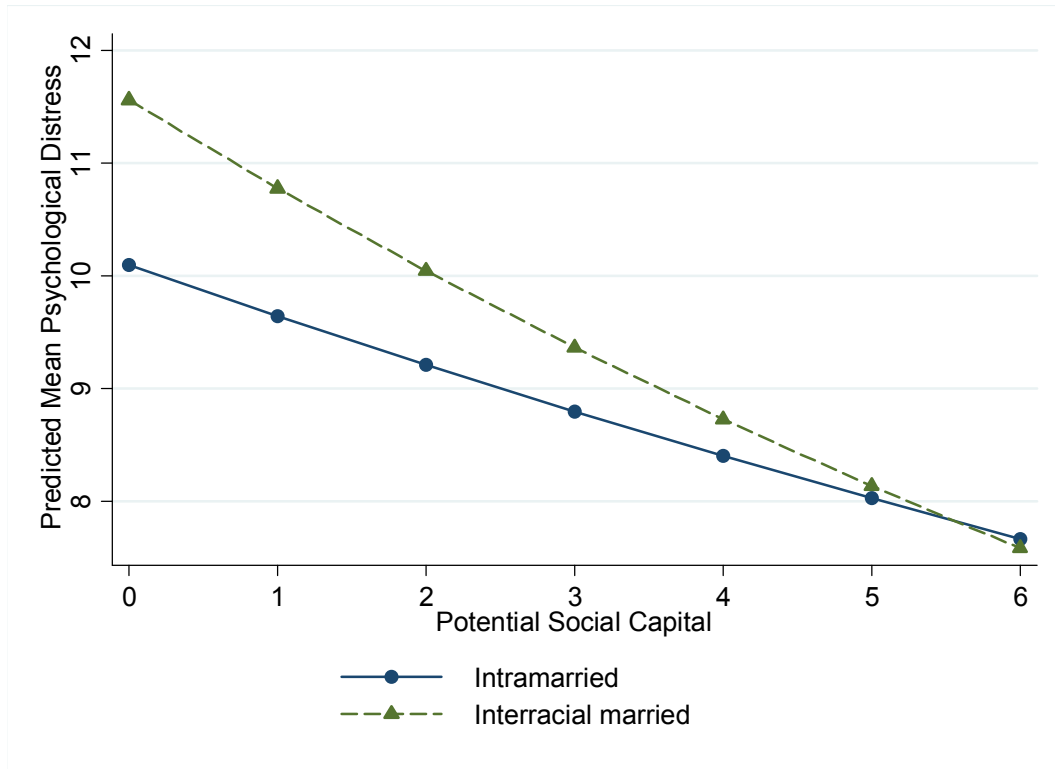
Figure 4. Association between Potential Social Capital and Psychological Distress by Intermarriage and Race of Spouse



Model 3 replicating Model 2 using the three types of intermarriage (i.e., interracial, interethnic, and international marriage) was estimated to determine whether the association between potential social capital and psychological distress differed with respect to type of intermarriage. The covariates in Model were same with those in Model 2 and their coefficients remained similar with those in Model 2.

Model 3 revealed that the only intermarriage type affecting psychological distress was interracial marriage. Interracial married persons were likely to experience 18% higher psychological distress than intramarried persons assuming their potential social capital was 0. Interaction between interracial marriage and potential social capital was also significant, which means the association between potential social capital and psychological distress differs by interracial marriage status. For intramarried persons, potential social capital was associated with 4.6% decrease in psychological distress holding other variables constant at their means. For interracial married persons, potential social capital was associated with about 7% decrease in psychological distress holding other variables constant at their means. Figure 5 (p. 66) illustrated the difference in the association between potential social capital and psychological distress for intramarried and interracial married persons. In addition to stronger negative association between potential social capital and psychological distress, interracial married persons were likely to experience more psychological distress than intramarried persons. However, the gap in psychological distress at lower levels of potential social capital between intramarried and interracial married persons decreased as potential social capital increased.

Figure 5. Association between Potential Social Capital and Psychological Distress by Interracial Marriage



The pattern of interaction between potential social capital and intermarried with White spouse was similar with that in Model 2. For intermarried persons with non-White spouse, there was about 6% decrease in psychological distress by each additional increase in potential social capital, whereas for intermarried persons with White spouse, there was about 2% decrease in psychological distress by each additional increase in potential social capital.

Discussion and Implications

Although it is often claimed that intermarried persons often experience more psychological distress caused by social disapproval of intermarriage and their limited social capital in previous literature, the association between social capital and psychological distress for intermarried persons has rarely been investigated, especially with comparison to intramarried persons. The current study aimed to examine the influence of intermarriage on psychological distress and whether the strength of association between potential social capital and psychological distress differs between intramarried and intermarried persons.

With regard to Research question 3, intermarried persons might experience more psychological distress relative to intramarried persons, but not all intermarried persons experience more psychological distress as indicated by Bratter and Eschbach (2006). When intermarriage was entered in analysis as a single entity, intermarried persons were likely to have higher psychological distress than intramarried persons assuming there was no potential social capital. However, when interracial, interethnic, and international marriages were entered in analysis as separate entities, only interracial married persons

experienced significantly higher psychological distress than intramarried persons holding potential social capital at zero.

With regard to research question 4, potential social capital was negatively associated with psychological distress, but the strength of the association varied. Although the influence of potential social capital on psychological distress for intermarried persons did not differ significantly from that for intramarried persons (no support for Hypothesis 3a) when intermarriage was treated as a single entity, the interaction between potential social capital and interracial marriage revealed that the strength of association was significantly different for interracial married persons from intramarried persons. Potential social capital had stronger negative influence on psychological distress for interracial married persons than for intramarried persons, which supported Hypothesis 3b. The strength of the association between potential social capital and psychological distress for interethnic and that for international married persons were not significantly different from that for intramarried persons.

In relation to Research question 5, the strength of association between potential social capital and psychological distress varied across intramarried persons, intermarried persons with non-White spouse, and intermarried persons with White spouse. For intermarried persons with non-White spouse, the negative association between potential social capital and psychological distress was significantly stronger compared to that for intramarried persons and for intermarried persons with White spouse, which supported Hypothesis 4. On the other hand, for interracial married persons with White spouse, the negative association was weaker than that for intramarried persons.

The results suggest that some intermarried persons experience more psychological distress than intramarried persons, but it cannot be generalized to all intermarried persons. For example, psychological distress experienced by interethnic and international married persons was not significantly different from that experienced by intramarried persons. In addition, intermarried persons with White spouse even tended to experience less psychological distress than intramarried persons. Further, although the results revealed that interracial married persons and intermarried persons with non-White spouse tended to experience more psychological distress than intramarried persons, the differences in psychological distress relative to intramarried persons decreased as potential social capital increased. Considering over 50% of them scored potential social capital at or above 5, it should not be concluded easily that those interracial married or intermarried with non-White spouse experience greater psychological distress caused by their intermarriage.

The results demonstrate that the negative effect of potential social capital on psychological distress varies by social context. The negative association between potential social capital and psychological distress was stronger for interracial married persons than for intramarried persons. One possible explanation is that potential social capital is more appreciated by interracial married persons because of the prevalence of possessing less potential social capital within interracial married persons as revealed in Study 1.

For intermarried persons with non-White spouse, the negative influence of potential social capital on psychological distress was stronger than that for intramarried persons. It could be interpreted that social disapproval or acceptance of their

intermarriage manifested by their potential social capital has a significant impact on their psychological distress. Another interesting result revealed is the weak association between potential social capital and psychological distress for intermarried persons with White spouse. Intermarriage may not bring the loss of racial privileges for White intermarried persons with White spouse, which might cause no obvious social rejection of intermarriage. It is obscure whether the weak association for non-White intermarried persons with White spouse is due to greater acceptability of intermarriage with White spouse because the profile of their potential social capital seems unique from others. Compared to intramarried persons, they were less likely to have physical contact with relatives and more likely to participate in group events. One might assume that low prevalence of having physical contact with relatives is caused by physical distance from them if they were immigrants, but it existed regardless of their immigrant status in the sample. The profile might indicate that their intermarriage might be accepted by community but opposed by relatives. Perhaps this mixed signal from relatives and community made them less sensitive to potential social capital resulting in the weak association between potential social capital and psychological distress.

In sum, I suggest that the context-dependent nature of social capital posited by Bourdieu (1986) might be applicable to the meaning of possessing social capital as well as to access to social resources and uneven distribution of social capital. In Bourdieu's original theory, the context-dependent nature of social capital means that access to social resources is determined by social context and it results in uneven distribution of social capital. In the current study, varying strength of the association between potential social capital and psychological distress points out that the influence of potential social capital

on psychological distress could be determined within context. In other words, how intermarried persons interpret and value their potential social capital could be affected by social approval/disapproval of their intermarriage, which results in varying influence of potential social capital on psychological distress. It suggests that the meaning of possessing social capital can be context-dependent for intermarried persons.

There are limitations of this study. The association between potential social capital and psychological distress in the current study may not be causal since it was estimated by using cross-sectional data. Future study should utilize longitudinal data to investigate the association between potential social capital and psychological distress for intermarried persons over time. Another limitation is that the analytic models in the current study did not consider potential explanatory variables of psychological distress such as the occurrence of life events. Future research requires controlling for them to obtain more accurate association between potential social capital and psychological distress for intermarried persons.

The study contributes to literature by revealing that the association between potential social capital and psychological distress varies among intermarried persons. Further, it implies that the context-dependent nature of social capital can be extended to the meaning of possessing social capital beyond determining access to social resources and the distribution of social capital.

General Discussion

While literature has argued that intermarried persons often experience lack of social capital and its consequent psychological distress, no previous research systemically explored whether intermarried persons actually possess less social capital and experience more psychological distress as a result. In this dissertation, I contributed to this gap in literature on intermarriage. Based on Bourdieu's social capital theory (1986), potential social capital was defined as accessible potential resources of relatives, friends, and community and examined by measuring one's contacts with relatives, friends, and communities in the current study. The two studies utilized the same data – the 2001 IHIS – including 11,483 intramarried persons and 1,392 intermarried persons. Generalized linear models were used for analyses.

As the first step in filling the gap in literature, I investigated whether intermarriage affected potential social capital. I found that intermarried persons, especially interracial married persons were likely to have less potential social capital than intramarried persons. With regard to social capital theory, the finding suggests that being interracially married hinders intermarried persons' equal access to social resources relative to intramarried persons due to social opposition to interracial marriages. Assuming that social opposition to intermarriage is a social context determining one's potential social capital, interethnic or international marriages are not considered as a serious violation of endogamy norm as interracial marriage because being interethnic or international married do not decrease potential social capital.

To further investigate the argument of previous literature, I assessed the association between potential social capital and psychological distress for intermarried

persons in comparison to that of intramarried persons. I found that the negative association between potential social capital and psychological distress was stronger for interracial married persons and intermarried persons with non-White spouse compared to that for intramarried persons. In addition, it was revealed that the negative association was weaker for intermarried persons with White spouse than for intramarried persons. The results imply that the meaning of possessing social capital as well as potential social capital are context-dependent for intermarried persons.

In general, I found variations in intermarried persons in terms of their potential social capital and psychological distress. Interracial married persons tended to have less potential social capital than intramarried persons, and the negative association between potential social capital and psychological distress was also stronger for them relative to intramarried persons. Since interethnic and international married persons did not reveal similar patterns, it might be assumed that interracial married persons confront most challenges and are opposed to a greater extent by society than other intermarried persons. Future research may focus more on interracial marriage than other types of intermarriage to investigate social opposition to intermarriage in depth.

In addition, within intermarried persons, whether their spouse was White or non-White played a role in determining the strength of the association between potential social capital and psychological distress. Contrary to the stronger association for intermarried persons with non-White spouse relative to intramarried persons, the association was weak for intermarried persons with White spouse. Thus, it provides evidence that with whom they married in addition to whether they intermarried may

affect their experiences of social opposition compared to other types of intermarried persons.

In sum, I cautiously raise a concern that the presumption in literature that intermarried persons tend to experience lack of social capital and consequent psychological distress might be exaggerated. The sample of the current study was population-based and not severely distressed in general. In the sample, some intermarried persons were more vulnerable than intramarried persons, but not all of them. If samples of previous studies consisted of intermarried persons who were severely depressed or very sensitive to social capital, it could explain why the current study did not fully support the presumption in previous literature. The current study shows that intermarried persons are not homogeneous and the variations among them are more than the differences in their demographic characteristics. Thus, family therapists and practitioners should not simply assume that their intermarried clients are psychologically distressed due to their intermarriage. How their social groups perceive various kinds of intermarriages must be considered as an important element of their social context.

This study supported Bourdieu's argument of context-dependent nature of social capital. First, interracial married persons tended to possess less potential social capital relative to intramarried persons. It illustrates their social context in which interracial married persons might not be approved as insiders of their society having the same access to social resources with intramarried persons. Second, the influence of potential social capital on psychological distress was context-dependent. The negative influence of potential social capital on psychological distress was stronger for interracial married persons and intermarried persons with non-White spouse than for intramarried persons.

It suggests that the meaning of possessing potential social capital is context-dependent as well.

There are a few main limitations of this dissertation study due to the nature of data. First, the data only provide cross-sectional information, thus it was not possible to assess the changes in the effect of intermarriage over time. In addition, it was not available to look at the causal relationship between potential social capital and psychological distress. Future research should utilize longitudinal data to examine the long-term effect of intermarriage and the change of the relationship between potential social capital and psychological distress for intermarried persons over time. Second, the data provides only one spouse's information about potential social capital and psychological distress. Thus, the study could not facilitate dyadic level analyses or comparisons between spouses. Future research needs to investigate potential social capital and psychological distress for intermarried couples in depth beyond investigating intermarried persons. Lastly, the data do not contain some necessary information about intermarriage and psychological distress such as the duration of marriage, remarriage, and occurrence of life events. Future research requires controlling for these variables in order to obtain more accurate results.

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Appendices

Appendix 1. Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1.Female	-																			
2.Age	-.10	-																		
3.Black	.00	-.03	-																	
4.Mexican	.00	-.17	-.11	-																
5.Education	-.04	-.08	-.04	-.23	-															
6.Income	-.01	-.16	-.05	-.23	.43	-														
7.Employment	-.16	-.46	.03	-.02	.18	.35	-													
8.Foreign-born	.00	-.12	.01	.54	-.14	-.17	-.04	-												
9.Number of children	.01	-.52	.02	.20	.04	.05	.20	.16	-											
10.General health	.01	-.32	-.08	-.03	.26	.30	.30	-.01	.20	-										
11.Northcentral/Midwest	-.01	.01	-.06	-.16	.01	.04	.04	-.13	-.02	-.00	-									
12.South	-.00	-.02	.14	-.01	-.04	-.08	-.01	-.05	-.04	-.01	-.45	-								
13.West	.01	-.04	-.10	.31	-.01	-.02	-.03	.21	.08	.04	-.30	-.39	-							
14.Intermarriage	-.01	-.08	.01	.18	.03	.01	.05	.23	.04	.04	-.09	-.02	.14	-						
15.White spouse	-.02	-.01	-.00	.07	.07	.04	.01	.21	.01	.04	-.04	-.03	.06	.65	-					
16.Interracial marriage	-.01	-.06	.09	-.03	.03	.01	.05	-.01	.03	.02	-.02	-.00	.05	.47	.08	-				
17.Interethnic marriage	-.00	-.09	-.03	.16	.00	.02	.06	.04	.05	.03	-.07	-.02	.12	.57	.19	.22	-			
18.International marriage	-.01	-.03	-.02	.13	.04	-.00	.02	.28	.07	.02	-.07	-.02	.09	.78	.62	.16	.19	-		
19.Potential social capital	.09	-.07	.03	-.02	.16	.14	.06	-.04	-.02	.19	.00	.02	-.02	-.04	-.02	-.04	-.01	-.03	-	
20.Psychological distress	.08	-.02	-.03	-.01	-.10	-.12	-.08	-.01	-.01	-.28	.02	.00	-.01	.01	-.01	.02	.01	-.01	-.20	

Appendix 2. Predicted Mean of Potential Social Capital

	All three groups	Whites ^a	Blacks	Mexicans
Total sample	4.65	4.61	4.85	4.85
<i>Intramarried</i>	4.67	4.62	4.88	4.88
<i>Intermarried</i>	4.53	4.43	4.59	4.77
Interracial married	4.51	4.25	4.44	4.48
	-	4.27 (with a Black spouse)	4.41 (with a non-Hispanic White spouse)	4.50 (with a Black spouse)
	-	4.24 (with a spouse from other minority races)	4.49 (with a spouse from other minority races including Hispanic White)	4.48 (with a spouse from other minority races)
Interethnic married	4.54	4.48	4.59	4.70
International married	4.52	4.44	4.70	4.82
White ^a spouse	4.51	4.47 ^b	4.41	4.70
Non-White spouse	4.55	4.40	4.71	4.81

Note. ^a White: non-Hispanic White. ^b Intermarried White respondents with White spouse corresponds to internationally married Whites with White spouse.

Appendix 3. Frequencies of Items in Potential Social Capital

Social Capital	Total sample	Intramarried	Total Intermarried	Intermarried		International
	%	%		Interracial	Interethnic	
			%	%	%	%
<i>Access to social resources of</i>						
<u>Relatives</u>						
Phone contact	93.44	93.63	91.81	92.06	92.83	91.67
Physical contact	84.79	85.33	80.39	73.82	83.81	80.02
<u>Friends</u>						
Phone contact	88.22	88.31	87.43	86.18	85.45	88.36
Physical contact	84.50	84.69	82.97	79.12	81.15	83.68
<u>Communities</u>						
Group event	57.41	57.29	58.33	57.94	62.70	56.39
Worship	56.84	57.59	50.65	45.88	50.61	51.60

Appendix 4. Means and SDs of Psychological Distress

Psychological Distress	Total	Intramarried	Intermarried			
	Mean (SD)	Mean (SD)	Total Mean (SD)	Interracial Mean (SD)	Interethnic Mean (SD)	International Mean (SD)
Effort	1.42 (0.88)	1.42 (0.88)	1.44 (0.89)	1.57 (0.99)	1.47 (0.90)	1.43 (0.90)
Hopeless	1.17 (0.56)	1.17 (0.56)	1.18 (0.58)	1.23 (0.67)	1.19 (0.57)	1.17 (0.55)
Nervous	1.59 (0.89)	1.59 (0.89)	1.59 (0.88)	1.61 (0.88)	1.63 (0.93)	1.55 (0.86)
Restless	1.57 (0.92)	1.57 (0.92)	1.56 (0.92)	1.66 (0.99)	1.59 (0.95)	1.51 (0.88)
Sad	1.35 (0.74)	1.35 (0.74)	1.39 (0.77)	1.42 (0.80)	1.41 (0.80)	1.37 (0.76)
Worthless	1.14 (0.54)	1.14 (0.53)	1.13 (0.52)	1.16 (0.59)	1.13 (0.53)	1.12 (0.49)

Note. Range: 1 – 5.