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In recently years, there has been a dramatic increase in the use of online dating websites among adults over age 50. Nevertheless, samples collected in existing literature are mainly centered on White/Caucasian Americans. Furthermore, the only theoretical guide has been sexual strategies theory. This study fills the gap by using sexual strategies theory and acculturation theory to test Chinese American older adults dating preferences.

The sexual strategies theory discusses how males and females use different mating strategies in short-term and long-term contexts. Acculturation theory describes changes in which individuals or groups adopt another culture when it makes contact with their original culture. Since culture influences individuals' dating preferences, this study tests how exposure to American culture, in terms of length of residency and education location, influences the sexual strategies theory's description of dating preferences regarding age differences, shortest height acceptance, and preference for partner's income and education. Also, this study examines how dating preferences, affected by acculturation, vary by gender.

Two hundred and fifty-seven Chinese American older adults' online dating profiles were collected from a national online dating website. Multivariate multiple regression, multivariate analysis of variance, and logistic regression were used. The final results indicate that sexual strategies theory may be applied to explain Chinese American older adults' dating preferences. Exposure to American culture, in terms of length of residency and education location, does not influence Chinese American older females' dating preferences. However, the length of residency and education location affects Chinese American older males' acceptance of partners' shortest height and preference of partners' minimum education level.

Understanding the dating preferences of Chinese older adults in the U.S. can contribute to the growth of culturally sensitive social work practices that promote innovative uses of technology to reduce the dangers of social isolation. The descriptive data offers insights into Chinese older adults' involvement in online dating and can help dismantle stereotypes and stigma that contribute to social isolation and loneliness.

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Chapter One: Introduction

Importance of This Work/Relevance to Social Work

In 2009, Social Work Today devoted a special issue to age and love (Social Work

Today, Volume 9, Number 1). As Dr. Amanda Barusch pointed out in her introduction to

the issue:

> "...social work practitioners in a wide range of settings can promote healthy
> romantic experiences among the clients they encounter. Here, too, practice can
> benefit from increased sensitivity and knowledge of emerging research. At a
> minimum, we must respect our clients' romantic involvements. People with
> disabilities, people who are homeless, and people who are disenfranchised are
> also people who fall in love. By turning our backs on this aspect of their lives, we
> miss opportunities for connection and holistic appreciation of the human
> condition. Effective practice demands recognition of this central aspect of the
> human experience" (page 12).

Indeed, love and romance among older adults (60 years and older) are an

important concern among social workers, given how such relationships impact physical

health (Umberson, 1992; Mineau, Smith, & Bean, 2002; Iwashyna & Christakis, 2003),

mental health (Cohen, Klein, & O'Leary, 2007; Gove, 1972; Murphy, Grundy &

Kalogirou, 2007; van Grootheest, Beekman, Broese van Groenou, & Deeg, 1999;

Wisocki & Skowron, 2000; Zizook & Kendler, 2007), and mortality (Johnson, Backlund,

Sorlie, & Loveless, 2000). For example, Alterovitz and Mendelsohn (2013) indicated that

dating relationships provide older adults a confidante for self-disclosure, improve their

status among their peers, and reduce their loneliness and depression. Though dating and

longer-term partnership relationships are not the only social support systems available to older adults, older adults who date or get married often broaden their social networks. Social support networks have been shown to have important salutary effects for older adults (Hatfield, Hirsch, & Lyness, 2013; Lee, Arozullah, Cho, Crittenden, & Vicencio, 2009; Li & Zhang, 2015).

It is notable that the social work code of ethics states that social work is generally concerned with both well-being and meeting basic needs of all people (National Association of Social Workers, 2016). The NASW statement has been used to support arguments made to advance the position that social workers should consider older adults' needs for seeking romantic relationships (Barusch, 2009). In addition to these guiding social work values and ethics, there is evidence that even professionally trained social workers are not immune to the social stereotypes that trivialize or discourage romantic relationships and sexuality among older adults (Alterovitz & Mendelshohn, 2013). A further complication is the need for social workers in this area to consider the many differences related to romance and sexuality practices among culturally diverse older adults.

The older adult population of the United States is growing. The US Census Department reports that as the population ages, it will become more diverse (U.S. Census Bureau, 2014). The diversity includes an Asian population with the majority of whom are Chinese (U.S. Census Bureau, 2010). Because of their traditional culture and Confucianism, both of which emphasize harmony and collectivism, Chinese older adults

usually take into consideration their family members' attitudes towards their choice of a partner. If the children of a Chinese older adult fail to accept the romantic relationship, the older person may be more likely to terminate romantic interests. This is attributable to fear of intergenerational alienation and abandonment by their primary social support network (Alterovitz & Mendelsohn, 2013). In this case, a social worker, who knows Chinese cultural norms, current online dating patterns, and dating preferences, may be able to help family members understand the needs of their parent while also helping families negotiate and resolve conflicts.

Traditional Chinese culture also values chastity for women and discourages widows from pursuing romantic relationships or even remarriage. Confucianism and Buddhism have influenced Chinese society and culture for thousands of years. For example, it is considered shameful for Chinese women to be divorced or remarried despite their needs or their desires to do so (Watson & Ebrey, 1991). In addition, Confucianism insists that Chinese widows should remain widows to express loyalty and chastity to their first husbands (Chen, Dai, & Parnell, 1992). This belief is memorialized in traditional Chinese practices such as the award of the "arch," the symbol of loyalty and chastity, to their family after their death (Yao, 1983). While these beliefs and practices have certainly changed rapidly in China, this study explores the situation in the United States, where Chinese American female older adults may feel that engaging in romantic relationships, experiencing intimacy, or meeting their sexual needs are acts that remain culturally discouraged. Social workers may be able to help those women deal with their change in identity, issues of acculturation, and their emotions.

Social workers can also have a role in a larger sense by engaging older Chinese American adults and their community in conversations that encourage open discussion of their contemporary beliefs and preferences for romance, love, and sexuality. In this study, an exploratory examination of dating preferences and acculturation among Chinese older adults who have participated in an on-line dating website provides a preliminary evidentiary base and some direction for continued research in the development of evidence-based social work practice in this area.

Background

   Chinese American older adults. In the United States, older adults, who are 65 and over, represented 13.7% of the U.S. population in 2012. They will grow to be 21% of the population by 2040 (Administration on Aging, 2013). In 2010, there were over 1 million older Asians in the United States. However, by 2050, this population will rise to 7.5 million, occupying 9 percent of the total older population (Federal Interagency Forum on Aging-Related Statistics, 2012). The Chinese population is the largest and oldest among Asian American groups (Dong, Chang, Wong, & Simon, 2012; U.S. Census Bureau, 2010).

   More than 80 percent of Chinese American older adults were born outside of the U.S. and more than 30 percent of them have come to the U.S. after the age of sixty (Dong, Chang, Wong, & Simon, 2012). Both immigrated and American-born face changes in social contact and participation, poor health, and lack of economic resources (Penning, Liu, & Chou, 2014). The foreign-born Chinese Americans face more challenges, including language barriers, culture differences, living alone, and lack of

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social support from relatives who are living in China (Dong, Chang, Wong, & Simon, 2012; Dong, Chang, Wong, Wong, Skarupski, & Simon, 2010). Thus marriage and non-marital relationships may be an important source of social support and may facilitate the broadening of their social network, particularly for groups facing more isolation, such as Chinese American immigrants.

Marital status and its benefit among Older Americans and Older Chinese Americans. It is estimated that 42% of American older adults are unmarried (widowed, divorced or never married; Administration on Aging, 2013). In 2013, 34% of older Asian Americans were unmarried (U.S. Department of Health and Human Services, Administration for Community Living, 2013). The study conducted by Tan (2009) pooled nine years of data from the National Health Interview Survey (NHIS; 1998 to 2006). The results indicated that from a sample of 618 Chinese American older adults, 31.1% were unmarried.

There is an increasing trend toward diverse romantic relationships among older American adults. These relationships include cohabitation and dating with no intent of marriage. Living together in an intimate relationship without marriage, which is also called domestic partnership or cohabitation, is not limited to young adults (Vespa, 2012). The cohabitation rate has increased from 2000 to 2010 (Vespa, 2012). In 2000, 14.9% of U.S. cohabiters were age 55 to 64, and 5% were aged 65 and older (U.S. Census Bureau 2001). In 2010, the rate increased to 21.5% among individuals 55 and older, and 7.7% among people 65 and older (U. S. Census Bureau 2010). Older adults are becoming the fastest-growing group of cohabiters in the U.S. (Vespa, 2012). However, this research

lacks data about the cohabitation rate among different ethnic groups. In addition, there are no data indicating the rate of dating with no intent of marriage among older adults.

Furthermore, in 2010, there were estimated 2 to 7 million older adults who identified as lesbian, gay, bisexual, or transgender (LGBT) in the United States (Grant, 2010). According to a national project conducted by Fredriksen-Goldsen, Kim, Emlet, Muraco, et al. (2010), among 2,560 LGBT adults aged 50 to 95, 2% were Asian or Pacific Islanders. Underreporting related to cultural factors may cause this low rate of LGBT among Asian-Americans older adults. In Asian culture, family role obligations encourage individuals to maintain strong ties to families (Cochran, Mays, Alegria, Ortega, & Takeuchi, 2007). Thus, Asians are far less likely to disclose their LGBT status to protect their family reputation. Since the reported rate of LGBT is low among Asian older adults, this study only focuses on heterosexual relationships among Chinese American older adults. In addition, since the data set for this study is unclear about bisexual and transgender identity, no information will be available to assess dating preferences of persons who identify as bisexual or transgender. Furthermore, both marital relationship and non-marital romantic relationship (cohabitation, dating with no intent of marriage) will be considered.

Older adults may benefit from either marital or non-marital romance. For example, the marital resource model indicates that marriage may promote health and reduce the risk of disability because it provides social, psychological and economic resources (Liu & Zhang, 2013). Turner and Marino (1994) indicated that marriage might be more important for the health of older adults because social networks tend to shrink at

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older ages. Though little research about the relation between mental and physical health and non-marital dating relationships for heterosexual older adults has been conducted, generally speaking, it has been noted that men gain greater payoffs in regards to intimacy and emotional support, while women identify increased status rewards from dating (Cooney & Dunne, 2001). In addition, a non-marital romantic relationship is a kind of social support, which may broaden older adults' social networks and reduce social isolation and loneliness.

Online Dating among Older Adults. In recent years, the number of older adults who use the Internet is increasing. According to Pew Internet Research Center (2013), approximately 56% of older adults (aged 65 and above) in the United States are connected to and use the Internet. Internet utilization has the potential to help older adults build social networks, diminish social isolation, increase social support, and reduce loneliness (Sum, Mathews, Pourghasem, & Hughes, 2008).

Online dating sites are Internet tools "designed to facilitate 'connections' between users who are seeking romantic and/or sexual partners" (Fullick, 2013, p. 546). Their use has seen a dramatic increase across various age groups during the past two decades (McWilliams & Barrett, 2014). In 2011, online dating became the third most-popular way for newlyweds to meet (Gonzaga, 2011). Almost half of all singles have tried dating on the Internet (Match.com, 2014).

Online dating is also accepted and used by older adults. A survey from Pew Research Center's Internet and American Life Project (2013) indicated that 26% of adults aged from 50 to 64 as well as 20% of people 65 and older know someone who met and

fell in love online. Six percent of adults from ages 50 to 64 and 3% of people 65 and older have used online dating sites. For people 50 and older, online dating is the most popular way to meet and get married (Gonzaga, 2011). The Match.com Fact Sheet (2014) reports that adults over age 50 are its fastest-growing demographic. Several online dating sites specially target adults over 50, for example, Lavalife PRIME, OutTime.com, SeniorMatch.com, and SeniorPeopleMeet.com. Nevertheless, research related to online dating tends to focus on young to middle-aged adults (McWilliams & Barrett, 2014). In addition, in the existing literature which focuses on older adults and online dating, samples collected in existing literature are mainly centered on White/Caucasian Americans. Furthermore, the only theoretical guide has been evolutionary theory. This study will use sexual strategies theory as well as level of exposure to American culture to examine dating preferences of older Chinese adults in the U.S. This specific literature related to the theoretical and empirical evidence regarding older adults and online dating will be reviewed in Chapter 2.

To achieve those goals, the following research questions were addressed in this study:

(1) What are the demographic and descriptive characteristics of Chinese American older adults who participate in online dating?

(2) How do gender and exposure to the US culture (education location and length of residency) affect dating partner preferences among Chinese American older adults?

Definition of Key Terms

The following terms will be used in this study. ***Chinese American Older Adults.*** Chinese American older adults are defined as 60 years old and above who are currently living in the United States (US), no matter they were born in the US or not. Sixty-five years and older has been accepted by most developed world countries as the definition of older adults (World Health Organization, 2016). The United Nations uses age 60 and above as the cutoff point to define older adults (World Health Organization, 2016). To guarantee the sample size, 60 years and older is used to refer to the Chinese American older adults. Since the reported rate of LGBT is low among Asian older adults, only the heterosexual Chinese American older adults have been included in this study.

Marital Status. Marital Status refers to married, divorced, windowed, and never married.

Romantic Relationships. In this study, Chinese American older adults use the Internet to seek romantic relationships. Romantic relationships refer to marital relationship or non-marital romantic relationship (cohabitation, dating with no intent of marriage).

Online Dating. Online dating sites are Internet tools "designed to facilitate 'connections' between users who are seeking romantic and/or sexual partners" (Fullick, 2013, p. 546). Online dating is a behavior that people seek romantic relationships via the Internet.

Chapter Two: Literature Review

The following chapter reviews the literature related to online dating among older adults and provides the theoretical frameworks for this study. These theoretical and empirical sources were reviewed with the aim of developing a better understanding of older adults' online dating preferences and how culture may affect those preferences. The research questions and hypothesis are discussed at the end of this chapter.

Online Dating among American Older Adults

Several articles have explored online dating among older adults, including the topics of online dating goals, older adults' and the public's attitudes toward online dating, online dating preferences, and the implications for nursing practitioners. This chapter will only discuss articles about older adults and their online dating preferences.

References to older adults and their online dating preferences are limited. Six studies were found related to this topic (see Table 1): three of them conducted comparison studies among different age groups, while the other three specifically focused on older adults. The first five studies reviewed here examine older American adults' online dating preferences directly. However, the last study explores older adults' online dating preferences indirectly by analyzing their self-presentation online.

Table 1.

Summary of Literature Review

Author(s); Field	Data Collection	Sample	Methodology/Theory
Alterovitz & Mendelsohn (2009); Psychology	Personal ads downloaded from Yahoo! Personals	300 heterosexual men and 300 heterosexual women; four age groups: 20-34, 40-54, 60-74, 75+; Caucasian (84%), African-American, (4%); Hispanic (4%)	Quantitative; ANOVAs; Evolutionary theory & sexual selectivity theory
McIntosh, Locker, Briley, Ryan, & Scott (2011); Psychology	Personal profiles from Match.com	175 cases in the U.S.; Caucasians (156), African-Americans (2), Asians (3), Hispanics (8), other ethnic groups (4), ethnicity not indicated (2)	Quantitative; MANOVA; evolutionary theory
Levaro (2011); Dissertation, Human Development and Family Studies	Personal ads from newspapers, Craigslist.com, classified websites that includes personal ads, Match.com, and informant snowball leads	24 participants; all white Americans	Qualitative interviews; ageism, age relations, and gender relations
Alterovitz &	Personal ads	150 participants;	Qualitative method

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Mendelsohn (2013); Psychology	downloaded from Yahoo! Personals	three age groups: 40-54, 60-74, 75+; overall, 87.6% of participants self-identified as white, 2.9% as black, 2.4% as Hispanic, 4.5% as other ethnicities, and 2.6% did not specify an ethnicity	of Strauss and Corbin; socio-emotional selectivity theory
McWilliams & Barrett (2014); Sociology	People "over 50 years of age who have used online dating recruited through email on listservs for older adult organizations, through presentations at older adults group meetings, and through referral through personal contacts" (P. 417)	20 adults; all white Americans	Semi-structured qualitative interviews; no theory has been mentioned
Davis & Fingerman, (2015); Human Development and Family Studies	Dating profiles from two online dating websites	4,000 participants; three age groups: 18-29, 30-49, 50-64, and 65+; 70% white/Caucasian, 11% Black/African-American, 7%	Mixed-method: coding themes as well as running ANOVA analysis

Hispanic/Latino,
2% Asian, and
10% mixed
race/other

Alterovitz and Mendelsohn (2009) analyzed 600 Yahoo! Personals Internet ads from four age groups—20-34, 40-54, 60-74, and 75+ years old. The results indicated that across the lifespan, men were mostly concerned about females' physical attractiveness, which is consistent with sexual strategies theory descriptions of males' dating preferences. Additionally, female adults age 60 to 74 sought an older man, whereas female adults over age 75 sought a younger man.

McIntosh et al. (2011) also conducted a comparison study by randomly selecting 200 online dating personal profiles from Match.com, including 100 younger adults (aged 25-35) and 100 older adults (aged 65 and older). The sample included 156 white participants. However, unlike Alterovitz and Mendelsohn's (2009) study, this research showed that older adults are more selective about a potential match's height, race, and religion. Older women also cared more about men's income than did younger women. Finally, the authors found that older adults were willing to travel to meet a date in order to find the right person.

These two studies compared older adults' dating preferences with other age groups but did not deeply examine older adults' dating preferences. The other three studies focused specifically on older adults' dating preferences.

Levaro (2011) conducted two studies in her dissertation using the same samples: 11 women and 13 men ranging between age 70 to 82. These two studies recruited participants from a regional monthly newspaper (n=2), Craigslist.com (n=5), Match.com (n=15), and informant snowball leads (n=2). All of the participants were white. Both studies involved qualitative research. The first study used ageism, gender relations, and considerations of intersection as its theoretical framework and found that the participants resisted self-identification as old. Participants preferred their potential dating partners to look or act young, and both men and women preferred younger romantic partners. The second study used ageism, age relations, and gender relations as its theoretical framework. It found that most participants were interested in a romantic relationship that included sex. The participants insisted that penetrative intercourse was important and desirable. Nearly all of the men had sex with younger partners, and over half of older men either used or possessed drugs for the treatment of erectile dysfunction. However, only a small percentage of the women were currently dating and sexually active. These two studies examined not only the dating preferences of older adults, but also their attitudes toward age and their desire for sex. However, the theoretical bases for these two studies were unclear.

Alterovitz and Mendelsohn (2013), mentioned above, conducted another study using Yahoo! Personals Internet ads. It focused on middle-aged (40-45), young-old (60-74), and old-old (75+) populations, instead of examining individuals across the lifespan. At each age level, the authors also compared gender differences. The study included 450 personal ads, and the results showed that young-old and middle-aged adults were

concerned more about adventure, romance, sexual interests, and seeking a soulmate, while the old-old were more likely to mention health. This study helps us understand relationship goals in later life. However, in this study, the members of the sample were less ethnically diverse than the general population.

McWilliams and Barrett (2014) recruited 20 participants through websites, emails, or listservs for older adult organizations who were over age 50 and had online dating experience. All were white, middle-class, and heterosexual. The authors did not specify any theories but cited previous research related to evolutionary theory to explain that men care about women's physical attractiveness and women care about men's social status. Their qualitative findings showed that men sought committed relationships, while women sought companionship without demanding caring roles. Narrow social networks were barriers to men's dating. Competition from younger women and friendship norms limited women's pool of eligible partners. Men emphasized women's physical attractiveness, whereas women focused on men's abilities. Women highlighted their looks and sociability in their profile, whereas men highlighted their financial and occupational successes in theirs. This study examined both dating preferences and strategies; however, the sample was not diverse.

Online dating website users wrote self-descriptions on their online dating profiles to introduce themselves and attract attention. To promote their attractiveness, users often mentioned characteristics that preferred by either males or females. By analyzing heterosexual older adults' self-presentations, we can understand their dating preferences

indirectly. Davis and Fingerman (2015) examined age differences in self-presentations by collecting 4,000 online dating profiles from two dating websites. They selected an equal number of profiles from Los Angeles, Denver, Chicago, Atlanta, and New York City (Davis & Fingerman, 2015). One thousand profiles were randomly selected from each of these four age groups: early young adulthood (age 18-29), late young adulthood/early midlife (age 30-49), late midlife (age 50-64), and older adults (age 65 and older; Davis & Fingerman, 2015). Among the 4,000 individuals sampled, "70% identified as white/Caucasian, 11% as Black/African-American, 7% as Hispanic/Latino, 2% as Asian, and 10% as mixed race/other" (p. 3). Twelve themes were coded using Linguistic Inquiry and Word Count software: first-person plural, family, friends, health, positive emotion, first-person singular, work, achievement, money, attractiveness, sexuality, and negative emotion. Themes were transformed and analyzed using regression. Also, the authors used t-tests and analysis of variance (ANOVA) to analyze the "potential differences by website, geographic region, and ethnicity" (p. 3). The results showed that older adults used first-person plural pronouns (e.g., we, our) more than younger adults; however, "the younger adults were more likely to use first-person singular pronouns (e.g., I, my)" (p. 1). The authors had thought that older adults would mention more family category words. However, the results failed to support their hypothesis. In addition, there were "no significant gender differences" found in the "categories of achievement, money, attractiveness, or negative emotion" (p.5). Furthermore, the results also showed that older and younger men highlighted their work and achievements in their profiles, while older and younger women highlighted their physical attractiveness and sexuality. The results

corresponded to evolutionary theory, which suggests that males care about females' physical attractiveness, whereas females care about males' socioeconomic status. In addition, the results showed that older adults used first-person plural pronouns (e.g., we, our) more than younger adults; however, "the younger adults were more likely to use first-person singular pronouns (e.g., I, my)" (p. 1). The authors tested for differences in motivations or behaviors regarding ethnicity: ANOVAs showed the significance of ethnicity in 6 of the 12 categories, including first-person singular, family, negative emotion, health, sexual, and work. The authors said that "contrasts revealed significant differences between white and all other ethnic groups in four of six significant ANOVAs." (p. 4). Based on these findings, the authors coded a dummy variable (white = 0, all other ethnic groups = 1) as a covariate in the analysis. However, the authors failed to provide the results related to covariance. Also, the authors did not compare the differences among each ethnicity group individually. They just briefly compared the preferences of white people to those of other ethnic groups. In addition, because of the lack of related literature, they failed to interpret and understand the reasons behind the differences. Thus, in the future, research on a more diverse group of older adults and their online dating preferences is needed.

To sum up, samples included in existing literature mainly consisted of white/Caucasian Americans. Even though the last article examines ethnic differences, the authors failed to find explanations for them. There is no research investigating online dating preferences among Chinese-American older adults. In addition, social work literature is sparse in this field. Furthermore, since all the studies mainly focus on older,

white, American adults and use sexual strategies theory, which indicate that males prefer younger and attractive females, while females prefer males with higher education level and better financial situation, other theories, like acculturation theory, must be considered as well.

Theories Related to Mate Selection

Kline and Zhang (2009) indicated that currently three main theories or perspectives guide mate selection: evolutionary theory/sexual strategies theory by Buss (1989), social exchange theory by Becker (1991), and "cultural values or frames perspectives" (e.g., Philipsen, 1992, p. 326).

Social exchange theory. Social exchange theory was introduced in 1958 by the sociologist George C. Homans. According to him, "social behavior is an exchange of goods, material goods but also non-material ones, such as the symbols of approval or prestige" (Homans, 1958). Social exchange theory has been used in different fields (Cropanzano & Mitchell, 2005), including mate selection and relationships. Rosenfeld (2005) points out that there are three forms of social exchange theory that are used to explain relationships. The first form of social exchange theory involves an exchange between a man's economic resources and a woman's youth and attractiveness. The second form of social exchange theory has been demonstrated by Becker (1991) in his book of "A treatise on the family," which uses economic perspectives to analyze the exchange of men's market skills for women's domestic skills (Rosenfeld, 2005). The third form of social exchange theory is related to interracial marriage. It indicates,

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"whites of relatively low socioeconomic status (SES) marry blacks of higher SES in an exchange or racial caste position for economic resources and status" (Rosenfeld, 2005, p.1285).

However, there are several limitations of social exchange theory. First of all, social exchange theory assumes people are rational and consider relationships based on cost and rewards. It reduces the human interaction and assumes the process of seeking relationships as an economic concern rather than a social concern (Katherine, 2005). Second, it fails to point out the reasons for exchange between males and females (Buss & Schmitt, 1993). What are the origins of these exchanges? Third, it does not discuss the different mating strategies that exist regardless of circumstances (Buss & Schmitt, 1993). What does a man look for in a short-term relationship versus a long-term relationship?

Sexual strategies theory. The sexual strategy theory integrates the basic idea of social exchange theory but rectifies its limitations by "articulating a selective rationale for the origins of the particular strategies that human men and women exhibit" (Buss & Schmitt, 1993, p.205). It discusses what individuals want from relationships, separating desire by gender and context. The sexual strategies theory is based on evolutionary theory. In 1871, Darwin published a book, "*The descent of man and selection in relation to sex,*" in which he pointed out "sexual selection," which was believed to be a "second evolutionary process" (Buss, 1998, p. 19). According to Darwin, sexual selection involves two processes: first, there are competitions among the same sex to gain "preferential sexual access to mates" (p.19). The qualities that lead to success will

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continue in the evolution process (Buss, 1998); second, people who have the "desired qualities have a preferential mating advantages" (p.19). However, Darwin's sexual selection theory fails to explain the origins of mate choice.

Fisher (1958), Trivers (1972), and Symons (1979, 1987, & 1992) moved forward Darwin's sexual selection theory by exploring how mate preferences might evolve through parental investment, adaptations, sex differences in sexuality, and the nature of evolved psychological mechanisms. All of those have provided foundations to sexual strategies theory. As an evolutionary theory of human sexuality, the sexual strategies theory is centered on "desire and all of its interpersonal ramifications—attraction tactics, derogation of competitor tactics, conflict between the sexes, mate-expulsion tactics, causes of conjugal dissolution, mate-retention tactics, and harmony between sexes" (Buss, 1998, p. 23).

According to Buss and Schmitt (1993), males and females have different strategies when they seek short-term or long-term strategies. Men face the following four problems when they pursue short-term dating: (1) having a number of partners; (2) identifying sexually accessibility and fertility; (3) minimizing costs and risks; and (4) commitment. From the evolutionary psychology perspective, men may increase their reproductive success by increasing the number of fertile women they can copulate with (Buss & Schmitt, 1993; Schulz, 2010). Thus, males prefer "a largely promiscuous lifestyle" (Schulz, 2010, p.42) when they look for short-term relationships. One of the problems of short-term strategies is identifying fertile women. Age is related to productive or fertile value. Younger women have higher fertile or productive values than

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older ones (Buss, 1998; Buss & Schmitt, 1993). Different from men, because of the cost of gestation, lactation, and reputation, women are less interested in short-term relationships than men are (Buss, 1998; Buss & Schmitt, 1993, Lo, 2001, Schulz, 2010). When women pursue short-term sexual strategies, they consider immediate resource extraction, evaluating short-term mates as possible long-term mates, gene quality, and mate switching (Buss & Schmitt, 1993). Women evaluate men's willingness and ability to spend resources on them for the short-term or on their offspring in the future by considering men's income and social status. Buss & Schmitt (1993) indicated that one of their hypotheses regarding short-term relationships was that women seek protection from protective men. Thus, in short-term mating, women consider men's physical size and strength more than in long-term mating.

When men look for long-term relationships, they consider the paternity confidence, female reproductive value, commitment, good parenting skills, and gene quality (Buss & Schmitt, 1993). All of those characteristics are related to reproduction— "the primary reproductive advantage to men of adopting a long-term mating strategy is the possibility of monopolizing a women's entire reproductive capacity for her lifetime" (Buss & Schmitt, 1993, p.216). Women's physical attractiveness, which provides a cue to age and health and is related to productive value, is highlighted by men in long-term relationships (Buss, 2007; Buss & Schmitt, 1993). Furthermore, even though education levels may be related to good parenting skills (Buss & Schmitt, 1993), when making marriage decisions, men consider women's physical attractiveness more than education level or social status (Buss & Schmitt, 1993).

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However, when women pursue long-term dating, they consider men who are willing and able to invest, provide physical protection and commitment, have good parenting skills and good gene quality. Women evaluate men's social status, wealth, education, and ambition to make sure that they have the ability to provide resources to women and their children (Buss, 2007; Buss & Schmitt, 1993).

Even though women in short-term mating focus on men's physical strength, women in long-term mating also value this factor. Buss failed to explore the reason in his articles published in the 1990s. However, in his latest book, *Evolutionary Psychology: The New Science of the Mind*, published in 2015, Buss pointed out that women have preferences for men's height and athletic prowess because height and physical prowess are related to protection in long-term relationships. From the perspectives of evolutionary biology and psychology, males' height has been recognized as being related to reproduction and parenting capacity. Taller men have greater reproductive outcomes, can protect others, and get resources (Yancey & Emerson, 2016). Because height is hereditary, taller men may have taller offspring, "who in turn would be preferred by females" (Buunk, Park, Zurriaga, Klavina, & Massar, 2008, p. 133). Furthermore, height is correlated with education, income, careers, life satisfaction, health, cognitive abilities, and social skills (Case & Paxion, 2008; Deaton & Arora, 2009; Jeager, 2011; Ponzo & Scoppa, 2015). Thus, females prefer taller males (Nettle, 2002; Yancey & Emerson, 2016).

To sum up, according to sexual strategies theory, no matter what kind of relationship men look for, females' physical attractiveness and age, which determines

their reproductive value, are important to them (Buss, 1998; Buss & Schmitt, 1993). No matter which kind of dating women pursue, they care about men's social and financial status, education, and ambition. Men in a good financial situation can provide them immediate resources in short-term dating or invest and provide resources to their children. Since height is associated with men's socioeconomic status, women consider men's height.

Sexual strategies theory and older adult mating. In sexual strategies theory, reproduction is the main concern, especially for men. However, when reproduction is no longer a concern, are age, physical attractiveness, and financial well-being still important, as evidenced in older adults' dating preferences? According to the current literature, sexual strategies theory can be used to analyze dating preferences among older adults. The previous literature review regarding the research about older adults and online dating preferences indicate that older men still prefer younger women and value women's physical attractiveness. Older women prioritize men's socioeconomic status. In addition, the literature, which examines older adults' dating preferences (not online dating preferences, specifically), also indicates a similar conclusion.

For example, Brown and Shinohara (2013) utilized the secondary data from the 2005-2006 National Social Life, Health, and Aging Project, "a nationally representative sample of 3,005 individuals ages 57-85" (p. 1). The authors selected 1,144 samples, which were composed of unmarried and non-cohabiting adults, "of which 152 reported they were in a dating relationship" (p. 3). The results indicated that most of the daters were men (62%). Because men prefer younger daters, and because women prefer the

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same age or older daters, men have more options than women. Dating men have higher

education level, more assets, and better financial status than non-dating men. Men's

health was positively associated with dating. Younger women have more chances then

older to be dating. Social connectedness was positively related to women's dating

(Brown & Shinohara, 2013).

England and McClinetock (2009) used the June 1995 Current Population Survey

(CPS) to "examine how the sex ratio of unmarried individuals varies with age" (p. 803)

and the U.S. Department of Health and Human Services and National Center for Health

Statistics (NVHS) Marriage Data (1970-1988) to test whether men prefer younger dates

and whether this preference is associated with education level. The results showed that

older men prefer younger women. Education level is related to this preference—highly

educated men were able to marry much younger women than less educated men.

However, the difference is small. Women are devalued in the marriage market as they

become old.

In addition to the factors men and women care about during the mating process,

older adults may also consider other factors in mating selections, such as health

(Alterovitz & Mendelsohn, 2013; Stroebe & Stroebe, 1983; Zisook & Shuchter, 1991)

and financial situations. Lee (2011) conducted research on Eharmony.com and found that

"health and mobility become an important dating criteria" among adults who are 60 and

older. Brown and Shinohara (2013) also pointed out that health is related to male's dating

preferences. Davis and Fingerman (2015) suggested that older women considered

potential partners' health because they were unwilling to play as a "caregiver role to an

ailing partner" (p.2). According to sexual strategies theory, females prefer dates with men of a higher social status and better financial status because those factors predict the possibility that men will provide resources to women and their offspring (Buss, 1998). Nevertheless, older women are concerned with potential dating partners' income and wealth because they want to avoid financial burden or losing their financial independence after entering a relationship (Davis & Fingerman, 2015). Furthermore, as women grow older, they prefer younger partners (Alterovitz and Mendelsohn, 2009; Levaro, 2011; Schwarz & Hassebrauck, 2012).

Limitations. The sexual strategies theory has been criticized for being "essentialistic, reductionistic, and sexist" (Smiler, 2011, p. 603). Also, Buss's findings have been questioned as "to what extent they in fact corroborate his hypotheses about what our sexual strategies are" (Schulz, 2010, p.43). Liesen (2013) criticized that sexual strategies theory is rooted in "our evolutionary past and not very responsive to the current environments with which men and women are making these reproductive decisions" (p. 485). Some feminist scholars point out that sexual strategies theory highlights men's power (Smith & Konik, 2011). Furthermore, sexual strategies theory has been criticized for it neglects social and cultural influences on behavior (Liesen, 2012; Smith & Konik, 2011). However, sexual strategies theory still plays an important role in analyzing mating and sexuality, as it points out the origins and provides a logical explanation for gender (female and male) differences in mating behavior (Buss, 1998; Smith & Konik, 2011).

Most studies examining older adults' dating preferences were conducted in the U.S. As mentioned above, sexual strategies theory has been criticized because it neglects

social and cultural factors. To test whether sexual strategies theory can be generalized to the other populations, some scholars conducted studies in Germany and Holland. Schwarz and Hassebrauck (2012) selected 828 participants out of 23,935 participants who completed an online survey to test dating preferences across different ages. These participants were between age 18 and 65 years old. The results indicated that sexual strategies theory worked for the participants, who were in Germany. Older women's tolerance of accepting older partners decreased as age. However, the authors found that older participants preferred creative and domestic partners. This point was not found in the other studies. Buunk, Dijkstra, Fetchenhauer, & Kenrick (2002) also examined dating preferences across the ages of 20, 30, 40, 50, and 60. The authors examined whether sexual strategies theory would be applicable to the people in the Netherlands, whose culture is more feminine, "that is, by less emphasis on psychological differences between men and women" (p.272). The results still supported some part of sexual strategies theory. However, the authors found that older men had a stronger preference for intelligent mates, and older women attached more value to the dominance of mates. The authors pointed out that they failed to find any theory to explain this.

While these two studies support some parts of sexual strategies theory, they have found preferences that differ from those of older American adults. There is no study about older Asian adults and their preferences. It is necessary to analyze the connection between Asian culture and sexual strategies theory.

Chinese culture &history and sexual strategies theory. Three Chinese culture and history/social changes have influenced Chinese people' mate preferences: traditional

cultural (before 1949), the Mao Era (1966-1976), and economic reform (since 1978; Xu, Li, & Xu, 2014). As described in the following sections, some support is evident for how sexual strategies theory may have guided mate selections during ancient Chinese society (before 1949) and after economic reform (since 1978).

  Ancient Chinese society (before 1949). Collectivistic traditions are influenced by Confucianism, the original culture of Chinese Americans older adults. Collectivistic culture emphasizes "harmony, interdependence, and concern for others" (Hui & Triandis, 1986, p. 244-245). In collectivistic cultures, marriage is seen "as the alliance between two families" (p. 504). Thus, in ancient Chinese society (before 1949), arranged marriage was very common and conducted according to the following three key principles: "lang cai nv mao", "men dang hu dui" (He, Zhang, Zhang, Wang, Tu, Ji, & Tao, 2013), and "sheng chen ba zi" (Xia & Zhou, 2003): "lang cai nv mao" means that men choose beautiful women; and women consider talented men for long term relationships. Since traditionally, Chinese social status may have brought acceptance and honor to their families, Chinese women have preferred educated and successful men (Kline & Zhang, 2009). The "lang cai nv mao" reflects the dating preferences supported by sexual strategies theory. However, "lang cai nv mao" was not the only dating principle in ancient Chinese society. "men dang hu dui" also played an important role. "men dang hu dui" refers to women and men's families should have similar socioeconomic status (Ji, 2015; Zhang, 2015). Finally, even though the standards of "lang cai nv mao" and "men dang hu dui" have been satisfied, women and men's "sheng chen ba zi" has to be matched. "sheng chen ba zi" means the eight characters of birth time. Based on "sheng

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chen ba zi", Chinese parents determine whether this marriage will bring good fortune or disaster or tragedy to the whole family (Xia & Zhou, 2003).

Furthermore, other characteristics are considered, such as women's personality—there are three principles of Confucianism: "the king is the master of the minister; the husband is the master of the wife; the father is the master of the son" (Li, 2007, p.2). According to Confucian ethics, before getting married, Chinese women were obedient to their father and older brothers; within the marriage, Chinese women were obedient to her husband; the Chinese women were obedient to her sons in widowhood (Zhang, You, Teng, & Chan, 2014). Being influenced by Confucian values, Chinese men insist that their partners' docility, softness, and tenderness (Parish & Farrer, 2000) is more important than physical attractiveness.

Overall, in ancient society, Chinese dating preferences reflect the importance of women's physical attractiveness and men's social and economic status, which are suggested by sexual strategies theory. However, these were not the only determining factors. Other factors were evaluated and played more important roles. Older adults, who were born 1924 and before, have been influenced by traditional culture deeply (see Table 2).

The Mao Era (1949-1977). Since the founding of the People's Republic of China (PRC) in 1949, the traditional mate selection standards were challenged (Xu, Li, & Yu, 2014). During the culture revolution (1967-1977), one of the most important standards of mate selection was the people's morality and the loyalty to the communist party.

Education level was de-emphasized during this period (Song & Luke, 2014). Older adults who were born between 1925-1945 may have been influenced (see Table 2).

Economic reform (since 1978). Chinese economic situation has been largely improved since economic reform in 1978. Both women and men have more job opportunities and higher salary. The whole society has been influenced by western culture. The western style of dating and intimacy have been accepted (Song & Luke, 2014). In this situation, women prefer men with high social status and income (Chang, Wang, Shackelfor, & Buss, 2011). Also, in this period, the tradition value of "men dang hu dui" has been supported and encouraged (Ji, 2015). All of the older adults' have been influenced by economic reform (see Table 2).

To sum up, the dating preferences suggested by sexual strategies theory have been reflected in ancient Chinese society and the period after economic reform. However, the sexual strategies theory guided dating preferences are not the sole determining factors. The other social and cultural factors still affect Chinese's mate selection. Chinese American older adults have been influenced by both Chinese and American culture— acculturation. It is necessary to examine their dating preferences, how they prioritize different preferences in mate selection as suggested by sexual strategies theory, and how acculturation may affect their dating preferences.

Table 2

Historical Periods and Culture and Their Influence on Difference Age of Older Adults

Age in 2014	60-69	70-79	80-89	90-99	100 and above
Born period	1945-1954	1935-1944	1925-1934	1915-1924	1914 and before
Traditional culture—ancient China	Slightly influenced	Slightly influenced	Mild influenced	Mild influenced or deeply influenced	Deeply Influenced
The Mao Era (1949-1977; including cultural revolution—1967-1977)	Influenced	Influenced	Influenced	Not Influenced	Not Influenced
Economic Reform from 1978	Influenced	Influenced	Influenced	Influenced	Influenced

Note: Participants who were born between 1935 to 1954 and had Mainland China citizenship, they might be influenced by the 1950 marriage law, which indicated the

marriage age of 18 for women and 20 for men. Participants, who were born in 1934 and earlier and had Mainland China citizenship, might not be influenced by the 1950 marriage law.

Culture and Acculturation. Besides sexual strategies theory, culture also affects individuals' values and behavior. Acculturation, the extent that older Chinese-American adults adopt American culture, may also affect their dating preferences, including sexual strategies.

The sexual strategy theory integrates the basic idea of social exchange theory but rectifies its limitations. It discusses what individuals want from relationships, separating desire by gender and context. Cultural values or frame perspectives indicate how culture affects relationships. Influenced by both Chinese and American cultures, older Chinese-American adults may face pressures of acculturation. Thus, this study will use sexual strategies theory as well as acculturation theory to analyze older Chinese-American adults' dating preferences.

Acculturation theory. *Definition of acculturation.* Acculturation is a process in which individuals or groups adopt another culture when it makes contact with their original culture (Berry, Poortinga, Segall, & Dasen, 2002; Moon & Park, 2007; Phinney, Horenczyk, Liebkind, & Vedder, 2001; Zagefka & Brown, 2002). Landrine & Klonoff (1996) describe acculturation among minorities in the U.S. as "the extent to which ethnic-cultural minorities participate in the cultural traditions, values, beliefs, and practices of their own culture versus those of the dominant white society" (p.120).

Models of acculturation. Berry (2008) suggested that all the people who are adjusting to new cultures are faced with two challenges: whether to maintain their

cultural heritage or not, and whether to participate in the larger society or host group or not (Wendland, 2011). Based on these two questions, Berry (2008) provided four strategies: assimilation, integration, separation, and marginalization. Assimilators do not maintain their original cultural heritage and wish to immerse themselves in the host society's culture. Integrators maintain their original culture as well as adjusting to the host culture. Separators adhere to their own culture and avoid interaction with the other cultures. Marginalizers have little interest in maintaining their original culture, but also do not want to interact with the host society.

Factors of acculturation. There are many factors that can contribute to acculturation: language usage, media usage, ethnic identity, length of time in the host nation, gender roles, and interactions within the host nation (Deng & Walker, 2007; Podoshen, 2005). Several scales have been designed to evaluate acculturation levels among Asian-Americans, such as the Suinn-Lew Asian Self-Identify Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987), Asian American Multidimensional Acculturation Scale (AAMAS; Chung, Kim, & Abreu, 2004), and Acculturation Scale for Chinese-Americans (ASCA; Yao, 1979). Each of these scales mentions language and evaluates English use and proficiency. The SL-ASIA scale evaluates the length of living in the host society. The AAMAS scale does not mention length of residency directly but tests for pan-ethnic characteristics among target groups. A pan-ethnic identification requires a certain length of residence in the U.S. Thus the AAMAS scale tests the length of residence in the U.S. indirectly (Chung, Kim, & Abreu, 2004). The ASCA scale mainly focuses on cultural identity and acceptance of host

culture; however, it also tests the length of residency indirectly. The relation between gender and acculturation is unclear. Some research has shown no gender differences with respect to acculturation level (Choi & Thomas, 2009). Other research has indicated women acculturate more easily to American culture than men (Christman, Bernal, & Nicolas, 2010; Cuellar, Arnold, & Maldonado, 1995).

   Four groups of Chinese American older adults, based on acculturation levels. Chinese American older adults' levels of acculturation are influenced by the length of residency in the U.S., education experience in the U.S., language usage, socioeconomic status, and the desire to assimilate into the American culture (Stokes & Pan, 2010). Based on these factors, four categories of Chinese American older adults can be identified according to their level of acculturation (Hsiung & Ferrans, 2007).

   The first immigrated as older adults. They are the most traditional and least acculturated. They have come to the U.S. to be with their children. They grew up and were educated in China. They speak Chinese and know little or no English.

   The second is working-class immigrants. They are less acculturated. They arrived in U.S. after the Immigration Act of 1965 and came here for relatively low socioeconomic-level jobs. They might speak more fluent English and accept the host culture. However, they are still very traditional.

   The third is highly educated, often scholars and professionals. Their English is fluent. They can work together with Americans or live in the American community, instead of Chinatown. They are bicultural, because they keep Chinese tradition and also accept American culture.

The fourth is American-born. They are the most acculturated and least traditional and consider American culture their predominant culture.

Data collected from an online dating website mainly focus on dating preferences. The four groups of Chinese American older adults may have been included in this study. Furthermore, only two factors coded from online dating personal profiles were found related to acculturation, length of residency and education location.

Length of residency. As mentioned above, length of residency in the host country is a commonly used proxy factor for acculturation (Park, Neckerman, Quinn, Weiss, & Rundle, 2008) and is identified as an important indicator of constructed validity (Airth, 2011): the SL-ASIA scale, AAMAS scale, and ASCA scale tests length of residency directly and indirectly. Also, Koya and Egede (2007) pointed out that as immigrants' length of residency increased, they received more chances to learn and accept American norms. Lahire (2003) found that the length of residence was negatively associated with the "maintenance of Ethiopian immigrants' original culture" (p. i).

Education in host country. Though education in the host country has not been evaluated in these three scales, it is a very important factor related to acculturation levels.

> "Education is a personal resource in itself, as problem analysis and solving are usually instilled by formal education. It is also related to other resources, such as support networks, which are helpful to individual adjustment in the host country. Education is a kind of pre-acculturation to the host country's language, history, values and norms, especially when the education is undertaken in the host country (Berry, 1997). Educational programs not only help immigrants obtain gainful employment, which can facilitate their successful adaptation into the labor market, but also promote higher levels of social interaction and communication with the mainstream fabric of the society (Choi and Thomas, 2009)" (Lu, 2015, p. 49-50).

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Choi and Thomas (2009) suggested that educational programs should be provided to immigrants in the U.S. to help them become acculturated and assimilated to the host country. Nekby, Rödin, and Özcan (2007) pointed out that educational opportunities in the host country provide immigrants with chances to learn their host culture and communicate with local people. Even though the length of living in the host country is important to acculturation, being educated in the host country can facilitate immigrants to learn "language, history, values, and norms of the new culture" (Lu, Samaratunge, & Härtel, 2011, p.76). Immigrants can become familiar with dominant culture and society in powerful and unintended ways by being educated in the host country (Shim & Schwartz, 2007).

However, acculturation level is a complicated concept measuring by several different factors. Only two factors, length of residency and education location could not measure acculturation level. Thus, this study used length of residency and education location to measure the level of exposure to American culture. Their length of residency may affect their values, which influences their dating preferences. In addition, older Chinese-American adults may have been educated in their original country or in both U.S. and in other countries. Since education plays a vital role in people's values, education location (being educated in the U.S. only, being educated in the other places or being educated in both U.S. and other places) may affect Chinese American older adults' dating preferences.

Acculturation and marriage. Culture defines and transmits the interactions of norms, rules, roles, understandings, customs, and expectations in relationships (Lalonde,

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Hynie, Pannu, & Tatla, 2004). It influences both internal and external aspects of relationships, such as representational and behavioral norms. The variety of ways to demonstrate emotions within a relationship is one such example (Lalonde et al., 2004).

As mentioned above, women's physical attractiveness and men's social and economic status have been valued in Chinese mate selection process. However, these are not the only determining factors. There are a lot of other factors, such as the similarities of the two families and women's personality.

However, marriage in "Western countries is assumed to be a consequence of a couple's feeling or romantic love" (Lalonde et al., 2004, p. 504). In addition, in the U.S. a continual preference for sexual and physical attractiveness can be seen in all media, reflecting and influencing individuals' desired preferences in a partner (Kline & Zhang, 2009).

Valentine & Mosley (2000) pointed out that the acculturation process correlated with many attitudinal and behavioral changes. Chinese American older adults are influenced by both collectivistic and individualistic culture. Thus, it is necessary to examine how acculturation affects older Chinese-American adults' dating preferences regarding age differences, shortest height acceptance, partners' income, and education level.

Chinese older adults' attitude toward sex. Confucianism, Taoism, and Buddhism have influenced Chinese society and culture for thousands of years. Confucian principles prescribe that sex occurs in marriage only for reproduction and that sex beyond this purpose is considered "undignified" (Momtaz, Hamid, Ibrahim, & Akhbar, 2014; Yan &

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Lee, 2013). Buddhism insists that if people want to achieve the state of peace, they should give up personal desire (Momtaz et al., 2014; Yan & Lee, 2013). Taoism suggests that sex is harmful for heath, especially for men. Previous studies found that the majority of older adults disagreed that sex was one of the benefits associated with their remarriage (Chiu & Ho, 2010). In addition, most of the Chinese public believes that sexual activities among older adults are immoral (Chiu & Ho, 2010). However, studies in Taiwan and Hong Kong indicated many Chinese older adults were sexually active. For example, in the study conducted by Wang, Lu, Chen, and Yu (2008), among 161 older adults (412 males and 204 females), 36% were sexually active. Chan, Ho, Heung, and Chan (2004) conducted research among 528 Chinese male older adults who attended Elderly Health Centers of the Department of Health. Of them, 66.1% reported sexual desire in the past year. In addition, 52.3% were sexually active. Even though older Chinese adults do not want to talk about sex publicly, they still experience sexual desire. Thus, it is necessary to examine whether physical attractiveness, related to sex, is important in their dating preferences.

Based on the analysis above, culture affects older adults' preferences for romantic relationships. Culture is learned through education and through living in the host society. Thus, whether older adults have been educated in the U.S. only or not, as well as their length of residency, may influence their dating preferences.

Chinese adults' dating preferences. There is no study about Chinese older adults and their preferences. However, there are some studies that examine Chinese adults' dating preferences using sexual strategies theory. Thus, I generate a hypothesis based on

the analysis of Chinese adults' dating preferences as well as American older adults' dating preferences.

Several studies have been conducted, including cross-cultural studies, that examine young Chinese adults' dating preferences using sexual strategies theory. Most of the studies' results indicate that Chinese women prefer men who are wealthy, well-educated, and ambitious (Bullough & Ruan, 1994; Buss, 1989; Chang, Wang, Shackelford, & Buss, 2011; Higgins, Hirsch, & Lyness, 2002; Toro-morn & Sprecher, 2003; Kline & Zhang, 2009). Like Western adults, Chinese men value women's physical attractiveness (e.g., Bullough & Ruan, 1994; Buss, 1989; Chang et al., 2011; Higgins et al., 2002; Toro-Morn & Sprecher, 2003; Kline & Zhang, 2009; Ong & Wang, 2015).

Chinese society has been becoming increasingly open to Western culture since 1989 (Chang et al., 2011). Chinese people, especially those who live in urban areas and big cities, are influenced by Western culture, even though Chinese culture is still dominant. Older Chinese-American adults have been affected by both Western and Chinese culture. From this perspective, I propose that older Chinese-American adults and Chinese adults may have similar dating preferences. Sexual strategies theory may affect older Chinese-American adults' dating preferences.

The interaction between gender and culture. Intersectionality suggests that to fully understand an individual's identity, it is necessary to analyze elements from different aspects, such as biological, social, and cultural perspectives (DeFrancisco, Palczewski, & McGeough, 2013). For this dissertation, that means the interaction between gender and culture may affect Chinese people's dating preferences, such as

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females' socioeconomic status, age, level of acculturation and education level, as well as cultural values.

Fu (2015) examined the dating preferences of 200 Shanghainese women who were well-educated (64.5% had bachelor's degree, 34.5% had master's degree and above) and had high income. The author found that the participants cared more about personality (83%) than their partner's financial ability (2.5%). Shanghai is a modern city, which has been influenced by both Chinese and Western culture. Since older, U.S-educated Chinese females have more chances to work in the U.S. than non-U.S.-educated females, they may have better incomes. Also, as the length of residency increased, the immigrants may have more chances to become acculturated and find jobs (Haque, Haque, & Link, 2008). Thus, the older, only-U.S.-educated Chinese females or females who have been in the U.S. for a long time may not have higher income and education requirements than older, non-U.S.-only-educated Chinese-American women.

In addition, Zhang, You, Teng, & Chan (2014) suggested that the gender differences in preferences for physical attractiveness and financial situations were larger among Chinese adults and adults in the U.S. or in Britain (Zhang et al., 2014): for example, in Kline and Zhang's (2009) comparison study between Chinese college students and American college students, there were no significant difference between American males and females about physical attractiveness and earning ability. However, significant differences were found among those of Chinese males and females. One of the reasons is that "until now, men are supposed to be the main financial providers of families in China" (Zhang et al., 2014). Furthermore, the literature review shows that as

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American females grow older, they prefer younger males (Alterovitz & Mendelsohn, 2009; Levaro, 2011; Schwarz & Hassebrauck, 2012).

Research Questions and Hypotheses

Currently, there is no study focusing on Chinese American older adults' dating preferences. Since culture influences individuals' behaviors and values, it also affects their dating preferences, as discussed above. This study tested how acculturation levels such as education location may influence the sexual strategies theory's description of dating preferences regarding age differences, height, financial well-being, and education. This study also tested the gender differences when it comes to dating preferences. The following research questions guide analysis in this study.

(1) What are the demographic and descriptive characteristics of Chinese American older adults who participate in online dating?

(2) How do gender and exposure to the US culture (education location and length of residency) affect dating partner preferences among Chinese American older adults?

The second research question is based on how sexual strategies theory may affect Chinese American older adults' dating preferences. Hypothesis testing for this question can be separated into two sets of hypotheses: (1) regarding gender differences, and (2) regarding the impact of exposure to American culture on gender differences. The first set of hypotheses assert that there are gender differences regarding dating preferences, as such:

Hypothesis 1.1: Chinese American older females prefer partners' who are older than them.

Hypothesis 1.2: Chinese American older females prefer partners' who are taller than them.

Hypothesis 1.3: Chinese American older females have preferences of partners' income level.

Hypothesis 1.4: Chinese American older females prefer partners' who are well educated.

Levels of exposure to American culture, in terms of education location and length of residency, may influence Chinese American older adults' dating preference regarding age differences, the shortest acceptance height, partner's income, and education level.

Hypothesis 2.a1: Chinese American older females who were educated only in the U.S. have lower requirements for their partner's education than females who were educated elsewhere.

Hypothesis 2.a2: Chinese American older females who were educated only in the U.S. may prefer younger males than females who were educated elsewhere.

Hypothesis 2.a3: Chinese American older females who were educated only in the U.S. may not have income requirements that differ from females who were educated elsewhere.

Hypothesis 2.b1: Chinese American older females' length of residency in the U.S. is inversely associated with their requirements of partners' minimum education level.

Hypothesis 2.b2: Chinese American older females' length of residency in the U.S. is directly associated with their preference of age differences between older females and their partners'.

Hypothesis 2.b3: Chinese American older females' length of residency in the U.S. is inversely associated with their preference of partners' income.

Hypothesis 2.c1: Chinese American older males who were educated only in the U.S. have higher requirements for their partner's education than males who were educated elsewhere.

Hypothesis 2.c2: Chinese American older males who were educated only in the U.S. may have income requirements than males who were educated elsewhere.

Hypothesis 2.d1: Chinese American older males' length of residency in the U.S. is directly associated with their requirements of partners' minimum education level.

Hypothesis 2.d2: Chinese American older males' length of residency in the U.S. is directly associated with their preference of partners' income.

Since the related evidence is rare/limited. I cannot generate specific hypothesis for the relations between length of residency/education location and females' preference of partners' shortest height, as well as the relations between length of residency/education location and males' preference of partners' shortest height/age differences. However, my study may explore the potential relations between those variables.

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Chapter Three: Methodology

Statistic Methods and Measurement

This was a cross-sectional descriptive study that used publicly available data on a national online dating website. I collected the data from online dating profiles in June 2014, and I applied a quantitative research method. The total sample consisted of 257 people (133 females and 124 males). For research question one, I used univariate analysis. For question two, I used multivariate multiple regression, which is similar to multiple regression but has more than one dependent variable; multivariate analysis of variance (MANOVA); and logistic regression.

Data Source and Inclusion Criteria

I selected the personal profiles of heterosexual Chinese-American adults age 60 and older from an online dating website. I considered those who were seeking both marital and non-marital romantic relationships (cohabitation and dating with no intent of marriage). I got IRB exemption, because the information collected is publicly available. For example, the Privacy Policy of a famous online dating website says "Also, whenever you voluntarily disclose personal information on publicly-viewable web pages, that information will be publicly available and can be collected and used by others" (Match.com, 2014). In addition, several scholars have used this kind of publicly available data in research. For example, Alterovitz and Mendelsohn (2009; 2013) downloaded

Personal ads Yahoo! Personals. They got IRB exemption for their studies. Klofstad,

McDermott, and Hatemi (2013) collected data from online dating profiles. Their IRB

committee approved their study because the project was not human research and the

information posted online by daters was publicly accessible. It has been estimated that

my research project involves very minimal risk. However, to protect participants'

privacy, I did not disclose their online IDs, did not use their pictures, and did not mention

the name of the online dating website.

This study included both immigrated and American-born Chinese-Americans.

When the online dating website users opened accounts on the website, they filled in

different kinds of personal information, including gender and sexual preference, age,

ethnicity, language, education, income, religion, height, weight, body shape, hair color,

and eye color. The users could, however, change their gender and sexual preferences to

search for different members. Users also had to fill in their preferences for dating

partners. Appendix 1 summarizes the variables and partner preferences that were

extracted from the user profiles. To read the various online personal profiles, I registered

myself on the website. Any member of this online dating website could browse another

member's profile by defining different settings. For example, I first selected "I am a

woman looking for man." Second, I set the age range from 60 to 120 to identify the older

male adults on this website. Because there was no specific ethnicity choice for Chinese,

in the third step I selected "Asian" and "speaks Chinese" to identify the Chinese

population. Fourth, I chose the specific location of potential dating partners. The website

only shows a few results when selecting the United States as a whole; thus, the best way to find the most members of a target group is to search state-by-state.

My final step was to read the personal profiles and learn whether they were in the United States. Because this dating site is available in different countries around the world, there are many Chinese older adults who have never been to the United States using this website to look for dating partners. For this reasons, this study included older adults who clearly state they are American-born Chinese, Chinese-American, or U.S. citizens. Additionally, older adults who failed to mention U.S. citizenship but indicated a college degree or above received from a U.S. university, a length of residency in the United States (without citizenship) greater than one year, or work experience in the United States were included. In a log, I tracked the numbers, reasons, and descriptions of the excluded participants. The one-time abstraction of profiles from the online data set occurred in June 2014.

Measures — Descriptive Variables

Participants' age. On the online dating website, the users could search for people by their characteristics. Under age selection, the oldest age provided by the website was 120. So the range of participants' age is from 60 to 120. However, the ages mentioned on the online dating website may not be the actual ages of participants. Some people may have wanted to make others think that they were younger or older than their actual ages. Thus, face validity and reliability is questionable.

Personal income. On the online dating website, the users could select one of eight personal income levels: 1. Less than $25,000; 2. $25,000 to $35,000; 3. $35,001 to

$50,000; 4. $50,001 to $75,000; 5. $75,001 to $100,000; 6. $100,001 to $150,000; 7.

$150,001+; and 8. No answer. In this study, I kept the first seven categories. If the user

failed to mention his/her income, I coded the "no answer" option as a missing value.

Participants' education level. The users also selected their educational level in

their personal profiles. The website provided seven selections: 1. High school; 2. Some

college; 3. Associate's degree; 4. Bachelor's degree; 5. Graduate degree; 6. PhD/Post-

Doctoral; and 7. No answer. In this study, I kept the first six categories as provided by

website. If the user failed to mention his/her education level and chose "no answer," I

coded it as missing value.

Measures — Variables in the Model

Gender. When the users registered on this online dating website, they were asked

to choose one of the following options: "I am a man looking for a woman," "I am a man

looking for a man," "I am a woman looking for a man,", and "I am a woman looking for

a woman." Because this study focused on heterosexual relationship, gender was coded

into two categories: men and women who were looking for heterosexual relationships.

This website did not provide options for the transgender population. Thus, the content

validity is questionable.

Education location. The online dating website gave no options for education

location. However, it did give the option to choose college names, and users usually

mentioned their education location. If they failed to select a college name, they often

mentioned it in their self-descriptions, especially those users who got their degrees

outside of the United States or in multiple places, because the online dating website only

provided the name of colleges that are located in the United States. Thus, I coded the education locations from the self-descriptions and the option of "names of colleges" to identify where the users had received their high school degrees and above.

My original coding was 1. Education in China (including Taiwan); 2. Education in the United States; 3. Education in both China and the United States; 4. Education in neither China nor the United States; 5. Education in other countries as well as in China or the United States; If participants did not mention it, I coded it as missing data. However, because the rate of some categories was very low, I then recoded this variable as binary, with 1. Educated in the United States and 2. Educated outside of the United States.

The preliminary analysis indicated that all of the males who mentioned their education location had been educated in the United States. Thus, there was no variance among males. After browsing the data, I found that some men were educated both inside and outside of the United States and some women were educated outside of the United States. Thus, I coded this variable as 1. United States-educated only; 2. Others (other countries OR both the United States and other countries). Another reason for this recoding was that whether the participants had been educated only in the United States may have affected their acculturation level.

In the proposal, I mentioned that there were 85 missing values for this variable. However, after further examination, only 72 missing values were identified. Here are the reasons for the change:

1. Some people mentioned their education location in their self-descriptions, which was not found at first. As mentioned above, the online dating website had

selections for college names that are located in the United States. Thus, users who received their degrees outside of the United States or in multiple places often indicated their education location in their self-descriptions. If the self-descriptions had a lot of information, education location information was not immediately apparent. For this reason, after analyzing the data, I recoded their self-descriptions;

2. Some users indirectly mentioned their education locations, which I failed to note at first. For example, one female participant mentioned: "I came to USA from Beijing, China in 2009; Now I'm a Permanent Resident of USA and temporarily living with my younger son, his wife, his daughter (at 14 years old age already) together in East Brunswick, NJ." This participant was aged 71 in 2014 and aged 64 in 2009. She mentioned that she had some college education. She might have been educated in the United States; however, it was obvious that she had been educated outside of the United States, possibly with a high-school degree. The education location variable had two categories, 1. United States-educated only; 2. Others (educated in the United States and other places or educated in other places). Thus, I recoded her education location as 2 instead of a missing value.

Length of residency. The online dating website listed no options for the length of time living in the United States. However, some participants mentioned when they came to the United States or how long they had lived in the United States in their self-descriptions. Thus, I coded the length of residency from participants' self-descriptions and used the exact number they mentioned. In some cases, I calculated the length of

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residency based on their self-description. The original coding was 1. Less than 10 years; 2. Between 11 and 20 years; 3. Between 21 and 30 years; 4. Between 31 and 40 years; and 5. More than 40 years. However, because of a large number of missing values, it was hard to categorize the length of residency.

In the proposal, I stated that the percentage of missing values was 63.4%; however, the final percentage of missing values was 56.4%. There were two reasons for this:

1.   Some participants mentioned their length of residency indirectly. For example, one mentioned that she had come to the United States for education or a job in #### (year), which was not noticed at first;

2.   Some participants were "American-born Chinese" and did not mention that they had lived outside of the United States. When coding for length of residency, I failed to notice that they might have lived in the United States for their entire lives. I discussed the limitation of this coding method in the discussion part of this thesis.

Age difference. The online dating website required participants to specify a minimum and maximum age for their potential partners. The selection range was from 18 to 121. I calculated the midpoint of the desired age range. Then, I used each participant's actual age minus the midpoint of his/her desired partner's age to get the age difference. If the participant preferred younger potential partners, the age difference was a positive value. Otherwise, the age difference was a negative value.

Shortest acceptable height. The online dating website gave a range of heights, from 3'0" to 8'11". The participants could select a height range, such as from 5'6" to 7'8". I used the minimum value as the shortest acceptable height.

Preference for partner's income. My original coding was the minimum acceptable income that a participant indicated for their prospective dating partner, which was one of eight categories: 1. Less than $25,000; 2. $25,000 to $35,000; 3. $35,001 to $50,000; 4. $50,001 to $75,000; 5. $75,001 to $100,000; 6. $100,001 to $150,000; 7. $150,001+; and 8. No preference. At the beginning, I coded this as: 1. up to $35,000; 2. $35,001 to $75,000; and 3. $75,001 and above. If the participants chose "no preference," I coded it as "1," which meant they might accept a partner with the lowest income level. However, 73.4% of males indicated that they did not have a preference for a partner's income. Thus, I recoded this variable as the dichotomous variable of "yes" and "no." If the participants chose "no preference," I coded it as "0;" if they indicated a preference, I coded it as "1."

Preference for partner's education. This variable was the minimum acceptable education level for a prospective partner and had six levels: 1. High school; 2. Some college; 3. Associate's degree; 4. Bachelor's degree; 5. Graduate degree; and 6. PhD/Post-Doctoral. Some people listed several education levels, for example, they said they preferred partners who had some college, an associate's degree, and a bachelor's degree. I only coded the minimum requirement. At the beginning, I kept the original coding and coded "no answer" as "accepting the lowest education level." I then analyzed the frequency of this variable and found that 34.6% of participants chose "high school,"

22.6% chose "some college", 5.4% chose "associate's degree," 30% chose "bachelor's degree", 7% chose "Graduate," and 0.4% chose PhD/Post-Doctoral. Thus, in the end, I combined some education levels and recoded this variable as 1. High school; 2. Some college; and 3. Associate's degree or above.

Table 3.

The Measurement of Variables on the Online Dating Website

Variable	Operationalization	Preset Response Options	Coded Variable/*Measurement Level*
Participant Age	Shown in personal profiles	Range from 60 to 120	The actual age of the sample (no coding) *Ratio data* *Continuous*
Personal Income	The personal income selected	1. Less than $25,000; 2. $25,000 to $35,000; 3. $35,001 to $50,000; 4. $50,001 to $75,000; 5. $75,001 to $100,000; 6. $100,001 to $150,000; 7. $150,001+; 8. No answer	1. Less than $25,000; 2. $25,000 to $35,000; 3. $35,001 to $50,000; 4. $50,001 to $75,000; 5. $75,001 to $100,000; 6. $100,001 to $150,000; 7. $150,001+. "No answer" coded as missing data *Ordinal variable*

Participant Education Level	The education level selected	There were seven options given by online dating website. 1. High school; 2. Some college; 3. Associate's degree; 4. Bachelor's degree; 5. Graduate degree; 6. PhD/Post-Doctoral; 7. No answer.	Keep the first six categories as provided by website. 1. High school; 2. Some college; 3. Associate's degree; 4. Bachelor's degree; 5. Graduate degree; 6. PhD/Post-Doctoral. If the participants choose "no answer", code it as missing data *Ordinal*
Gender (Independent variable)	Sex	I am a man looking for a woman; I am a man looking for a man; I am a woman looking for a man; I am a woman looking for a woman.	Man and woman (who are heterosexual)
Education Location (Independent variable)	The location of participants' attainment of "some college" and above	No options were listed. Coded from self-description and name of college.	1. Educated in the United States only; 2. Other (educated in the United States or educated in the United States and other

			places).
			If participants did not mention it, it was coded as missing data. *Nominal*
Length of Residency (Independent variable)	The number of years in the United States	No options were listed. Coded from self-descriptions.	I used the exact number mentioned in the personal profiles. In some cases, I calculated length of residency based on their self-descriptions.
Age Difference (Dependent variable)	The desired age difference between partner and self	The website required participants to specify a minimum and maximum age for their potential partner	I subtracted the midpoint of the desired age range from the participant's actual age to determine the age difference. *Ordinal*
Shortest Accepted Height (Dependent variable)	The shortest height the participant would accept for a potential partner	The website gave a range of height from 3'0" to 8'11"	Input the exact number of the shortest accepted height (no coding). *Ordinal*
Income Requirement (Dependent variable)	The minimum acceptable partner's income	The website gave eight categories: 1. Less than $25,000; 2. $25,000 to $35,000; 3. $35,001 to $50,000;	Dichotomous variable of "yes" and "no;" 0. No preference; 1. Has a preference.

| | | 4. $50,001 to $75,000; 5. $75,001 to $100,000; 6. $100,001 to $150,000; 7. $150,001+; 8. No preference. | |
| Education Requirement (Dependent variable) | The minimum acceptable partner's education level | The website gave six education levels: 1. High school; 2. Some college; 3. Associate's degree; 4. Bachelor's degree; 5. Graduate degree; 6. PhD/Post-Doctoral. | I coded the lowest education level mentioned. If none of the six options chosen, "no preference" assumed to accept the lowest educational level (high school). There were three categories of education requirements: 1. High school; 2. Some college; 3. Associate's degree or above. *Ordinal* |

Analytical Strategy

Sample size and power. Profiles were extracted from the online data in June 2014. I used multivariate multiple regression, one-way MANOVA, and logistic regression on the 257 participants. The multivariate multiple regression had two independent variables and three dependent variables. G*Power, the software used to compute statistical power analyses, did not have the ability to perform multivariate

regression. Reference about sample size and power needed for multivariate multiple regression is limited. However, because multivariate multiple regression is similar to multiple regression and structural equation modeling (SEM), I estimated the sample size according to those two analysis methods. The Free Statistics Calculator Version 4.0 indicated that if a multiple regression has two independent variables, then the power = 0.9, the effect size = 0.15, and its desired sample size is 87. For SEM, I used two latent variables, acculturation and dating preferences, and six observed variables, education location, length of residency, age difference, shortest accepted height, partner's education level, and preference for partner's income. With power = 0.9 and effect size = 0.1, the minimum sample size for the model structure would be 200. Because multivariate multiple regression is more complicated than multiple regression, but simpler to SEM with two latent variables and six observed variables, my sample size of 257 was considered sufficient.

For a one-way MANOVA, I had two groups (males and females) and three dependent variables, age differences, requirements of partners' education level, and shortest height acceptance. To achieve power of 0.8 with a medium effect size (f = 0.25), the desired sample size was 44 (Statistics Solutions, 2016). Thus, my sample size of 257 was large enough for MANOVA analysis. In addition, I used logistic regression. If the alpha = 0.05, the power = 0.8, and effect size had an odd ratios = 2.48, then this kind of two-tailed logistic regression requires a sample size of 71. If the effect size (odd ratio = 1.72) is medium, the desired sample size would be 177 (Statistics Solutions, 2016). Thus, my sample size of 257 was also large enough for logistic regression analysis.

Missing data. There were 72 missing values for the variable of education location, which was about 28%. There were 145 missing values for the variable of length of residency, which was about 56.4%. There were eight missing values for the variable of shortest accepted height. In addition, there were nine missing values for the variable of age difference. The missing values for the variables of shortest accepted height and age difference were all caused by deleting outliers.

Theoretically, the missing data in "education location" and "length of residency" were due to the design of the website questionnaire: the online dating website only provided the names of American colleges. If people got their degrees outside of the United States and did not specifically mention it in their self-descriptions, it was difficult to determine their education location. Some individuals may have been educated in the United States but did not clearly mention the location; the online dating website did not have options about length of residency. However, only some participants mentioned their length of residency in their self-descriptions.

I used the Missing Value Analysis function in the Statistical Package for the Social Sciences (SPSS) to analyze the type of missing values using Roderick J. A. Little's chi-square. According to the *IBM SPSS statistics guide book* (2010), the null hypothesis of this test was that these missing values were completely random (MCAR). The p value was significant at the .05 level. If the value was more than .05, the missing data would be MCAR. Otherwise, the missing data would be missing at random (MAR) or missing not at random (MNAR). In my test, the chi-square = 7.25 and p = 0.51. Thus, the values were MCAR (IBM SPSS, 2010). Also, the SPSS missing value pattern analysis demonstrated

that the pattern of missing data was monotone; a monotone missing data pattern means

that "the variables can be arranged in such a way that, when Y_j is

missing, $Y_{j+1}, Y_{j+2}, \ldots, Y_p$ are missing as well" (Dong & Peng, 2013, p. 3). It is easier to

deal with a univariate or monotone missing data pattern than an arbitrary pattern.

The limitation of SPSS missing value analysis is that it fails to analyze the type of

missing values among individual variables. Thus, to identify individual variables'

missing data, I chose the method recommended by Saunders, Morrow-Howell,

Spitznagel, Doré, Proctor, and Pescarino (2006) and Schafer and Graham (2002). If the

absence depends on neither the independent nor dependent variables, the data are MCAR.

If the omitted data was related to the independent but not the dependent variables, then

they are MAR. If the probability of a missing value depends on the variable that is

missing, then the data are MNAR.

I ran several one-way ANOVAs and binary logistic regressions to test the type of

missing values. The results indicated that the missing values within length of residency

were associated with education location (IV); however, the missing values within

education location, shortest accepted height, and age difference were unrelated to any

dependent or independent variables. Based on this, the missing values within length of

residency were MAR. Nevertheless, the missing values within education location and

shortest accepted height were MCAR.

I utilized multiple imputation to deal with the missing values. Multiple

imputation, which was proposed by Rubin (1987), is a "two-stage approach where

missing values are imputed a number of times using a statistical model based on the

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available data and then inference is combined across the completed datasets" (Lee & Simpson, 2014, p. 162). As Plumpton, Morris, Hughes, and White (2016) indicated, the expectation–maximization (EM) algorithm and multiple imputation (MI) are two modern missing data imputation methods, both of which are recommended for MAR data. De Goeij, Diepen, Jager, Tripepi, Zoccali, and Dekker (2013) tested multiple imputation for both MCAR and MAR data and found that multiple imputation performed well for both MCAR and MAR data. In this study, I used multiple imputation 56 times. Many scholars, such as Graham, Olchowski, and Gilreath (2007); Rubin (1987); and White, Royston, and Wood (2011), pointed out that, generally, three to five imputations are enough to obtain excellent results, especially when the number of missing data points is not very high (less than 30%). However, in this study, the largest percentage of missing values was 56.4%, for the length of residency variable. Thus, more imputations were needed. Graham, Olchowski, and Gilreath (2007) examined the relation between the number of multiple imputations (m), the fraction of missing values (r), and power, suggesting that to decrease the power to less than 1%, the number of multiple imputations m = 20, 40, 100, or >100 was recommended in response to r = .1, .5, .7, or .9, respectively. In my study, the length of residency and education location variables had many missing values. The results generated by SPSS indicated that the fraction of missing values for length of residency was 0.6 and the fraction of missing values for personal education location was 0.5. According to Graham, Olchowski, and Gilreath (2007), the number of imputations may be between 40 and 100. White, Royston, and Wood (2011) pointed out that the number of imputations should be close to the percentage of missing values. Finally, 56 times of

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imputation were used to guarantee the efficiency of the imputed data. I followed de

Goeij, Diepen, Jager, Tripepi, Zoccali, and Dekker's (2013) and He's (2010) suggestion

to include all of the variables in the final models for the imputation process. The

advantage of this method is that it reduces bias and increases precision (Lee & Simpson,

2014) and has also been shown "to be robust under departures from normality, in case of

low sample size, and when the proportion of missing data is high" (Plumpton, Morris,

Hughes, & White, 2016, p. 2).

Models and hypothesis. For the first question, I ran frequencies and complete

univariate analyses for all variables using SPSS 22.0. The results described the

characteristics of participants. I changed my model and statistical method for the second

question to make the data and theory fit each other better.

For question two, my original plan was to use SEM to test how acculturation,

including education location, length of residency, and language utilization, affected

dating preferences for age difference, shortest accepted height, interracial dating, income

requirement, education level, and partner's language, and the gender differences therein.

However, because there was no evaluation of participants' English fluency (all of the

participants stated that they spoke English), only two variables, length of residency and

education location, were used to represent acculturation level. In addition, most of the

participants mentioned that they accepted interracial dating, and all of the participants

would accept potential partners who spoke languages other than Chinese. Thus, because

the variables of interracial dating and partner's language did not have enough variance, I

dropped these two variables. Furthermore, this study only had 257 cases, which was not

large enough to conduct multiple group analysis by gender. Thus, multiple group SEM analysis was not used.

I used one-way MANOVA, which has more than one dependent variable, as well as logistic regression to analyze hypothesis one and used multivariate multiple regression and logistic regression for hypotheses two.

Hypothesis one examined how four dependent variables (age difference, shortest accepted height, income requirement, and education level) varied across the categorical independent variable of gender. Davis (n.d., para 1) pointed out that "the goal of the MANOVA is to test whether mean differences among the groups (independent variable) on a combination of dependent variable are likely to have occurred by chance" (p.1). The dependent variables have to be correlated empirically or theoretically, otherwise "small or negligible differences on these variables may obscure a real difference(s) on some of the other variables" (Stevens, 2009, p. 146). As discussed in the literature review, according to evolutionary theory, height may be associated with social status, education level, and income. Even though age difference may not be theoretically related to shortest accepted height and partner's education level, it is statistically associated with height ($r = -.537$, $p < 0.001$) and education level ($r = -.126$, $p = 0.047$). The null hypothesis of the one-way MANOVA in this study was that the means of age difference, shortest accepted height, and education level are the same across gender.

Because the variable of preference for partner's income was coded as a binary variable (0. No preference; 1. Has a preference), this variable was not included in the one-way MANOVA. I used a binary logistic regression to test the probability of a

preference for partner's income—yes or no—based on the predictor of gender (Sperry, 2014). The preference for partner's income, which was a dichotomous dependent variable, was "transformed into a linear model" (Sperry, 2014, p. 34) by comparing gender "to the log odds of the event taking place" (p. 35). The odds ratio was calculated as Howell (1992) suggested. The null hypothesis was that the preference for partner's income was unrelated to gender. In other words, the probability of a female's preference for a partner's income is the same as a male's preference for a partner's income.

For hypotheses two, I used multivariate multiple regression to examine how acculturation, in terms of education location and length of residency, affected dating preference for age difference, shortest accepted height, and preference for partner's education. In contrast to multiple regression, multivariate multiple regression uses several independent variables to predict a set of dependent variables (Mendes, 2011). Mendes (2011) said "MMLR gives the same coefficients, standard errors, t-and p-values and confidence intervals as one would estimate with individual MLR computations for each of the dependent variables separately" (p. 78). Multivariate multiple regression has been used in a wide range of fields, including education and psychology (Chitsaz, 2012). I used multivariate multiple regression instead of several multiple regressions because of the following reasons: first, multivariate multiple regression avoids generating multiple errors ("Friendly", n.d.); second, multivariate tests are more powerful than several multiple regressions, especially when the dependent variables are correlated ("Friendly", n.d.; see Table 4); third, multivariate multiple regression can help us to understand the joint linear effect of predictors on a set of dependent variables (UCLA Institute for

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Digital Research and Education, 2016). The omnibus null hypothesis was that "all regression coefficients for all IVs equal zero for all DVs" (Dattalo, 2013, p.2). To compare the gender differences using this model, I split the file by gender and ran multivariate multiple regression.

As mentioned before, the variable of preference for partner's income is a binary variable. Thus, logistic regression was used to test the relation between partner's income, length of residency, and personal education location. The null hypothesis was that there is no relationship between length of residency and preference for partner's income; also, there is no relationship between personal education location and preference for partner's income.

Assumptions testing. I explored the dependent and independent variables to assess whether these variables satisfied the assumptions for one-way MANOVA and multivariate multiple regression, which have the similar assumptions as one-way MANOVA. Binary logistic regression and multiple regression have the same assumptions. Because I used four different statistical methods, all of the assumptions were tested and met.

Logistic regression has fewer assumptions than MANOVA. It requires a dichotomous dependent variable, in which an event occurring is coded as "1," categorical or continuous independent variables, independence of observation, and linearity between any continuous independent variables and the log of odds ratio (Laerd Statistics, 2013; McDonald, 2015; Statistic Solutions, 2016).

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Dichotomous dependent variable. The dependent variable preference for partner's income was a dichotomous variable in which "no preference" was coded as "0" and "has a preference" was coded as "1."

Categorical or continuous independent variables. The independent variable gender was a categorical variable.

The independence of observation. I used publicly available data from the online dating website. The users created their own dating profiles when they opened their personal accounts. Without personal accounts, they would not have been able to browse each other's profiles. Thus, in most cases, when users created personal accounts and set up their personal profiles, they could not refer to other people's dating profiles. Thus, the observations were independent.

The linearity between any continuous independent variable and the log of odds ratio. Because the independent variable gender in the binary logistic regression was categorical, this assumption could not be applied. In the multiple logistic regression, length of residency and personal education location were the independent variables. Although the length of residency was a continuous variable, "it can be hard to see whether this assumption is violated" (McDonald, 2015).

The assumptions for MANOVA include normality, no outliers, linearity, multicollinearity and singularity, homogeneity of variance-covariance matrices, and homogeneity of variance.

Normality. All of the variables were normally distributed, meeting the standards of a skewness value between -1 and 1 and a kurtosis value between -3 and 3.

No outliers. Both univariate and multivariate methods were used to detect outliers. Univariate outliers were checked using boxplots. Eight outliers were found among the shortest accepted height, and nine outliers were found within age difference. I also used the Mahalanobis distance to test for multivariate outliers. The Mahalanobis distance estimates "how far each case is from the center of all the variables' distributions" (Starkweather, 2013, p.1). However, no outliers were found using Mahalanobis distance.

Linearity. Linearity was tested using SPSS Scatterplot. All of the continuous variables were included in the matrix variables. The independent variables, gender and education location, were included separately. The graph did not show any evidence of non-linearity.

Multicollinearity and singularity. As discussed above, it is better for the dependent variables of MANOVA to be moderately correlated to each other (Stevens, 2009). However, if they are highly correlated (greater than 0.8), it means one of the variables maybe a combination of the others. All of the dependent variables in this study were correlated to each other; however, the correlations between each of the two variables were below 0.8 (see Tables 4.1 and 4.2).

Table 4.1.

Correlations between Dependent Variables Using Raw Data

		Shortest accepted height	Desired age difference: self minus partner	Partner's education level
Shortest accepted height	Pearson Correlation	1	-.537**	.188**
	Sig. (two-tailed)		.000	.003
Desired age difference: self minus partner	Pearson Correlation		1	-.126*
	Sig. (two-tailed)			.047
Partner's education level	Pearson Correlation			1
	Sig. (two-tailed)			

Note. * *p* < .05. ** *p* < .01

Table 4.2.

Correlations between Dependent Variables Using imputed Data

		Shortest accepted height	Desired age difference: self minus partner	Partner's education level
Shortest accepted height	Pearson Correlation	1	-.538**	.205**
	Sig. (two-tailed)		.000	.001
Desired age difference: self minus partner	Pearson Correlation		1	-.126*
	Sig. (two-tailed)			.047
Partner's education level	Pearson Correlation			1
	Sig. (two-tailed)			

Note. * *p* < .05. ** *p* < .01

Homogeneity of variance-covariance matrices. This assumption was tested in

SPSS using Box's M test for equivalence of covariance. If the p value is significant, the

assumption is violated. This assumption was not violated in the one-way MANOVA (p =

0.11).

Homogeneity of variance. Homogeneity of variance was tested using Levene's

test. In this test, if the p value is significant, it means the assumption is violated.

However, the p values for each dependent variable were non-significant.

The assumptions of multivariate multiple regression include "1) multivariate

normality of residuals, 2) homogenous variances of residuals conditional on predictors, 3)

common covariance structure across observations, and 4) independent observations"

(UCLA Institute for Digital Research and Education, 2016). As discussed above, the data

used in this study satisfied independent observation. The first three assumptions are very

hard to test (UCLA Institute for Digital Research and Education, 2016). Like many

software programs, SPSS "[does] not offer a test of multivariate normality" (UCLA

Institute for Digital Research and Education, 2016). However, multivariate multiple

regression's "hypotheses, methods used to obtain the estimates, and the assumptions are

all similar" to MANOVA's (UCLA Institute for Digital Research and Education, 2016).

Because the MANOVA assumptions were all met, the assumptions for multivariate

multiple regression were also met.

In MANOVA analysis, the Wilks' lambda and tests of between-subject effects

were used to examine how gender affected the variables of age difference, shortest

accepted height, and partner's education level. In logistic analysis, the log ratio was used. The multivariate multiple regression provided the Wilks' lambda with which to test whether there were differences among the dependent variables as a function of one or more independent variables. The separate analyses were also used to identify the specific significant relations between the independent and dependent variables.

Chapter Four: Results

This chapter, which is organized according to the research questions, discusses the results of this study. First, the characteristics of the participants are described. Second, the results of one-way MANOVA, logistic regressions, and multivariate multiple regressions are reported. Because the data with missing values were imputed 56 times, the results generated using imputed data are reported. However, the results produced using raw data are shown in tables or figures for reference and comparison.

Description of the Sample and Results of Univariate Analyses

257 online profiles were selected based on the inclusion criteria. A little more than half (51.7%) of the participants were females. The participants' ages ranged from 60 to 94 years, with a mean age of 65.4 years. The average age of females was 64.6 years (range 60 to 77 years), and the average age of males was 66.2 years (range of 60 to 94 years; see Table 5). The annual income of the participants ranged from less than $25,000 to more than $150,001 annually, although only 44% of participants reported their annual income levels. Of those, 21.5% reported annual incomes greater than $150,000, and 42.1% reported incomes between $50,001 and $150,000. Males had better financial situations—30.8% of males had incomes between $75,001 and $150,000, and 33.8% of males reported that their yearly incomes were more than $150,001. In comparison, most females' annual incomes were between $35,001 and $50,000 (23.9%) and $50,001 to $75,000 (26.1%). Only 4.3% of females reported annual incomes above $150,001. Nearly

all participants (96%) indicated their education levels in their personal online dating

profiles, ranging from high school to PhD/postdoctoral degrees. Of the participants, 39%

had graduate degrees while 27% had bachelor degrees. Overall, males had higher

education levels than females: 83.9% of males had at least a bachelor's degree compared

to 70.8% of females. No males reported a level of education below some college,

whereas females' lowest reported degree was a high school diploma. Moreover, 19.4% of

males had PhD/postdoctoral degrees, compared to only 6.8% of females (see Table 6).

Table 5

Description of Participants—Continuous Variable

	Min.	Max.	Mean/SD	Median	Missing
Age	60	94	65.4/5.2	64	0
Female	60	77	64.6/3.9	64	0
Male	60	94	66.2/6.2	64.5	0

Table 6

Description of Participants—Ordinal Variables

	Frequency (%)		Missing
	F	M	9
Personal education level			
High School	2.3%	0	
Some college	16.5%	9.7%	

Associate degree	8.3%	1.6%
Bachelor degree	27.1%	25%
Graduate degree	36.8%	39.5%
PhD/Post Doc.	6.8%	19.4%
Personal income			143
Less than $25,000	3.8%	3.2%
$25,000 to $35,000	4.5%	4%
$35,001 to $50,000	8.3%	8.1%
$50,001 to $75,000	9%	4%
$75,001 to $100,000	4.5%	9.7%
$100,001 to $150,000	3%	7.3%
More than $150,001	1.5%	18.5%

Description of Dependent and Independent Variables

I used a one-way MANOVA to test how gender differences affect dating

preferences in regard to partner's height, age difference, and partner's education level. A

logistic regression was used to test the relation between gender and preference of

partner's income, which was a binary variable ("no preference" = 0; "has preference" =

1). A multivariate multiple regression was used to test the model for how acculturation

(length of residency and personal education location) affected these dating preferences.

Additionally, since preference of partner's income was a binary variable, a logistic

regression was conducted to test the degree to which the length of residency and personal

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education location predicted the preference of partner's income. The descriptions of the dependent and independent variables in this study follow. I used SPSS's function of "missing value imputation" to figure out the missing values among the variables of length of residency, shortest height acceptance, age differences, and personal education location. Both raw data (see Table 7) and imputated data (see Table 8) were reported.

The variables of personal education location ("US only" = 0; "Others" = 1) and preference of partner's income ("no preference" = 0; "has preference" = 1) are binary. A total of 59.1% of the selected sample indicated no preference in terms of partner's income. Before imputation, 42.8% of the selected participants were educated in the US only. However, 28% of the values for this variable were missing. After imputation, 57% of the participants were educated in the US only.

Table 7.

Measures of Central Tendency of Raw Data in the Analysis

Variables	Frequency	Range	Mean/SD	Median	Mode	Skewness	Kurtosis
PLL		86	40.61/19.56	40	20	.19	-.88
SHA		51	162.73/9.69	162	152	.11	-.82
AGED		43.5	6/7.95	5	0.5 AND 2	.497	.003
PAE							
High school						-.05	-1.61
Some college	34.6%						

| | 28.4% |
| Associate degree or higher | 37% |

Note. PLL = personal length of residency. SHA = shortest accepted height in centimeters. AGED = age differences between participants and their potential partners. PAE = participants preferences of partners' minimum education level.

Table 8.

Measures of Central Tendency of Imputed Data in the Analysis

Variables	Range	Mean/SD	Median	Mode	Skewness	Kurtosis
PLL	88.96	44.52/19.38	44.03	20	-.004	-.076
SHA	51	162.60/9.71	162	152	.11	-.79
AGED	43.5	6.21/7.96	5	0.5 AND 2	.46	.06

Note. PLL = personal length of residency. SHA = shortest accepted height in centimeters. AGED = age differences between participants and their potential partners.

Research Question 2. How do gender and acculturation (length of residency and education location) affect dating partner preferences among Chinese American older adults?

Hypothesis 1. Sexual strategies theory may predict the dating preferences of older Chinese Americans. In addition, there are gender differences in dating preferences. Older Chinese American males care about the physical attractiveness of younger females

(younger and shorter then them) and do not care about the females' income or education level. In contrast, Chinese American older females prefer wealthy (income) and well-educated males, and they also prefer older and taller males.

MANOVA. Hypothesis 1 was tested using a one-way MANOVA to examine how dating preferences regarding age differences, height, and partner's education level varied across gender (male vs. female). A summary of the results is included in Table 9 and Table 10. Since the preference of partner's income was a dichotomous variable, a logistic regression was conducted. Before this analysis, all the assumptions were tested and satisfied (see details in the methodology). The WILK's Lambda and tests of between-subject effects were used for the one-way MANOVA. The log ratio was used for logistic regression.

The results indicated that there was a statistically significant difference in dating preferences based on gender, $F (3, 253) = 277.52, p < .001$; Wilk's $\Lambda = .233$, partial $\eta^2 = .77$. Gender had a statistically significant effect on shortest height acceptance ($F (1, 255) = 483.26; p < .001$; partial $\eta^2 = .65$), age differences ($F (1, 255) = 267.89; p < .001$; partial $\eta^2 = .51$), and preference of partner's education level ($F (1, 255) = 11.86; p = .001$; partial $\eta^2 = .044$) (see Table 9).

Table 9.

Test of Between-Subjects Effects Using Imputed Data

Source	Dependent Variable	Df	Error df	F	Sig.	Partial Eta Squared	Observed Power

GEN	Shortest height acceptance	1	255	483.26	< .001	.65	1
	Age difference	1	255	267.89	< .001	.51	1
	Preference of Partner's education	1	255	11.86	.001	.04	.93

The females' shortest accepted height (mean = 170.17cm) was taller than that of males (mean = 154.47cm; see Table 10). In addition, the males preferred dating females who were, on average, 12.1 years younger than them; females preferred dating males who were, on average, .71 years younger than them. Furthermore, females' preference of partner's education level, which was some college (mean = 2.2), was a little higher than that of males, which was high school (mean = 1.84).

Table 10.

Estimated Marginal Means Using Imputed Data

Dependent Variable	Gender	Mean
Shortest height acceptance in centimeters	Female	170.17
	Male	154.47
Age differences in years	Female	.71
	Male	12.1
Preference of partner'	Female	2.2

education

	Male	1.86

Note. There are three levels for preference of partners' education level: 1= high school, 2 = some college, 3 = Associate degree or higher.

Logistic regression. Logistic regression was conducted to test how gender predicted the preference of partner's income. The results indicate that the logistic regression model was statistically significant, $\chi^2(1) = 20.48$, $p < .001$ (see Table 11) and correctly classified 59.1% of cases (see Table 12). In this model, gender was coded as follows: female = 0 and male = 1; the preference of partner's income was coded as: no preference = 0 and has preference = 1. Table 13 shows that B = -1.18 ($p < .001$), indicating that there was a significantly negative relationship between gender and preference of partner's income. When I conducted this analysis, I set the odds ratio as male/female. Exp (B), odds ratio, was .307, which means that females were 3.26 (1/.307) times more likely than males to have a preference regarding their partners' income. SPSS crosstabs were used to facilitate further analyses. As Table 12 demonstrates, 26% of males had a preference of partner's income compared to 54% of females.

Table 11.

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	20.484	1	< .001
	Block	20.484	1	< .001

Model	20.484	1	< .001

Table 12.

Classification Table

		Predicted		
		partner's income preference: mention it or not		Percentage
Observed		no preference	has preference	Correct
partner's income preference: mention it or not	no preference	152	0	100.0
	has preference	105	0	.0
Overall Percentage				59.1

Note. Constant is included in the model. The cut value is .5

Table 13.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp (B)
Step 1[a]	GEN(1)	-1.180	.268	19.459	1	.000	.307
	Constant	.166	.174	.908	1	.341	1.180

Note. a. Variable(s) entered on step 1: GEN.

Hypotheses 2. Acculturation level, in terms of education location and length of residency, might influence the dating preferences of Chinese American older adults in regard to age differences, shortest accepted height, and partner's income and education level. The influence of acculturation on dating preferences may vary by gender. Hypotheses were tested using multivariate multiple regressions. To compare gender differences, I split the file by gender, female versus male. Then, I ran multivariate multiple regressions using length of residency and education location as independent variables and shortest height acceptance, age differences, and partner's education level as dependent variables. Since the preference of partner's income is a dichotomous variable, I split the file by gender and used logistic regression to test the effect of length of residency and education location and to determine whether there were any gender differences.

Multivariate multiple regression analysis. The multivariate multiple regression tests the omnibus hypothesis that all beta coefficients across all dependent variables will be equal to zero. The other statistical software, such as Statistical Analysis System (SAS) and Stata, provide an omnibus hypothesis test for the overall model: if the overall Wilk's lambda is significant, then there are differences among the dependent variables as a function of one or more independent variables (Dattalo, 2013). This means that there is at least one coefficient not equal to zero. Unlike other software, SPSS does not provide an overall Wilk's Lambda for the model. A Wilk's lambda is provided for each dependent variable to see if each is significant. Thus, I looked at the Wilk's lambda for each variable to assess whether or not it rejected the ominus hypothesis.

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The results indicated that the length of residency (F (3, 128) = 3.37, p =.12) and personal education location (F (3,128) = 1.94, p = .24) had no effect on females' dating preferences (see Table 14). Thus, the model for females failed to reject the omnibus hypothesis. However, the length of residency (F (3, 119) = 6.31, p =.036, Wilk's lambda = 0.87) and personal education location (F (3,119) = 4.17, p = .046, Wilk's lambda = .91) affected males' dating preferences of shortest height acceptance, age differences, and partner's education level (see Table 14).

Table 14

Multivariate Tests by Using Imputed Data

Gender	IVs	Wilk's Lambda Value	F	Hypothesis df	Error df	Sig.
Female	PLL		3.37	3	128	.12
	PDL		1.94	3	128	.24
Male	PLL	.87	6.31	3	119	.036
	PDL	.91	4.17	3	119	.046

Note. PLL refers to personal length of residency. PDL refers to personal education location.

The tests of between-subjects effects demonstrated that the length of residency affected males' preference of partner's shortest height (p = .028; see Table 16): the longer the length of residency, the shorter the partners the males could accept (B= -.11; see Table 17). Age differences (p = .27) and partner's education level (p = .41) were not influenced by length of residency (see Table 16).

Though the multivariate tests indicated that personal education level could affect one of the dependent variables, the results of tests of between-subjects effects demonstrated that personal education location did not affect shortest height acceptance (p = .38), age differences (p = .25), or partner's education level (p = .08; see Table 16).

All the imputed results mentioned above were consistent with raw data analysis, except the effect of personal education location: in the model using raw data, the personal education location affected males' preferences of partner's education level (p = .018; see Table 15). Moreover, if personal education location fails to influence any dependent variables, the Wilk's lambda in the multivariate analysis may be non-significant. One of the reasons for this is that, in this model, there are interactions between length of residency and personal education location, and these interactions may affect the results. Thus, to further test whether personal education location affected males' preference of partner's education level, I ran an independent samples t- test.

The results of the independent samples t-test demonstrated that males' education location affected their preference of partner's education level (p = .042; see Table 18). However, females' education location had no such influence (p = .885; see Table 18). Males who had been educated in other countries or in both the US and other countries demanded that their partners have at least some college background (mean = 2.1; see Table 19). This requirement was higher than that of males educated in the US only, who required high school graduation (mean =1.73; see Table 19).

Logistic regression. The results of the logistic regression indicated that both

length of residency (*p* = .88) and personal education location (*p* = .66) had no affect on

the preference of partner' income level.

Table 15

Tests of Between-subjects Effects by Using Raw Data

Gender	Source	Dependent variables	df/error df	Sig.
Male	PLL	Shortest height acceptance	1/36	.016
		Age differences	1/36	.052
		Partner's education level	1/36	.117
	PDL	Shortest height acceptance	1/36	.152
		Age differences	1/36	.141
		Partner's education level	1/36	.018

Note. PLL refers to personal length of residency. PDL refers to personal education
location.

Table 16

Tests of Between-subjects Effects by Using Imputed Data

Gender	Source	Dependent variables	df/error df	Sig.
Male	PLL	Shortest height acceptance	1/30	.028

		Age differences	1/130	.27
		Partner's education level	1/130	.41
	PDL	Shortest height acceptance	1/130	.38
		Age differences	1/130	.25
		Partner's education level	1/130	.08

Table 17

Parameter Estimates by Using Imputed Data

Gender	Dependent variable	Parameter	B	Sig.
Male	Shortest height acceptance	Length of residency	-.11	.028

Table 18

Independent Samples T- Test by Using Imputed Data

			t-test for equality of means				
G	DV		t	df	Sig. (2-tailed)	Mean difference	Std. error difference
F	PAE	EVA	.145	1455	.885	.023	.16
		EVNA	.145	1464.19	.885	.023	.16

M	PAE	EVA	-2.04	921	.042	-.369	.18
		EVNA	-1.96	1046.41	.048	-.369	.19

Note: G means gender. F means female. M refers to male. PAE refers to partner's education level. EVA means equal variances assumed. EVNA means equal variances not assumed.

Table 19

Group Statistics by Using Imputed Data

Gender	DV	Personal education location	N	Mean	Std. Error Mean
Female	PAE	U.S. educated only	61.8	2.2	.11
	PAE	Others	71.3	2.18	.1
Male		U.S. educated only	85.9	1.73	.09
		Others	38.1	2.1	.16

Note. PAE refers to partner's education level.

Chapter Five: Discussion

This chapter summarizes the way in which the results should be interpreted. In addition, based on the results, this chapter discusses the implications of this research to social work (education, practice, and research), social policy and global gerontological social work.

Summary and Interpretation of Results

There are two research questions in this study, each of which was analyzed separately:

Question 1. What are the demographic and descriptive characteristics of Chinese American older adults who are involved in online dating?

The results indicated that most of the participants were "young old" adults (Forman, Berman, McCabe, Baim, & Wei, 1992), with an average age of 65.4 years. In addition, the selected samples were well educated. Most of them had graduate degrees and were in good financial situations. Thus, it appears that older, well-educated Chinese American adults with good financial situations are likely to use online dating services to seek romantic relationships. The samples selected by Levaro (2011) had similar characteristics. Further, my findings regarding the descriptive characteristics of this group of Chinese American adults is related to the results of research conducted by the Pew Research Center (2014), which indicated that younger, financially stronger, and highly

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educated older adults are more likely to use the Internet. However, other studies examining older adults' dating preferences, such as those by Alterovitz and Mendelsohn (2009, 2013), Davis and Fingerman (2015), McIntosh, Locker, Briley, Ryan, and Scott (2011), and McWilliams and Barrett (2014), failed to report on the personal education levels or financial situations of the participants or selected samples.

Question 2. How do gender and acculturation (education location) affect dating partner preferences among Chinese American older adults?

There are two sets of hypotheses related to the second research question (see Table 20).

Table 20

Summary of Hypothesis and Results

	Female	Male
Hypothesis one: Sexual strategies theory may be used to explain gender differences in Chinese American older adults' dating preferences.	Results about dating preferences in terms of shortest height acceptance, partners' education and income requirements supported hypothesis one. However, results about age differences rejected hypothesis one.	Hypothesis one was supported
Hypothesis two: Levels of exposure to American	Results rejected hypothesis two.	Results rejected

culture may impact how gender differences occur among Chinese American older adults' dating preferences.

hypothesis two. However, two of the findings were not expected in the hypothesis: males' length of residency was related to males' acceptance of partners' shortest height. Males who were not educated in the US only prefer have higher

requirements

of partners'

education

level

_____

Hypothesis one: Sexual strategies theory may affect Chinese American older

adults' dating preferences. There are gender differences regarding dating preferences—

Chinese American older males care about the physical attractiveness of younger females

(preferring women who are younger and shorter than them) and do not care about

females' income and education levels; Chinese American older females prefer wealthy

(based on income) and well-educated males. Also, they would like to date older and taller

males.

The results supported most part of hypothesis one—older Chinese American

females preferred taller partners. Additionally, they were more likely than males to have

a preference of partner's income. On the other hand, males preferred younger partners

and were less likely than females to have a preference of partner's income. The results

regarding the dating preferences of older Chinese American males and females in terms

of age differences, height, and income were consistent with the sexual strategies theory of

dating preferences. Furthermore, there were differences between males and females in

their minimum requirements of their partners' education level. Males' minimum

requirement was a high school degree (mean = 1.84) while females' required some

college (mean = 2.2). This finding was also consistent with sexual strategies theory,

which pointed out that females prefer males with higher education level. However, these differences between males and females were not large. England and McClinetock (2009) pointed out that older males who were college-educated had more than twice the chance to date compared to men with less education. Other previous studies failed to examine or compare the requirements of partners' education level in older males and females.

Nevertheless, the results indicated that older Chinese American females prefer dating males who were .71 years younger than them. The studies conducted by Alterovitz and Mendelsohn (2009), Levaro (2011), McWilliams, and Barrett (2014), and Schwarz and Hassebrauck (2012) demonstrated the similar findings that older females prefer younger partners. However, sexual strategies theory fails to explain this phenomenon.

The second set of hypotheses examined how level of exposure to American culture may impact the gender differences in dating preferences. The results indicated that length of residency and education location did not associate with older Chinese American females' dating preferences. It rejected all of the hypotheses. Males' length of residency affected their preference regarding their partners' height: the longer the males lived in the US, the shorter the partners they might accept. This finding was not expected in the hypothesis. Education location influenced older Chinese American males' minimum preference of their partners' education level. The results demonstrated that Chinese American older males who were educated outside of the US or in the US and other places required their dating partners to have some college background (mean = 2.1). However, Chinese American older males who were educated only in the US required their dating partners to have completed a high school education (mean = 1.7). This part of

results rejected hypothesis three. The existing literature has examined how exposure to host culture is related to or affects marital quality (Schwartz, 2011), marital stability (Duncan, 2011), marital satisfaction (Hurula, 2012), and attitudes towards arranged marriages and marriages for love (Jeedigunta, 2012). Nevertheless, literature on the effect of exposure to American culture in terms of length of residency and education location is rare. It is hard to explain the reasons behind the relation between length of residency and shortest height acceptance and the relation between education location and minimum preference of partners' education level.

Limitations and Future Research

Limitations. There are several limitations in this study. First, the inclusion criteria, "Asian" and "Speaking Chinese," exclude Chinese American older adults who do not speak Chinese, and this excluded group may have higher levels of acculturation.

In addition, because there are no options for specific ethnic groups, it is possible that some participants who are Asian and speaking Chinese are not Chinese at all. They may have grown up in Chinese communities or been adopted by Chinese parents. However, their biological parents may belong to another ethical group, or more than one.

Second, data from personal online dating profiles may be not accurate because participants may provide incorrect information about themselves. That can affect the validity and reliability of the descriptive analysis of this study, for example, a woman may lie about her age, a man about his income level. However, in the model, I included their dating preferences. They may lie about their self information. Nevertheless, they

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may express their real dating preference and requirements. From this perspective, the data related to dating preferences included in the model may be accurate.

Third, it is difficult to identify the goals and purposes of online dating website use. This study therefore does not discuss the different dating preferences based upon different dating goals and purposes.

Fourth, gays and lesbians have been excluded from this study. In the future, however, it will be necessary to examine the dating preferences for gay and lesbian relationships. In addition, bisexual and transgender populations have been neither purposely included nor knowingly excluded in this study. It is, however, difficult to identify these populations using the current information provided by online dating websites.

Fifth, there are only two variables (length of residency in the U.S. and education location) related to acculturation used in this study. Unfortunately, those two factors are insufficient. Other factors, like media usage, ethnic identity, gender roles, and interactions within the host nation culture, should also contribute to evaluating acculturation in the future.

Sixth, there were a lot of missing values in this analysis. Though 56 times of imputation was run, the numbers were still not accuracy. The missing values may affect the final results.

Seventh, the Chinese American older adults who use online dating are probably more educated and higher in income than their peers looking for a relationship without using the Internet (Alterovitz & Mendelsohn, 2009; McIntosh, Locker, Birley, Ryan, &

Scott, 2011). The research conducted by the Pew Research Center (2014) has similar

finds of older adults who use Internet. Consequently, the samples may be representative

for older adults who use online dating website; however, it may be not representative for

older adults who seek romantic relationships offline.

Future research. Future research will be designed to overcome limitations listed

above (see Table 21).

Table 21

Limitations and Future Research

Limitations	Future Research
Identify Chinese older adults.	An online dating website that only focuses on Asian American older adults might be selected. Further, the researcher could choose an online dating website in China that is also open to Chinese older adults outside of China
Accuracy of information on online dating profiles.	It is hard to examine whether information provided on online dating personal profiles are accurate of not. However in the future, I will code themes from those information to analyze what kind of strategies they use to attract potential partners' attention.
Long- or short-term	Online dating website always do not provide

relationship	information related to long- or short-term relationships,
Bisexual and	bisexual and transgender, and exposure to American
transgender	culture. In the future, I will consider conducting
populations	qualitative interviews to get related information.
Evaluation of exposure	Also, I will compare the dating preferences of Chinese
to American culture	older adults in China with those of Chinese American
	older adults to find whether expose to American culture
Missing values	affects dating preferences.

There are two research plans not related to limitations of this study. The first one is designed based on the consideration of importance of family members in older adults' life. Thus, in the future, qualitative interviews could also be considered to better understand the attitudes of the older adults' family members towards dating in late life. Second, the dating preference factors included in this study were selected according to research questions and theory. In the future, deeply exploring Chinese American older adults' dating preferences, should consider additional factors, such as body shape, health, religious preferences, and the distance one is willing to travel.

Implications and Recommendations

Implications for social work research, practice, education, and policy. There are two kinds of implications for social work research, practice, education, and policy: the first

kind of implications is generated from this study directly; the second kind is related to this study, however, summarized from literature.

Social work research. This study contributes to gerontological social work research. Previous research on American older adults and online dating has mainly been focused on older white American adults. This is the first study on the online dating preferences of older Chinese American adults. Thus, it fills a research gap by examining whether sexual strategies theory applies to minority older American adults, such as Chinese Americans; second, this study would facilitate the development of sexual strategies theory. Currently, the sexual strategies theory is based to evolutionary theory, which supposes that romantic relationships based on the consideration of reproduction. The theory fails to consider age and social factors. This study indicates that minority older adults have their own consideration and preferences of dating. Thus, in the future, the sexual strategies theory may integrate social, cultural, and age factors, instead of just focusing on biological perspectives.

Social work practice. Social work practitioners will benefit from the results of the study in the following five ways: the first, second, and third are generated from this study directly. The fourth and fifth are based on literature, however, also related to this study.

First, this study may facilitate communication by social work practitioners with the family members of older Chinese American adults. Alterovitz and Mendelsohn (2013) pointed out that older adults may give up seeking for romantic relationships if their family members disagree. For example, children may not understand why their father prefer dating females who are much younger than them, or why their mother would

like date young males. Because of preference of harmonious family atmosphere, Chinese American older adults may give up their romantic relationship if their family members strongly disagree. Thus, by utilizing this study, social work practitioners may facilitate family members of older Chinese Americans to help them understand that their fathers' or mothers' dating preferences reflect our knowledge of human nature and are consistent with sexual strategies theory. Similar dating preferences have been found among older white American adults and young people with different cultural backgrounds. By understanding the needs and dating preferences of older adults, family members may become more supportive.

Second, this study may help social work practitioners to work together with Chinese American older adults and their family members to reduce the rate of online dating scams. Wion and Loeb (2015) observed that online dating scams have become more prevalent. In the study conducted by VandeWeerd et al. (2014), 89% of the selected older adults trusted that the self-descriptions on online dating profiles were accurate. As this study indicated that Chinese American older males prefer younger females and older females prefer males with better financial situations, criminals may utilize the dating preferences of older adults to increase the appeal of their fraudulent online profiles. Chinese American older adults may be especially vulnerable during the process of online dating. Hence, social work practitioners could cooperate with the family members of Chinese American older adults to assess their acculturation levels in terms of knowledge about American culture, values, and law and to assess their online dating relationships.

Third, this study indicates that older Chinese American adults with better financial situations and higher education levels are more likely to become involved in online dating then those with less education or lower incomes. A similar pattern was found among white American older adults. Social work practitioners could therefore pay attention to older adults with low income and education as they may lack opportunities to build social connections online. Social workers advocate for social justice. Thus, social work practitioners have a responsibility to deal with the digital divide among older adults. In the future, social work practitioners could negotiate with policymakers to get more funding for computer training for low-income and less-educated older adults. Moreover, social work practitioners could provide training in different languages to minority older adults to help them build social support online.

Fourth, this study helps social work practitioners consider minority older adults' romantic involvements, sexual health, and sexual histories. Older adults who use online dating services may be sexually active (Waite, Laumann, Dad, & Schumm, 2009, Wion & Loeb, 2015). However, practitioners find it difficult to explore older adults' sexual health and histories, as they do not want to disrupt the relationships between practitioners and clients by discussing topics that might be considered taboo (Wion & Loeb, 2015). Since Chinese norms discourage older adults from having sex (Chiu & Ho, 2010), it is more difficult to ask Chinese American older adults sexually related questions than their white American peers. This study may enhance social work practitioners' understanding of that fact that, similar to other American older adults, Chinese American older adults have desires for romantic and sexual activity. When exploring questions related to

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sexuality, social work practitioners may prepare themselves by understanding Chinese culture related to sex and remarriage as well as the Chinese older adults' acculturation levels to show empathy, understanding, and respect towards their clients. Importantly, this study shows that Chinese Americans older adults are involved in online dating, which counters the myth of their lack of interest in romantic partnerships.

Fifth, this study may contribute to international social work. Society is aging globally. Romantic relationships in late life are becoming an increasingly important area, given how such relationships impact physical health (Iwashyna & Christakis, 2003), mental health (Cohen, Klein, & O'Leary, 2007), and mortality (Johnson, Backlund, Sorlie, & Loveless, 2000). However, research on the dating preferences of older adults with different cultural backgrounds is limited. This study also provides guidance to social work practitioners in other counties, particularly in Asian countries. Furthermore, in some places in Asia, such as in the small villages in China, women are still required to remain widowed to show their loyalty to their dead husbands. However, this study shows that Chinese American older females break these cultural norms and stereotypes by seeking romantic relationships, showing similar dating preferences to other older adults. This finding is meaningful for international social work because it encourages older females to challenge unfair and cruel traditions and seek love and happiness in later life.

Social work education. This study contributes to gerontological social work education in several ways: the first and two implications are based on my research. The third and fourth implications are related to literature.

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First, educators could use this study as a reference to help their students understand that health is an important consideration for older females seeking romantic relationships. Several studies have suggested that older females like to date younger lovers because age may be related to health (Alterovitz & Mendelsohn, 2009; McWilliams & Barrett, 2014). Similarly, Chinese American older females prefer dating partners who are younger than them. The main reason for this age preference is that older females wish to avoid the burden of having to take care of their partners in the event of remarriage (Manning & Brown, 2015).

Second, this study may help social work students deepen their understanding about diversity and cultural competence. This study demonstrates Chinese culture related to mate selection and how acculturation affects the dating preferences of Chinese American older adults. Based on this study, social work students will understand how important it is to understand the cultures and values of minority groups.

Third, it helps social work students understand that older adults still have sexual desires, including Chinese American older adults. Sexuality is a basic human right. Gerontological social work educators could teach students how to ask about and understand older adults' romantic interests, sexual histories, and sexual health in practice. In addition, educators could guide students to learn how to communicate with older adults' family members or caregivers about their sexuality, especially family members or caregivers from minority families.

Fourth, this research may attract the attention of social work and gerontology educators and professionals to build programs or related courses to teach students about

the use of technology in aging service. Computer-mediated communication, such as email, Facebook, voice chat, instant messaging, blogs, and YouTube (Boyd & Ellison, 2007; Xie, 2008), can help older adults build social connections and social capital (Adler, 2006; Gallienne, Moore, & Brennan, 1993; Russell, 1999; White & Weatherall, 2000). My study shows that white American older adults are not alone in their use of technology to seek romantic relationships and build social connections; Chinese American older adults use the same strategy. The number of older adults who use technology has increased. For example, the percentage of American older adults who use the Internet increased from 14% in 2000 to 58% in 2014 (Pew Research Center, 2015). However, the number of professionals and scholars who understand both gerontology and technology is limited. According to the *US News & World Report*, only three classes (no degree or certificate programs) among top education programs focus on gerontology and technology (Coughlin, 2014). This study may encourage educators and professionals to focus on technology and gerontology, ultimately resulting in programs designed to train students to use technology, thereby helping older adults.

   Implications for social policy. This study examines the online dating preferences of Chinese American older adults. Polices related to romantic relationship-seeking among older adults is rare. However, one of the results of this study indicated that Chinese American older females prefer dating younger males. Similar results have been found among the other studies. According to literature review, one of the reasons of this preference is based on the consideration of caregiving after remarriage and cohabitation. Thus, in the policy part, I discuss the policy of caregiving after remarriage and

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cohabitation. Sherman and Boss (2007) pointed out "current public policies and social norms in the USA assume that family members will bear the substantial burden and cost for long-term care of elderly relatives" (p. 263). As this study and other related research have shown, older females prefer dating younger partners based on health considerations. However, who will take care of older remarried adults? Taking older adults with dementia as an example, Sherman and Boss (2007) argued that it not always realistic for older adults to rely on family support if they remarry late in life. Thus, policies are needed to clarify whether the original family, stepfamily, or both are responsible for the care of older adults. Additionally, the government should provide funding to services and training programs focused on helping caregivers from stepfamilies.

Marriage rates across generations have declined in the United States, and about one-third of baby boomers are unmarried (Manning & Brown, 2015). In 2010, the rate of cohabitation was 21.5% among individuals 55 and older and 7.7% among people 65 and older (U. S. Census Bureau 2010). To reduce their burdens and responsibilities, American older females often choose cohabitation rather than remarriage because the "expectations for care are weaker" (Manning & Brown, 2015). Traditionally, spouses are mainly responsible for providing caregiving to older adults. However, cohabiting partners are less likely to take care of lovers than spouses (Manning & Brown, 2015). Policymakers and service providers must thus pay attention to issues relating to unmarried couples' caregiving.

In sum, funding should be improved and policies should be promoted to improve formal long-term care and services for older adults. A better long-term care system could

reduce the worry about being a caregiver and the impact of this worry on older adults'
dating preferences.

Conclusion

This study examined how exposure to American culture in terms of length of
residency and education location affects Chinese American older adults' dating
preferences in regard to age differences, shortest height acceptance, and partners' income
and minimum education level. The results indicated that sexual strategies theory could be
used to explain the dating preferences of Chinese American older adults. Additionally,
length of residency and education location was shown to have an effect on Chinese
American older males' preferences regarding their partners' height and minimum
education level. This study is meaningful for social work practice (sexual history and
health among minority older adults, communication with the families of older Chinese
Americans, online dating scams, the digital divide, and international social work),
education (older adults' sexuality, health, cultural competence, and technology
utilization), and policy related to caregiving for remarried older adults and unmarried
couples. In addition, it contributes to social work practice and research. The study has
several limitations. In the future, the researcher may explore Chinese American older
adults' dating preferences more deeply and conduct comparison studies.

References

Adler, R. (2006) *Older Americans, broadband and the future of the net—SeniorNet*.

Retrieved from www.seniornet.org/research/SeniorNetNNPaper060606.pdf

Administration on Aging. (2013). *A profile of older Americans: 2013*. Retrieved from:

http://www.aoa.gov/Aging_Statistics/Profile/2013/docs/2013_Profile.pdf

Airth, D. (2011). *Somewhere in between: The role of length of residence and age of*

arrival in predicting acculturation to the host society (Doctoral dissertation,

University of California, Riverside). Retrieved from

http://0-search.proquest.com.bianca.penlib.du.edu/docview/904574661?pq-

origsite=summon

Alterovitz, S. S. R., & Mendelsohn, G. A. (2009). Partner preferences across the life

span: Online dating by older adults. *American Psychological Association, 24*(2),

513-517. doi: 10.1037/a0015897

Alterovitz, S. S. R., & Mendelsohn, G. A. (2013). Relationship goals of middle-aged,

young-old, and old-old Internet daters: An analysis of online personal ads.

Journal of Aging Studies, 27, 159-165. doi:10.1016/j.jaging.2012.12.006

Barusch, A. S. (2009). Love and ageism-A social work perspective. *Social Work Today, 9*

(1), 12.

Becker, G. S. (1991). *A treatise on the family*. Cambridge, MA: Harvard University

Press.

Berry, J. W. (2008). Globalization and acculturation. *International Journal of Intercultural Relation, 32*(4), 328-336. doi:10.1016/j.ijintrel.2008.04.001

Berry, J. W., Poortinga, Y. H., Segall, M. H., & Dasen, P. R. (2002). *Cross-cultural psychology: Research and applications* (2nd ed.). New York, NY: Cambridge University Press.

Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230. doi: 10.1111/j.1083-6101.2007.00393.x

Brown, S. L., & Shinohara, S. K. (2013). Dating relationships in older adulthood: A national portrait. *Journal of Marriage and Family*, *75*(5), 1194-1202.

Bullough, V. L., & Ruan, F. F. (1994). Marriage, divorce, and sexual relations in contemporary China. *Journal of Comparative Family Studies*, 383-393.

Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypothesis in 37 cultures. *Behavioral and Brain Science, 12* (1), 1-49. doi: dx.doi.org/10.1017/S0140525X00023992

Buss, D. M. (1998). Sexual strategies theory: Historical origins and current status. *The Journal of Sex Research, 35*(1), 19-31. doi:10.1080/00224499809551914

Buss, D. M. (2007). The evolution of mating strategies: Consequences for conflict and cooperation. In S. Gangstead & J. Simpson (Eds.), *The evolution of mind* (pp. 375-382). New York: Guilford.

Buss, D. (2015). *Evolutionary psychology: The new science of the mind*. Psychology Press.

Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary

    perspective on human mating. *Psychological Review, 100*(2), 204-232.

    doi:10.1037/0033-295X.100.2.204

Buunk, A. P., Park, J. H., Zurriaga, R., Klavina, L., & Massar, K. (2008). Height predicts

    jealousy differently for men and women. *Evolution and Human Behavior, 29*(2),

    133-139. doi:10.1016/j.evolhumbehav.2007.11.006

Buunk, B. P., Dijkstra, P., Fetchenhauer, D., & Kenrick, D. T. (2002). Age and gender

    differences in mate selection criteria for various involvement levels. *Personal*

    Relationships, *9*(3), 271-278.

Case, A., & Paxon, C. (2008). Stature and status: Height, ability, and labor market

    outcomes. *Journal of Political Economy, 116*(3), 499-532.

Chan, C. C. N., Ho, K. S., Heung, L. C. L., & Chan, W. M. (2004). Study on knowledge,

    attitude and sexual behavior among the Chinese elderly males in Hong

    Kong. *Hong Kong Practitioner*, *26*(2), 64-73.

Chang, L., Wang, Y., Shackelford, T. K., & Buss, D. M. (2011). Chinese mate

    preferences: Cultural evolution and continuity across a quarter of a century.

    Personality and Individual Differences, *50*(5), 678-683.

Chen, X., Dai, K., & Parnell, A. (1992). Disaster tradition and change: Remarriage and

    family reconstruction in a post-earthquake community in the People's Republic of

    China. *Journal of Comparative Family Studies*, 115-132.

Chitsaz, S. (2012). *Improved estimation strategies in multivariate multiple regression*

    models (Doctoral dissertation, University of Windsor). Retrieved from

    http://scholar.uwindsor.ca/cgi/viewcontent.cgi?article=1418&context=etd

Chiu, M. Y., & Ho, W. W. (2010). Intent to remarry among Chinese elderly widowers:

    An oasis or an abyss?. *American Journal of Men's Health*, *4*(3), 258-266. doi:

    10.1177/1557988309342001

Choi, B. J., & Thomas, M. (2009). Predictive factors of acculturation attitudes and social

    support among Asian immigrants in the USA. *International Journal of Social*

    Welfare, *18*(1), 76-84. doi:10.1111/j.1468-2397.2008.00567.x

Christman, S. T., Bernal, D., & Nicolas, G. (2010). *Acculturation, acculturative stress,*

    and depression among Haitians in the United States. Retrieved from

    http://www.education.miami.edu/crecer/pdf/presentations/presentations-

    2010/presentations-2010-ref3.pdf

Chung, R. H., Kim, B. S., & Abreu, J. M. (2004). Asian American multidimensional

    acculturation scale: Development, factor analysis, reliability, and

    validity. *Cultural Diversity and Ethnic Minority Psychology, 10*(1), 66.

    doi:10.1037/1099-9809.10.1.66

Cochran, S. D., Mays, V. M., Alegria, M., Ortega, A. N., & Takeuchi, D. (2007). Mental

    health and substance use disorders among Latino and Asian American lesbian,

    gay, and bisexual adults. *Journal of Consulting and Clinical Psychology*, *75*(5),

    785. doi:10.1037/0022-006X.75.5.785

Cohen, S., Klein, D. N., & O'Leary, K. D. (2007). The role of separation/divorce in

    relapse into and recovery from major depression. *Journal of Social and Personal*

    Relations, 24, 855-873. doi: 10.1177/0265407507084187

Cooney, T. M., & Dunne, K. (2001). Intimate relationships in later life: Current realities,

    future prospects. *Journal of Family Issues, 22*, 838-858.

    doi:10.1177/019251301022007003

Coughlin, J. F. (2014). Technology, innovation, and developing a NexGen aging services

    workforce. *Public Policy and Aging Report, 24*, 6-9.

Cropanzano, R. & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary

    theory. *Journal of Management, 31*(6), 874-900. doi:10.1177/0149206305279602

Cuellar, I., Arnold, B., & Maldonado, R. (1995). Acculturation rating scale for Mexican

    Americans-II: A revision of the original ARSMA scale. *Hispanic Journal of*

    Behavioral Sciences, *17*(3), 275-304. doi:10.1177/07399863950173001

Darwin, C. (1871). *The descent of man and selection in relation to sex*. London: Murray.

Dattalo, P. (2013). *Analysis of multiple dependent variables*. Oxford University Press.

Davis, E. M., & Fingerman, K. L. (2015). Digital Dating: Online Profile Content of Older

    and Younger Adults. *The Journals of Gerontology Series B: Psychological*

    Sciences and Social Sciences, 1-8. doi:10.1093/geronb/gbv042

Davis, K. (e.d.). *Multiple analysis of variance (MANOVA) or multiple analysis of covariance (MANCOVA)*. Retrieve from http://schatz.sju.edu/multivar/guide/mancova.pdf

Deaton, A. S., & Arora, R., (2009). Life at the top: the benefits of height. *Economics and Human Biology, 7*(2), 133-136.

DeFrancisco, V. P., Palczewski, C. H., & McGeough, D. D. (2013). *Gender in communication: A critical introduction*. SAGE Publications.

de Goeij, M. C., van Diepen, M., Jager, K. J., Tripepi, G., Zoccali, C., & Dekker, F. W. (2013). Multiple imputation: dealing with missing data. *Nephrology Dialysis Transplantation*, *28*(10), 2415-2420. doi: 10.1093/ndt/gft221

Deng, J., & Walker, G. J. (2007). Chinese acculturation measurement. *Canadian Ethnic Studies*, *39*(1-2), 187-217. doi: 10.1353/ces.0.0008

Dong, X., Chang, E., Wong, E., & Simon, M. (2012). Perception and negative effect of loneliness in a Chicago Chinese population of older adults. *Archives of Gerontology and Geriatrics*, *54*(1), 151-159. doi: 10.1016/j.archger.2011.04.022

Dong, X., Chang, E., Wong, E., Wong, B., Skarupski, K. A., & Simon, M. A. (2010). Assessing the health needs of Chinese older adults: Findings from a community-based participatory research study in Chicago's Chinatown. *Journal of Aging Research*, *2010,* 1-12. doi: 10.4061/2010/124246

Dong, Y., & Peng, C. J. (2013). Principled missing data methods for researchers. *Springerplus, 2*(1), 1-17. doi: 10.1186/2193-1801-2-222

Duncan, E. M. (2011). *African American marriages: The impact of levels of acculturation, commitment and religiosity upon marital stability* (Doctoral Dissertation, Saint Louis University). Retrieved from http://0-search.proquest.com.bianca.penlib.du.edu/docview/883386582?pq-origsite=summon

England, P., & McClintock, E. A. (2009). The gendered double standard of aging in US marriage markets. *Population and Development Review, 35*(4), 797-816.

Federal Interagency Forum on Aging-Related Statistics. (2012). *Older Americans 2012: Key indicators of well-being.* Retrieved from http://www.agingstats.gov/agingstatsdotnet/Main_Site/Data/2012_Documents/Docs/EntireChartbook.pdf

Fisher, R. A. (1958). *The genetical theory of natural selection*. New York: Dover.

Forman, D. E., Berman, A. D., McCabe, C. H., Baim, D. S., & Wei, J. Y. (1992). PTCA in the elderly: The "young-old" versus the "old-old". *Journal of the American Geriatrics Society, 40*(1), 19.

Free Statistics Calculators (Version 4.0) [online software]. Retrieved from http://www.danielsoper.com/statcalc/default.aspx

Fredriksen-Goldsen, K., Kim, H. J., Emlet, C. A., Muraco, A., Erosheva, E. A., Hoy-
Ellis, C. P., … Petry, H. (2010). *The aging and health report-Disparities and
resilience among lesbian, gay, bisexual, and transgender older adults.* Retrieved
from http://caringandaging.org/wordpress/wp-content/uploads/2011/05/Full-
Report-FINAL-11-16-11.pdf

Friendly, M. (n. d.). *Multivariate multiple regression & visualizing multivariate test.*
Retrieved from
http://www.psych.yorku.ca/lab/psy6140/lectures/MultivariateRegression2x2.pdf

Fu, T. (2015). What are the Shengnv looking for in online heterosexual dating and
courtship? A content analysis of Shanghainess women's personal profiles on
Jiayuan.com. In I. A. Degim, J. Johnson, & T. Fu (Eds). *Online courtship:
Interpersonal interactions across borders* (pp.186-207). Institute of Network
Cultures, Amsterdam.

Fullick, M. (2013). "Gendering" the self in online dating discourse. *Canadian Journal of
Communication*, *38*(4), 545-562.

Gallienne, R. L., Moore, S. M., & Brennan, P. F. (1993) Alzheimer's caregivers:
Psychosocial support via computer networks. *Journal of Gerontological Nursing,
19*(12), 15-22. Retrieved from
http://0-search.proquest.com.bianca.penlib.du.edu/docview/1021720427?accounti
d=14608

Graham, J. W., Olchowski, A. E., & Gilreath, T. D. (2007). How many imputations are

    really needed? Some practical clarifications of multiple imputation

    theory. *Prevention Science*, *8*(3), 206-213.

Grant, J. M. (2010). *Outing age: Public policy issues affecting gay, lesbian, bisexual and*

    transgender elders. Retrieved from

    http://www.thetaskforce.org/downloads/reports/reports/outingage_final.pdf

Gonzaga, G. (2011). *How you meet your spouse matters*. Retrieved from

    http://www.eharmony.com/blog/2011/02/10/how-you-meet-your-spouse-

    matters/#.U82YQo1dXqt

Gove, W. (1972). The relationship between sex roles, mental illness and marital status.

    Social Forces, 51, 34–44. doi:10.2307/2576129

Haque, R., Haque, M. O., & SpringerLink (Online service). (2008). *Gender, ethnicity and*

    employment: Non-English speaking background migrant women in Australia.

    Heidelberg: Physica-Verlag.

Hatfield, J. P., Hirsch, J. K., & Lyness, J. M. (2013). Functional impairment, illness

    burden, and depressive symptoms in older adults: Does type of social relationship

    matter? *International Journal of Geriatric Psychiatry*, 28, 190-198.

He, Q. Q., Zhang, Z., Zhang, J. X., Wang, Z. G., Tu, Y., Ji, T., & Tao, Y. (2013).

    Potentials-attract or likes-attract in human mate choice in China. *PloS one*, *8*(4),

    e59457. doi:10.1371/journal.pone.0059457

He, Y. (2010). Missing data analysis using multiple imputation getting to the heart of the matter. *Circulation: Cardiovascular Quality and Outcomes*, *3*(1), 98-105. doi: 10.1161/CIRCOUTCOMES.109.875658

Higgins, L. T., Zheng, M., Liu, Y., & Sun, C. H. (2002). Attitudes to marriage and sexual behaviors: A survey of gender and culture differences in China and United Kingdom. *Sex Roles*, *46*(3-4), 75-89.

Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology, 63*(6), 597-606.

Howell, D. C. (1992). *Statistical methods for psychology* (3rd ed.). Boston, MA: PWS-Kent Publishing Co.

Hsiung, Y. Y., & Ferrans, C. E. (2007). Recognizing Chinese Americans' cultural needs in making end- of-life treatment decisions. *Journal of Hospice & Palliative Nursing, 9*(3), 132-140. doi:10.1097/01.NJH.0000269993.13625.49

Hui, C. H., & Triandis, H. C. (1986). Individualism-collectivism a study of cross-cultural researchers. *Journal of Cross-cultural Psychology*, *17*(2), 225-248. doi: 10.1177/0022002186017002006

Hurula, K. H. (2012). *The impact of indexes of acculturation on marital satisfaction and conflict resolution in Hispanic couples* (Doctoral dissertation, Wheaton College). Retrieved from

http://0-search.proquest.com.bianca.penlib.du.edu/docview/1114894822?pq-

origsite=summon

IBM SPSS Statistics. (2010). *IBM SPSS missing values 19*. Retrieved from

http://www.unt.edu/rss/class/Jon/SPSS_SC/Manuals/v19/IBM%20SPSS%20Miss

ing%20Values%2019.pdf

Iwashyna, T. J., & Christakis, N. A. (2003). Marriage, widowhood, and health-care use.

Social Science & Medicine, 57, 2137–2147. doi: 10.1016/S0277-9536(02)00546-

4

Jeager, M. M. (2011). A thing of beauty is a joy forever? Returns to physical

attractiveness of the live course. *Social Forces, 89*, 983-1003.

Jeedigunta, A. (2012). *Coming to America: The impact of acculturation and cultural*

identity on the preference for arranged versus love marriage among Indian

Hindus residing in the United States (Doctoral dissertation, University of Hawai'I

at Manoa). Retrieved from

http://0-search.proquest.com.bianca.penlib.du.edu/docview/1048271724?pq-

origsite=summon

Ji, Y. (2015). Between tradition and modernity: "Leftover" women in Shanghai. *Journal*

of Marriage and Family, 77(5), 1057-1073. doi:10.1111/jomf.12220

Johnson, N. J., Backlund, E., Sorlie, P. D., & Loveless, C. A. (2000). Marital status and

mortality: The national longitudinal mortality study. *Ann Epidemiol*, *10*, 224–238.

doi: 10.1016/S1047-2797(99)00052-6

Katherine, M. (2005). *Communication theories: Perspectives, processes, and contexts*.

New York: McGraw Hill.

Kline, S. L., & Zhang, S. (2009). The role of relational communication characteristics

and filial piety in mate preferences: Cross-cultural comparisons of Chinese and

US college students. *Journal of Comparative Family Studies*, *40*(3), 325-353.

Klofstad, C. A., McDermott, R., & Hatemi, P. K. (2013). The dating preferences of

liberals and conservatives. *Political Behavior*, *35*(3), 519-538. doi:

10.1007/s11109-012-9207-z

Koya, D. L., & Egede, L. E. (2007). Association between length of residence and

cardiovascular disease risk factors among an ethnically diverse group of United

States immigrants. *Journal of general internal medicine*, *22*(6), 841-846.

Laerd Statistics (2013). *Binomial logistic regression using SPSS statistics*. Retrieved

from https://statistics.laerd.com/spss-tutorials/binomial-logistic-regression-using-

spss-statistics.php

Lahire, N. (2003). *The effects of length of residence, language(s) proficiency, and

acculturation on Ethiopian immigrants' academic achievement* (Doctoral

dissertation, George Washington University). Retrieved from http://0-

search.proquest.com.bianca.penlib.du.edu/docview/305326501?pq-origsite=summon

Lalonde, R. N., Hynie, M., Pannu, M., & Tatla, S. (2004). The role of culture in interpersonal relationships: Do second generation South Asian Canadians want a traditional partner?. *Journal of Cross-Cultural Psychology*, *35*(5), 503-524. doi: 10.1177/0022022104268386

Landrine, H., & Klonoff, E. (1996). The African American acculturation scale: Origin and current status. In R. Jones (Ed), *Handbook of tests and measurements for Black populations*, Volume 2 (pp. 119-138). Hampton, VA: Cobb & Henry Publishers.

Lee, E. (2011). *Dating preferences change with age*. Retrieved from http://www.eharmony.com/blog/2011/11/22/dating-preferences-change-with-age/#.U8xO86jUVz8

Lee, K. J., & Simpson, J. A. (2014). Introduction to multiple imputation for dealing with missing data: Multiple imputation for missing data. *Respirology, 19*(2), 162-167. doi:10.1111/resp.12226

Lee, S. D., Arozullah, A. M., Cho, Y. I., Crittenden, K., & Vicencio, D. (2009). Health literacy, social support, and health status among older adults. *Educational Gerontology, 35*(3), 191-201. doi:10.1080/03601270802466629

Levaro, E. B. (2011). *Theorizing age and gender in the pursuit of love in late life*

    (Doctoral dissertation, Oregon State University)*.* Retrieved from

    http://search.proquest.com/docview/918226559/

Li, T., & Zhang, Y. (2015). Social network types and the health of older adults:

    Exploring reciprocal associations. *Social Science & Medicine, 130*, 56-68.

    doi:10.1016/j.socscimed.2015.02.007.

Li, W. (2007). *Chinese culture and customs*. Retrieved from

    http://www.wku.edu/~haiwang.yuan/China/docsChinesecultureandcustoms.rtf

Liesen, L. T. (2013). Feminists need to look beyond evolutionary psychology for insights

    into human reproductive strategies: A commentary. *Sex roles*, *69*(9-10), 484-490.

Liu, H., & Zhang, Z. (2013). Disability trends by marital status among older Americans,

    1997- 2010: An examination by gender and race. *Population Research and*

    Policy Review, *32*(1), 103-127. doi: 10.1007/s11113-012-9259-0

Lo, Ven-hwei. (2001). Sexual Strategies Theory, gender, exposure and support for

    restriction of pornography on the Internet. *Studies in Media & Information*

    Literacy Education, 1(4).

Lu, C. Y. (2015). *Skilled migration, expectation and reality: Chinese professionals*

    and the global labour market. Burlington, VT; Farnham, Surrey, UK: Gower

    Publishing.

Lu, Y., Samaratunge, R., & Härtel, C. E. (2011). Acculturation strategies among

      professional Chinese immigrants in the Australian workplace. *Asia Pacific*

      Journal of Human Resources, 49(1), 71-87. doi:10.1177/1038411110391709

Manning, W. D., & Brown, S. L. (2015). Aging cohabiting couples and family policy:

      Different-sex and same-sex couples. *Public Policy & Aging Report*, *25*(3), 94-97.

Match.com. (2014). *Match.com, L.L.C. privacy policy.* Retrieved from

      http://www.match.com/registration/privacystatement.aspx?lid=4

Match.com. (2014). *Match.com fact sheet 2014.* Retrieved from

      http://match.mediaroom.com/download/Match.com+Fact+Sheet+2014.pdf#search

      =Matc h.com fact sheet

McDonald, J. H. (2015). *Handbook of biological statistics* (3rd ed.). Retrieved from

      http://www.biostathandbook.com/

McIntosh, W. D., Locker, L., Briley, K., Ryan, R., & Scott, A. J. (2011). What do older

      adults seek in their potential romantic partners? Evidence from online personal

      ads. *The International Journal of Aging and Human Development*, *72*(1), 67-82.

      doi: 10.2190/AG.72.1.d

McWilliams, S., & Barrett, A. E. (2014). Online dating in middle and later life: Gendered

      expectations and experiences. *Journal of Family Issues, 35*(3), 411-436. doi:

      10.1177/0192513X12468437

Mendeş, M. (2011). Multivariate Multiple Regression Analysis based on Principal

   Component Scores to study relationships between some pre and post slaughter

   traits of broilers. *Journal of Agricultural Sciences (Turkey)*.

Mineau, G. P., Smith, K. R., & Bean, L. L. (2002). Historical trends of survival among

   widows and widowers. *Social Science & Medicine 54*, 245–254. doi:

   10.1016/S0277-9536(01)00024-7

Momtaz, Y. A., Hamid, T. A., Ibrahim, R., & Akahbar, S. A. N. (2014). Racial and

   socioeconomic disparities in sexual activity among older married

   Malaysians. *Archives of Gerontology and Geriatrics*, *58*(1), 51-55. doi:

   10.1016/j.archger.2013.08.003

Moon, S. & Park, C. (2007). Media effects on acculturation and biculturalism: A case

   study of Korean immigrants in Los Angeles' Korea town. *Mass Communication

   & Society, 10*(3), 319-343. doi: 10.1080/15205430701407330

Murphy, M., Grundy, E., & Kalogirou, S. (2007). The increase in marital status

   differences in mortality up to the oldest age in seven European countries, 1990-

   99. *Population Studies, 61*, 287–298. doi: 10.1080/00324720701524466

National Association of Social Workers. (2016). *Code of ethics of the National

   Association of Social Workers*. Retrieved from

   https://www.socialworkers.org/pubs/code/code.asp

Nekby, L., Rödin, M., & Özcan, G. (2007). *Acculturation identity and educational attainment* (No. 3172). IZA Discussion Papers. Retrieved from http://ftp.iza.org/dp3172.pdf

Nettle, D. (2002). Women's height, reproductive success and the evolution of sexual dimorphism in modern humans. *Proceedings of the Royal Society of London B: Biological Sciences*, *269*(1503), 1919-1923.

Ong, D., & Wang, J. (2015). Income attraction: An online dating field experiment. *Journal of Economic Behavior & Organization*, *111*, 13-22.

Parish, W. L., & Farrer, J. (2000). Gender and family. In W. F. Tang & W. L. Parish (Eds). *Chinese urban life under reform: The changing social contract* (pp. 232-272). Cambridge: Cambridge University Press.

Park, Y., Neckerman, K. M., Quinn, J., Weiss, C., & Rundle, A. (2008). Place of birth, duration of residence, neighborhood immigrant composition and body mass index in New York City. *International Journal of Behavioral Nutrition and Physical Activity*, *5*(1), 19.

Penning, M. J., Liu, G., & Chou, P. H. B. (2014). Measuring loneliness among middle-aged and older adults: the UCLA and de Jong Gierveld Loneliness Scales. *Social Indicators Research*, *118*(3), 1147-1166. doi:10.1007/s11205-013-0461-1

Pew Research Center's Internet & American Life Project. (2013). *Online dating & relationships*. Retrieved from

http://www.pewinternet.org/files/oldmedia//Files/Reports/2013/PIP_Online%20D
ating%202013.pdf

Pew Research Center's Internet & American Life Project. (2014). Older Adults and
technology use. Retrieved from http://www.pewinternet.org/2014/04/03/older-
adults-and-technology-use/

Pew Research Center's Internet & American Life Project. (2015). American's Internet
access: 2000-2015. Retrieved from
http://www.pewinternet.org/2015/06/26/americans-internet-access-2000-2015/

Philipsen, G. (1992). *Speaking culturally: Explorations in social communication*. Albany,
NY:Suny Albany Press.

Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity,
immigration, and well-being: An interactional perspective. *Journal of Social
Issues, 57*, 493-510. doi:10.1111/0022-4537.00225

Plumpton, C. O., Morris, T., Hughes, D. A., & White, I. R. (2016). Multiple imputation
of multiple multi-item scales when a full imputation model is infeasible. *BMC
Research Notes, 9*, 45.

Podoshen, J. S. (2005). *Acculturation, ethnic conflict and equity theory: The American
Jewish consumer* (Doctoral dissertation, Temple University). Retrieved from
http://0-search.proquest.com.bianca.penlib.du.edu/docview/305393603?pq-
origsite=summon

Ponzo, M. & Scoppa, V. (2015). Trading height for education in the marriage market. *American Journal of Human Biology, 27*, 164-174.

Rosenfeld, M. J. (2005). A critique of exchange theory in mate selection. *American Journal of Sociology, 110*(5), 1284-1325.

Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York, NY: Wiley.

Russell, M. (1999). Online Learning Communities: Implications for Adult Learning. *Adult Learning*, *10*(4), 28-31. Retrieved from http://0-search.proquest.com.bianca.penlib.du.edu/docview/208170295?accountid=14608

Saunders, J. A., Morrow-Howell, N., Spitznagel, E., Doré, P., Proctor, E. K., & Pescarino, R. (2006). Imputing missing data: A comparison of methods for social work researchers. *Social Work Research*, *30*(1), 19-31.

Schafer, J. L. & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*(2), 147-177. doi: 10.1037//1082-989X.7.2.147

Schulz, A. W. (2010). It takes two: Sexual strategies and game theory. *Studies in History and Philosophy of Biological and Biomedical Science, 41*, 41-49. doi:10.1016/j.shpsc.2009.12.004

Schwartz, A. L. (2011). *Marital quality, acculturation, and communication in Mexican American couples* (Doctoral dissertation, Utah State University). Retrieved from http://0-search.proquest.com.bianca.penlib.du.edu/docview/901112252?pq-origsite=summon

Schwarz, S., & Hassebrauck, M. (2012). Sex and age differences in mate-selection preferences. *Human Nature*, *23*(4), 447-466.

Sherman, C. W., & Boss, P. (2007). Spousal dementia caregiving in the context of late-life remarriage. *Dementia, 6*(2), 245-270. doi:10.1177/1471301207080367

Shim, Y. R., & Schwartz, R. C. (2007). The relationship between degree of acculturation and adjustment difficulties among Korean immigrants living in a western society. *British Journal of Guidance & Counseling*, 35(4), 409-426. doi:10.1080/03069880701593516

Smiler, A. P. (2011). Sexual strategies theory: Built for the short term or the long term?. *Sex Roles*, *64*(9-10), 603-612.

Smith, C. A., & Konik, J. (2011). Feminism and evolutionary psychology: Allies, adversaries, or both? An introduction to a special issue. *Sex Roles*, *64*(9-10), 595-602.

Song, J., & Luke, N. (2014). Fairy Brides from Heaven: Mate Selection in Rural China, 1949-2001. *Journal of Comparative Family Studies*, 497-515.

Sperry, R. A. (2014). *Prediction of retention and probation status of first-year college students in learning communities using binary logistic regression models* (Doctoral dissertation, Texas A&M University-Corpus Christi). Retrieved from http://0search.proquest.com.bianca.penlib.du.edu/docview/1552484966?pq-origsite=summon

Starkweather, J. (2013). *Multivariate outlier detection with Mahalanobis' distance*. Retrieved from https://www.unt.edu/rss/class/Jon/Benchmarks/Moutlier_JDS_July2013.pdf

Statistics Solutions (2016). *MANOVA: 2 levels and 3 dependent variables*. Retrieved from http://www.statisticssolutions.com/manova-2-levels-and-3-dependent-variables/

Statistics Solutions (2016). *Logistic regression: 2-tailed.* Retrieved from http://www.statisticssolutions.com/logistic-regression-2-tailed/

Stevens, J. P. (2009). *Applied multivariate statistics for the social sciences*. 5th ed. Taylor & Francis Group.

Stokes, S. C. & Pan, C. (2010). *Health and Health Care of Chinese American Older Adults*. Retrieved from http://geriatrics.stanford.edu/ethnomed/chinese/downloads/chinese_american.pdf

Stroebe, M. S., & Stroebe, W. (1983). Who suffers more? Sex differences in health risks

    of the widowed. *Psychological Bulletin, 93*(2), 279-301. doi:10.1037/0033-

    2909.93.2.279

Suinn, R. M., Rickard-Figueroa, K., Lew, S., & Vigil, P. (1987). The Suinn-Lew

    Asianself-identity acculturation scale: An initial report. *Educational and*

    Psychological Measurement, 47, 401-407. doi: 10.1177/0013164487472012

Sum, S., Mathews, M., Pourghasem, M., & Hughes, I. (2008). Internet technology and

    social capital: How the Internet affects seniors' social capital and

    wellbeing. *Journal of Computer-Mediated Communication*, *14*(1), 202-220. doi:

    10.1111/j.1083-6101.2008.01437.x

Symons, D. (1979). *The evolution of human sexuality*. New York: Oxford

    UniversityPress.

Symons, D. (1987). If we're all Darwinians, what's the fuss about?. In C. Crawford, D.

    Krebs, & Mo. Smith (Eds.), *Sociobiology and psychology* (pp. 121-145).

    Hillsdale, NJ: Erlbaum.

Symons, D. (1992). On the use and misuse of Darwinism in the study of human behavior.

    In J. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind* (pp. 137-162).

    New York: Oxford.

Tan, J. (2009). *Health service utilization among Chinese, Filipino, and Asian Indian*

    older adults in the United States (Doctoral dissertation, Washington University in

St. Louis). Retrieved from

http://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1341&context=etd

Toro-Morn, M., & Sprecher, S. (2003). A cross-cultural comparison of mate preferences

among university students; The United States vs. The People's Republic of China

(PRC). *Journal of Comparative Family Studies*, 151-170.

Trivers, R. (1972). Parental investment and sexual selection. In B. Campbell (Ed.),

Sexual selection and the descent of man, 1871-1971 (pp. 136-179). Chicago:

Aldine.

Turner, R. J., & Marino, F. (1994). Social support and social structure: A descriptive

epidemiology. *Journal of Health and Social Behavior, 35*, 193-212. Retrieved

from

http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1063&context=sociolo

gyfacp ub

UCLA Institute for Digital Research and Education. (2016). *Multivariate regression in*

SAS. Retrieved from

http://www.ats.ucla.edu/stat/sas/library/multivariate_regrssn.htm

Umberson, D. (1992). Gender, marital status and the social control of health behaviour.

Social Science & Medicine, 34, 907–917. doi: 10.1016/0277-9536(92)90259-S

U.S. Census Bureau. (2001). *Profiles of general demographic characteristics: 2000*

Census of population and housing. Retrieved from

http://www.census.gov/prod/cen2000/doc/ProfilesTD.pdf

U.S. Census Bureau. (2014). *An aging nation: The older population in the United States population estimates and projections, current population reports*. Retrieved from https://www.census.gov/prod/2014pubs/p25-1140.pdf

U.S. Census Bureau. (2010). *The Asian population: 2010*. Retrieved from http://www.census.gov/prod/cen2010/briefs/c2010br-11.pdf

U.S. Department of Health and Human Services, Administration for Community Living (2013). *A statistical profile of older Asians.* Retrieved from

http://www.acl.gov/NewsRoom/Publications/docs/A_Statistical_Profile_of_Older _Asian s.pdf

Valentine, S., & Mosley, G. (2000). Acculturation and sex-role attitudes among Mexican Americans: A longitudinal analysis. *Hispanic Journal of Behavioral Sciences*, *22*(1), 104-113. doi:10.1177/0739986300221006

VandeWeerd, C., Corvin, J., Coulter, M., Perkins, E., Telford, R., Yalcin, A.,… Yegidis, B. (2014). A preliminary investigation of risks for adverse outcomes of relationship seeking on social network sites (SNS): A descriptive study of women over 50 seeking relationships on MySpace in Hillsborough County, Florida. *Journal of Women & Aging*, *26*, 127-145. doi:10.1080/08952841.2014.884897

Van Grootheest, D. S., Beekman, A. T. F., Broese van Groenou, M. I., & Deeg, D. J. H. (1999). Sex differences in depression after widowhood. Do men suffer more?

Social Psychiatry Psychiatric Epidemiology, 34, 391–398.
doi:10.1007/s001270050160

Vespa, J. (2012). Union formation in later life: Economic determinants of cohabitation and remarriage among older adults. *Demography, 49*, 1103-1125. doi:10.1007/s13524-012-0102-3

Waite, L. J., Laumann, E. O., Das, A., & Schumm, L. P. (2009). Sexuality: Measures of partnerships, practices, attitudes, and problems in the national social life, health, and aging study. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 64B*(suppl_1), i56-i66. doi:10.1093/geronb/gbp038

Wang, T. F., Lu, C. H., Chen, I. J., & Yu, S. (2008). Sexual knowledge, attitudes and activity of older people in Taipei, Taiwan. *Journal of clinical nursing, 17*(4), 443-450. doi: 10.1111/j.1365-2702.2007.02003.x

Watson, R. S., & Ebrey, P. B. (Eds.). (1991). *Marriage and inequality in Chinese society* (Vol.12). University of California Press.

Wendland, S. (2011). *Social Tensions and acculturation: Portrayals of German integration discourse* (Master's thesis). Available from ProQuest Dissertations and Theses database. (UMI No.1491844)

White, I. R., Royston, P., & Wood, A. M. (2011). Multiple imputation using chained equations: issues and guidance for practice. *Statistics in medicine, 30*(4), 377-399.

White, J. & Weatherall, A. (2000). A grounded theory analysis of older adults and

    information technology. *Educational Gerontology, 26*(4), 371-386.

    doi:10.1080/036012700407857

Wion, R. K., & Loeb, S. J. (2015). Older adults engaging in online dating: What

    gerontological nurses should know. *Journal of Gerontological Nursing, 41*(10),

    25. doi:10.3928/00989134-20150826-67

Wisocki, P. A., & Skowron, J. (2000). Effects of gender and culture on adjustment to

    widowhood. In R. M. Eisler (Ed.), *Handbook of gender, culture, and health* (pp.

    429-447). Mahwah, NJ: Lawrence Erlbaum.

World Health Organization. (2016). *Definition of an older or elderly person: Proposed*

    working definition of an older person in Africa for the MDS project. Retrieved

    from http://www.who.int/healthinfo/survey/ageingdefnolder/en/

Xia, Y. R., & Zhou, Z. G. (2003). The transition of courtship, mate selection, and

    marriage in China. In R. R. Hamon & B. B. Ingoldsby (Eds.), *Mate selection*

    across cultures, (pp. 231-246). Sage Publications.

Xie, B. (2008). Multimodal computer-mediated communication and social support

    among older Chinese Internet users. *Journal of Computer-Mediated*

    Communication, 13(3), 728-750. doi:10.1111/j.1083-6101.2008.00417.x

Xu, Q., Li, J., & Yu, X. (2014). Continuity and change in Chinese marriage and the family:evidence from the CFPS. *Chinese Sociological Review*,*47*(1), 30-56. doi:10.2753/CSA2162-0555470102

Yan, E., & Lee, C. F. (2013). Chinese version of aging sexual knowledge and attitudes scale. *Asian Journal of Gerontology & Geriatrics*, *8*(2), 78-84. Retrieved from http://ajgg.org/AJGG/V8N2/2012-137-OA.pdf

Yancey, G. & Emerson, M. O. (2016). Does height matter? An examination of height preferences in romantic coupling. *Journal of Family Issues, 37*(1) 53-73. doi: 10.1177/0192513X13519256.

Yao, E. L. (1979). The assimilation of contemporary Chinese immigrants. *Journal of Psychology:Interdisciplinary and Applied, 101*(1), 107-113. doi:10.1080/00223980.1979.9915060

Yao, E. S. L. (1983). *Chinese Women: Past & Present.* Mesquite, TX: Ide House, Inc.

Zagefka, H., & Brown, R. (2002). The relationship between acculturation strategies, relative fit and intergoup relations: Immigrant-majority relations in Germany. *European Journal of Social Psychology, 32*, 171-188. doi:10.1002/esjp.73

Zhang, H., You, J., Teng, F., & Chan, D. K. (2014). Differential roles of physical attractiveness and earning capability in explaining sense of power among dating individuals in China: A gender comparison. *Sex roles*, *70*(7-8), 343-355.

Zhang, H. P. (2015). Wives' Relative Income and Marital Quality in Urban China: Gender Role Attitudes as a Moderator 1. *Journal of Comparative Family Studies*, *46*(2), 203.

Zisook, S., & Shuchter, S. R. (1991). Early psychological reaction to the stress of widowhood. *Psychiatry, 54*, 320-332.

Zizook, S., & Kendler, K. S. (2007). Is bereavement-related depression different than non-bereavement-related depression? *Psychological Medicine, 37*, 779-794. doi:10.1017/S00332917