# The Role of Social Networking Websites: Do They Connect People Through Marriage or Are They Responsible for Divorce?

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Many individuals are now using social media to meet and connect with others. Some of the more popular dating sites and apps such as Match.com and eHarmony, report that many successful marriages have come about through people using their services. Critics argue, however, that these social networking sites make it easier for those in long-term relationships to find another partner for an affair, which ultimately destroys the first relationship. The purpose of this paper was to determine which specific social networking sites, dating sites and apps, led to more marriages and which ones led to more divorces. It was found that in those states where Match.com was more heavily used in 2013, there were fewer marriages in 2014. Furthermore, in those states where social networking sites such as Hinge, Bumble, Plenty of Fish and Facebook were more heavily used in 2013 there were more divorces in 2014.

Keywords: social media, social networking sites, dating sites, apps, marriages, divorces

#### 1. Introduction

Social networking sites are now very popular all over the world. After the invention of the modern computer, technology and social communication systems evolved rapidly and different chatting websites became available on the internet. Now there are types of social networking sites that have gone far beyond just chatting and include various features like photo and video sharing, professional networking, online dating and different online blogs. "Six Degrees" was the first social website which introduced the modern trend of social networking by adding the features of a personal profile and friend request (Hendricks, 2013). According to the "Statistics Portal" an online statistical report, there were 1.87 billion active users of social networking sites in 2014 and it is expected to reach about 2.55 billion users by the end of 2018 (p.1).

A recent concern about social websites is that people may be spending too much time on these sites, creating problems in their family life and making it difficult to maintain good relationships with their spouses. Research conducted by Valenzuela et al. (2014) showed that "Facebook had a positive and significant correlation between spousal trouble and the divorce rate in the United States" (Laskowski, 2014, p.1). The research indicated a 2.18% increase in the divorce rate due to a 20% increase in Facebook users (Laskowski, 2014, p.1). In 2010, an online newspaper, "Daily mail.com" published a report stating that 80 percent of divorce lawyers had claimed that social media was responsible for most of the cheating among marital couples and 1 out of 5 divorce cases was caused by Facebook (Gardner, 2010). The American Community Survey report 2015 (Remarriage in the United States) has shown that since 1996 the percent of people marrying only once, is gradually decreasing. Also, according to the US Census Bureau 2001 & 2009 Report, the divorce rate for men and women has increased from 8.8% to 9.1% and 10.8% to 11.3%, respectively.

Although there are many studies that do not speak highly of social networking or dating sites, it cannot be concluded that social networking sites are harmful to society. While it is true that many relationship have been destroyed by social media, there are also many cases in which social media has helped people to find their perfect mate. Cacioppo, et al (2013, p.1) stated that social networking sites were responsible for one third of the marriages between 2005-2012 in the United States and most of those couples were maintaining a healthy and happier marital relationship than those who met offline. Most of the couples who met online were 30 to 39 years of age with higher levels of education and income.

The purpose of this paper is to examine the effects of specific social networking and dating sites on marriages and divorces in the U.S. Is social media affecting positively or negatively the overall quality of life in terms of maintaining new and existing relationships?

In the next section a review of the literature will be presented. Some studies have shown how social networking sites help to connect people to a new relationship and some have shown how they create dissatisfaction among couples.

## 2. Literature Review

A growing body of literature is now focusing on social media and its influence on society and new journals have recently appeared that deal exclusively with social networking and behavior. Most of the articles deal with social media and relationships in a general way such as comparing the success of couples who met offline versus those who met online. Some studies have looked at the characteristics of those who use online dating services. However, other than considering Facebook, few studies if any, have looked at how specific social networking sites such as Match.com, Hinge, Bumble, and Plenty of Fish, affect marriages and divorces.

AnKee & Yazdanifard (2015) found eight harmful effects of online dating. One of the most harmful effects was a threat to marital relationships. The authors conducted their research using surveys among married couples. It was found that 53% of the married couples that went to family therapists for consultation about their family problems were involved in cybersex. Ankee & Yazdanifard (2015) concluded that online dating pushed unsatisfied married couples to look for new love instead of solving their problems. These couples engaged in casual sex with random partners which ultimately led them to suffer from STDs.

Hitsch et al. (2010) explained the matching patterns of online daters by observing their searching preferences which included age, education, income, personality, life style, and physical traits. Using a similar pattern Hitsch et al. (2010), also tried to predict marriage outcomes among people who met online. Their study found that people mostly preferred marriage partners that had a similar educational background.

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Shaadi.com, an online dating website, has become very popular for marriage seekers among the Indian Sikh community (Maclaran et al., 2008). The Sikh community is very strict on following their traditional culture and they mostly believe in arranged marriages where young men and women have little to say about whom they will marry. The study found that these dating sites do have a great impact on reshaping traditional cultures. For example, shaadi.com is working very effectively as a middle agent among Sikh people in sorting their soul mates and changing the traditional marriage system by changing their existing cultures.

Many studies have also attempted to determine the type of individual who searches for a partner online. Rosenfeld & Thomas (2012), found that gays, lesbians and middle-aged heterosexuals in general, were not as heavily engaged in a market search for a suitable partner and as a result, they mostly preferred an online searching process.

Traditionally, parents used to connect young people according to the same race, religion and status. Studies now show that the internet is reducing these family influences over young people in searching for their partners. It is also leading to more interracial and interreligious couples (Rosenfeld & Thomas, 2012). The authors found that the strength of the relationships among the couples who originally met online is no different than for relationships formed in traditional ways.

Cacioppo, et all, (2013) found that marriages and divorces varied among couples who met online compared to those who met offline. They collected 19,131 surveys across the nation from those who got married only once between 2005 and 2012. The authors used a  $\chi^2$  test to estimate the differences between couples who met online and offline based on their age, sex, years of being married, ethnicity, income, education, religion and employment. Their results showed that married couples who met online were more satisfied and had a lower probability of divorce than the married couple that met offline.

Using the same survey data as Cacioppo et al., (2013), Hall (2014), found that social networking sites are getting more popular among young adults rather than older adults when it comes to searching for mates. He also found African Americans were more likely to prefer social networking sites.

Although social networking sites are very effective for searching for potential partners which can lead to a long-term, healthy, marital relationship, many scholars also suggest that these sites can have negative effects on a couple's current relationship. Drouin et al. (2015), surveyed 371 undergraduate students from a Midwestern U.S. University who were currently in a committed relationship. The purpose was to search for any negative impacts on their relationships due to their Facebook friends list and potential alternative partners available in their friends list. Using the Bonferroni post hoc comparison between potential sexual or committed partners in their Facebook friends list and satisfaction level with their current partner, it was found that men were more interested in having a sexual partner from Facebook than women. Drouin et al. (2015) also concluded that Facebook increased the possibility of physical and emotional cheating, dissatisfaction, lower commitments and conflicts between couples.

Perceptions about dating sites are changing and these sites are becoming a very useful medium for communication between prospective males and females. "The Statistics Portal" (2013, p.1) published a report which showed that 87% of males and 83% of females believed these online sites are now socially acceptable for finding a soul mate. The report also showed that those with incomes between \$50,000 and \$74,999 were the largest users. An online website "Dating Sites Reviews" provides statistics based on the reviews of different online dating sites and it showed that in the U.S., 16% of couples met using online dating sites, 12% of couples met through friends, 7% of couples met through social networking, and 7% met through social gatherings (p. 1).

In the following section, the data and methodology used in this study will be presented to determine the relationship between social networking sites and marriages and divorces. The findings will then be discussed.

### 3. Data and Methodology

The Pew Research Center conducted an Internet Project Tracking Survey over landlines and cell phones in 2013 which showed that Facebook was the dominant social networking site with approximately 71% of active online adults (p. 1). Similarly, Twitter and Instagram have 18% and 17% of the active online adult users, respectively. In addition to these large social networking sites, people use other online dating sites searching for their partners or spouses. Popular dating sites include Match.com, Plenty of fish, Zoosk, Okcupid, eHarmony and OurTime. Among these sites Match.com, Plenty of Fish and Zoosk have 35 million, 23 million and 11.4 million visitors, respectively (The Statistics Portal, p. 1).

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In this study, the following social networking sites and dating sites were included to examine the effects of social media on marriages and divorces: 1) Match.com, 2) Ourtime, 3) Hinge, 4) Hitch, 5) How About We, 6) OkCupid, 7) Grindr, 8) Down Dating, 9) Bumble, 10) Score, 11) At First Sight, 12) Plenty of Fish, 13) Eharmony, 14) Zoosk, 15) Tinder, 16) Adult friend finder, 17) Ashley Madison, 18) Instagram and 19) Facebook. While there is disagreement about which social networking sites are most popular, the ones that are most often reported in places such as Dating Site Reviews (2013), include OkCupid, Plenty of Fish, Match.com, Tinder, and Zoosk. Thus they were included in the list of 19 networking sites above. The remaining sites were chosen to include a variety of sites that catered to different groups such as those over 50, those who were already married or in a serious relationship but looking for an affair, those interested in relationships with other men, or those who wanted to stay connected to family and past friends.

Except for some of the most popular social websites like Facebook or Twitter, the exact number of active users of the other dating sites is unknown or unreported. However, "Google Trends" which reports the "search volume index" for different states in a particular year, provides information about the number of internet searches for different items such as Match.com, eharmony, or other social networking sites. In this study, the "search volume indexes" for the year 2013 for all 50 states and the District of Columbia, were collected for each of the 19 social websites listed above. The Search Volume Index ranges from 0 to 100 for a particular search. If the people of a state search more for a particular social website compared to the other 50 states using Google, Google Trends will record an index of 100 for that state. Other states will have lower index numbers compared to that state. For example, Vermont had the highest number of searches for Match.com in 2013 relative to total internet searches in the state. Thus, the search volume index for Vermont was 100. In New York, the percent of the searches for Match.com was 69% of the number of searches of Vermont relative to total internet searches and thus New York was given a search volume index of 69.

Many individuals may perform a Google search for a web site, but that does not necessarily mean that these individuals are actual users of the web site. However, for purposes of this study, a higher search volume index for a state for a given social networking site was used to represent a greater percent of users of the web site in the state.

Marriages and divorces for 2014 were collected from the web site of the U.S. Census Bureau. This study will determine if and how usage of social networking sites in 2013, affected marriage and divorce rates in 2014.

Income and education are two important variables that influence the number of marriages in a state. According to Nobel laureate Gary S. Becker, marriage is an independent decision taken by the male and female to maximize their utility. He mentioned that income and similar qualifications are important factors in searching for a mate and maximizing utility (Becker, 1973). Recent research also suggests that people search for their mate based on age, personality, life style, and physical traits (Hitsch et al., 2010; Cacioppo et al., 2013). Since age, income and education are easily measured, they will be used as independent variables in determining the number of marriages in a state.

Race is also an important factor affecting marriages and divorces. Marriage decisions may vary according to the sorting preferences of different races. Hall (2014) found that African Americans were more likely to use social networking sites for searching their soul mates than other races.

Based on the above discussion, variation among marriages and divorces in 2014 between states will be estimated using equation 1 and the ordinary least squares methods. In equation 1, the number of marriages in a state is affected by the state's population, race composition in the state, age of the population, the state's level of per capita income, education and the degree to which different social networking sites are used. Equation 2 estimates the effects of the same independent variables on divorces in the different U.S. states.

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(1)  Marriage_i = \beta_0 + \beta_1 TPop13_i + \beta_2 AfrAm_i + \beta_3 Hispan_i + \beta_4 PCapInc_i + \beta_5 Age65_i + \beta_6 HSchl_i + \beta_7 SocMed_i + \epsilon_i
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(2)  $Divorce_{i} = \beta_{0} + \beta_{1}TPop13_{i} + \beta_{2}AfrAm_{i} + \beta_{3}Hispan_{i} + \beta_{4}PCapInc_{i} + \beta_{5}Age65_{i} + \beta_{6}HSchl_{i} + \beta_{7}SocMed_{i} + \epsilon_{i}$ 

where,

 $Marriage_i = Number of Marriages in 2014 in State i$   $Divorce_i = Number of Divorces in 2014 in State i$  $TotPop13_i = Total population of 2013 in state i$ 

AfrAm<sub>i</sub> = African Americans in state i as a percent of the state's population in 2013

Hispan<sub>i</sub> = Hispanics in state i as a percent of the state's population in 2013

PCapInc<sub>i</sub> = Per capita money income of 2013 in state i

Age65<sub>i</sub> = Individuals age 65 and older as a percent of the state's population in 2013

HSchl<sub>i</sub> = Percent of the population who are high school or college graduates and who are 25 years of age or

older in 2013

SocMed<sub>i</sub> = Google Trends search volume index of 2013 for a particular form of social media in state i

In model (1) a positive relationship between number of marriages and total population in a state is expected. Number of Marriages can also vary according to race. According to "National Healthy Marriage Center" Hispanic marriages have increased from 891,000 in 1980 to 2,076,000 in 2004. Furthermore, a website named divorce360.com has published a report stating that African Americans have a smaller chance of getting married and are more likely to get divorced. Given these results, it is anticipated that there will be a positive relationship between the Hispanic population and marriages and a negative relationship between the African American population and marriages in equation (1). The literature also suggests that higher income individuals are more likely to get married (Becker, 1973). Therefore, a positive relationship is expected between marriages and income.

Marriage decisions also depend on the age distribution of the region. If a state has a greater percent of its population over 65, it would be expected that there would be fewer new marriages in the following year.

The literature also suggests that people prefer an educated person when sorting for their spouse. Thus a positive relationship is expected between the percent of high school graduates in a state and the number of marriages. Finally, many have suggested that social networking sites like Match.com, Facebook or eHarmony, are connecting people which ultimately leads to marriage (Rosenfeld and Thomas, 2012; Cacioppo et al., 2013).

In model (2) the dependent variable is number of divorces in 2014. Similar to marriages, the possibility of divorce is also higher in a region with a higher population. "National Healthy Marriage Center" reported that the Hispanic population has a lower divorce rate compared to their marriage rate. They also stated that Hispanics maintain healthier marital relationships if they marry within the same race rather than marrying a Non-Hispanic person. On the other hand, divorce360.com stated that the divorce rate among African Americans was high due to poor economic conditions. Thus it is anticipated in model (2) that there would be a positive relationship between the size of the African American population in a state and number of divorces, and a negative relationship between the size of the Hispanic population and number of divorces.

Those marriages involving individuals over 65 years of age generally do not end with divorce. Thus it is expected that if a state has a larger percent of its population over 65, there would be fewer divorces. It has also been argued that low-income couples have a higher divorce rate since they hold largely traditional family values and have less experience in dealing with basic problems in a relationship (Trail and Karney, 2012). Thus in model (2), it is expected that the income variable would be negatively related to divorces. Similarly, it is expected that education and divorces would be negatively related, since education is positively correlated with income. It may also be that individuals with higher levels of education spend more time searching for a mate and thus are more likely to find a lifetime partner with whom they are compatible. This would reinforce the negative relationship between education and divorce.

The literature also suggests that the number of divorces increases when more people are using social networking and dating sites. In this study, the effects of nineteen social networking sites on marriages and divorces will be examined.

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Finally, it should be noted that the data used in this study are secondary data and therefore their validity and reliability are not ensured. The U.S. census data as well as the Google trends data may suffer from sampling errors and non-sampling errors. The sampling errors occur when samples do not represent the population and non-sampling errors occur when information is misrepresented and data are not correctly coded.

## 4. Findings

Table 1 includes the description, means and standard deviations of the variables used in the above two regression equations in the methodological section. Table 2 contains the estimates of the coefficients from the marriage and divorce equations where all variables were in log form. One reason for estimating the equations in log form is to reduce and/or eliminate the presence of heteroscedasticity which could lead to incorrect estimates of the standard errors of the estimated coefficients. Placing all variables in log form also helps to scale the variables so that no one variable has a dominant effect over the others.

Each of the models in Table 2 uses the same independent variables with the exception of the type of social media being considered. Only those models in which social media had a statistically significant effect on marriages or divorces were reported.

The results show that population of a state in 2013 had a significant, positive effect on the number of marriages and divorces in 2014, as anticipated. In particular, for every 1% increase in a state's population, there is close to a 0.9% increase in marriages and divorces in the following year.

In model (1) of Table 2, states with a larger percent of individuals who were 65 or older in 2013 had fewer marriages in 2014, which was also expected. On the other hand, states with a younger population are more likely to see new marriages.

All of the divorce models in Table 2, models (2)-(5), show a negative relationship between income per capita in 2013 and divorces in 2014. For every 1% increase in per-capita

**Table 1-Variables and Descriptive Statistics** 

Variables	Description	Mean	Standard Dev 94,138.00		
Marriage14	Number of Marriages in 2014	85,629.76			
Divorce14	Number of Divorces in 2014	2014 45,347.37			
TotPop13	Total population of 2013	6,205,833.94	7,051,230.65		
Age65	% of people Age 65 and older in 2013	14.38	1.75		
AfrAm%	% of African Americans in 2013	11.60	10.92		
Hispan%	% of Hispanics in 2013	11.19	10.04		
Hschl	% of high school or college grad 25 or older in 2013	85.98	11.34		
PCapInc	Per capita money income in 2013	28,053.80	4,659.38		
match.com	Search volume index by state: 2013	71.82	12.44		
ourtime	Search volume index by state: 2013	36.06	36.63		
hinge	Search volume index by state: 2013	62.35	29.05		
hitch	Search volume index by state: 2013	51.25	15.93		
how about we	Search volume index by state: 2013	38.16	29.68		
okcupid	Search volume index by state: 2013	53.39	20.44		
grindr	Search volume index by state: 2013	41.08	32.09		
down	Search volume index by state: 2013	83.84	5.97		
bumble	Search volume index by state: 2013	56.06	24.78		
score	Search volume index by state: 2013	78.14	9.91		
at first sight	Search volume index by state: 2013	10.31	18.76		
plenty of fish	Search volume index by state: 2013	78.02	11.79		
eharmony	Search volume index by state: 2013	63.90	18.64		
adultfriendfindr	Search volume index by state: 2013	42.45	26.35		
ashleymadison	Search volume index by state: 2013	21.73	36.02		
instagram	Search volume index by state: 2013	61.67	17.23		
facebook	Search volume index by state: 2013	67.02	13.18		
zoosk	Search volume index by state: 2013	51.57	16.56		
tinder	Search volume index by state: 2013	39.41	26.93		

**Table 2. Regression Results** 

Dependent Variable		Marriage14 (1)	Divorce (2)	:14	Divorce (3)	:14	Divorce (4)	14	Divorce14 (5)
Independent <u>Variables</u>									
Intercept	1.104	3.176		3.222		0.396		0.441	
TotPop13		(1.07)† 0.909*** (51.42)	(1.59) 0.932** (27.24)	<b>:</b> *	(1.68) 0.919** (27.47)	<b>*</b>	(0.17) 0.947** (29.40)	*	(0.19) 0.887*** (18.84)
AfrAm%		-0.0056 0.025	, ,	0.021	, , ,	0.033	` ,	0.033	, ,
Hispan%		(0.37) 0.00089 0.007 (0.05)	(0.91)	0.009	(0.78)	0.047	(1.24)	0.026	(1.24) (0.70)
Age65		-0.616***	-0.29		-0.333		-0.369*	-0.335	(0.70)
PCapInc	-0.117	(-5.47) -0.717*		-0.691*		-0.623*	(-1.75)	-0.564*	(-1.62) **
Hschl		(-1.14) -0.100**0.039	(-4.19)	0.023	(-4.19)	0.097	(-3.39)	0.092	(-2.96)
Match.com		(-2.32) - <b>0.317</b> *** (-2.85)	(0.45)		(0.28)		(1.16)		(1.11)
Hinge		(-2.63)	<b>0.035</b> * (1.72)						
Bumble			(1.72)	0.056**					
Plenty of Fish					(2.58)		<b>0.361*</b> (1.87)		
Facebook							(1.07)		<b>0.430*</b> (1.85)
R-squared Adj R-squared No. of observation	ons	0.989 0.987 51	0.976 0.972 51		0.978 0.974 51		0.976 0.973 51		0.976 0.973 51

<sup>†</sup>t-statistics in parentheses

income, divorces tend to decrease by around 0.7%. Higher incomes have been known to have different effects on household behavior. If individuals in a marriage are spending a great deal of their time in non-household activities such as working at a job, they may not have the time to invest in their marriage and relationship. This would lead to a positive relationship between incomes and divorces. However, studies have also suggested that money or lack of it is one major reason why couples argue with each other, leading to dissatisfaction with the relationship and separation. In this case, higher incomes should lead to fewer divorces. The results of this study reinforce the latter line of reasoning.

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<sup>\*\*\*</sup>indicates significance at the 1% level

<sup>\*\*</sup>indicates significance at the 5% level

<sup>\*</sup>indicates significance at the 10% level

In model (1) of Table 2, education was found to be inversely related to marriages. As the percent of high school graduates in a state increased in 2013, the number of marriages in 2014 decreased. This result could be due to high school graduates delaying marriage to either start a job or go on to college.

The only social networking site that had a significant effect on marriages was match.com as shown in model 1 of Table 1. The results indicate that for every 10% increase in a state's search volume index for this web site, marriages in the following year fell by 3.17%. Match.com began operations in 1995 and is viewed by many to be the top dating site. Members fill out forms about their likes and dislikes and post photos to the site that potential partners can view. Match.com claims that many of their members end up being happily married. The results in Table 1 indicate, however, that marriages decrease in the following year in states in which there are many users of the site in a given year. This supports the idea that dating and social networking sites may be providing individuals with greater opportunities to meet others, lessening the need and urgency to find a mate quickly. Thus these dating sites may result in individuals delaying and postponing their marriage decisions.

Models (2)-(5) show that in states with a higher search volume index in 2013 for Hinge, Bumble, Plenty of Fish, and Facebook, there were more divorces in 2014. Hinge is a mobile dating app that seeks to match partners with similar interests. Bumble is a dating app that is similar to Tinder, and Plenty of Fish is known for its free features. Facebook is not a dating site, but many use it to keep track of friends and potential partners. The results of this study show that these websites are enabling people to meet and connect with others more easily, increasing the odds of divorce. Laskowski, (2014) & Gardner, (2010) have suggested that Facebook in particular, is one of the reasons for spousal trouble and 1 out of 5 divorces is caused by Facebook.

## 5. Discussion and Conclusions

Social networking sites are gradually getting more popular between different age groups. The purpose of using these sites is different for each group. Teens or young adults mostly prefer websites like Tinder or Plenty of Fish that have the option for setting up a date or hookup. Adults may want to search for a partner for a long term relationship or for marriage. Therefore, their social media preference will be different as well. There are also those who are married and unhappy with their relationship and they may search for another partner more suitable for them. In these cases, both marriages and divorces can be affected by social media. The purpose of this study was to examine and estimate the effects of specific forms of social media on marriages and divorces.

This study found that social media does have a significant influence over marriages and divorces. Users of match.com, one of the more popular dating sites, appear to be delaying marriage due to the increased opportunity they have of meeting someone new. Why would someone settle down and get married with so many other options available to them? It was also found that dating sites such as Hinge, Bumble, and Plenty of Fish and even a social networking site like Facebook, have led to more divorces. Here, social media has increased the opportunities to have an affair and some people are taking advantage of it.

The financial and mental costs of divorce are high to all involved. The couple may have to divide the family assets. One spouse may have to start a new career. The children however, may face the highest cost of all and may struggle with feelings of guilt over the divorce. The results of this study showed that heavy use of specific social networking sites led to more divorces. Furthermore, states where these sites are heavily used can be easily identified by the state's Google search volume index number. Thus marriage and family counselors and health care professionals may be able to concentrate their efforts and resources to try to prevent divorces or reduce its damages once it occurs.

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