



Racial and Gender Differences in Extramarital Sex in the United States in the Last Three Decades

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Abstract

Background: Marital infidelity is a serious problem because it can lead to separation and even divorce. Yet, little is known about racial and gender differences in levels of extramarital sex in the United States in the last three decades (1991 to 2018).

Aim: This study represents the first analysis of the racial and gender differences in levels and determinants of extramarital sex in the United States.

Methodology: We use data from all the 15 waves of the General Social Survey in which respondents were asked if they have ever had sex with someone other than their husband or wife when they were married. Descriptive and multivariate (logistic regression) analyses were conducted to determine the levels and determinants of racial and gender differences in extramarital sex in the last three decades.

Results: There are small changes in percent of extramarital sex between 1991 (14.63 percent) and 2018 (16.48 percent). However, despite some fluctuations observed across the 15 General Social Survey waves, the prevalence of extramarital sex has remained significantly higher for blacks compared to whites, and higher also for men than women.

Conclusion: The results show the importance of race and gender in explaining extramarital sexual behavior in the United States. We discuss these findings in relation to previous studies and suggest directions for future research.



Article History

Received: 13 March 2020

Accepted: 23 April 2020

Keywords

Extramarital Sex;
Gender;
Race;
Sexual Behavior;
United States.

Introduction

Americans overwhelmingly disapprove of extramarital relations (Campbell & Wright, 2010); yet, empirical

studies and media reports indicate that extramarital sexual (EMS) relations are more common these days. Conservatively, studies report that each

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Doi: <http://dx.doi.org/10.12944/CRJSSH.3.1.03>

year, approximately 4% of men and 2% of women engage in extramarital relations (Treas & Giesen, 2000; Wiederman, 1997). For instance, Michael W. Wiederman (1997) used data from the 1994 wave of the General Social Survey (GSS) to examine the lifetime prevalence of EMS, as well as the incidence of EMS during the past year. The study found that 12% of women and 23% of men reported having committed infidelity at some point in their marriage; and the incidence of EMS in the past year was 1.7% for women and 4.1% for men. Similar to Wiederman's (1997) study findings, Judith Treas and Deirdre Giesen (2000) found that men were less likely to be sexually exclusive than women; that is, "being male increased the odds of having engaged in EMS by 79%" (pp. 54).

Further, there have been numerous reports in media outlets about cases of infidelities committed by celebrities, politicians, and religious authorities. While most of the allegations of extramarital affairs have been of men, there have been cases of married women having EMS relations. Given its private nature and the social and often political, ethical, and professional consequences, most EMS relations are hidden or at least unknown to the public. Sometimes, the alleged cheater ends the affair without the knowledge of their spouse. Although, if found out or confronted, they may confess to their spouse or continue to deny the affair. However, some studies argue that disclosing sexual affairs is likely to produce panic and pain rather than permanent peace (Block, 2000: 74-75). As such, there are limited data on the level of extramarital sex in the United States (US).

One of the earliest information on national estimates of EMS in the US released 70 years ago suggested that by age 40, about half of all married men (Kinsey, Pomeroy, & Martin, 1948: 585, 587) and one-fourth of married women (Kinsey, Pomeroy, Martin, & Gebhard, 1953: 416) will have had sexual intercourse with someone else than their spouse. However, such estimates have not yet been corroborated in most studies.

Studies that have examined EMS behavior in the US show varied results. In the 1990s, the AIDS pandemic pushed scholars to revisit the field of sexuality research to design appropriate

prevention programs. Because EMS was identified as one of the key vectors of HIV infection (Reinisch, Sanders, & Ziemba-Davis, 1988), questions on extramarital relations were incorporated into national representative surveys in the 1990s. For example, the National Health and Social Life Survey (NHSLs) (Laumann, Gagnon, Michael, & Michaels, 1994) and the GSS added questions on extramarital relations in early 1990s. Estimates from the first waves of these surveys showed women trailing men in the prevalence of extramarital affairs (Wiederman, 1997). Further, Edward O. Laumann *et al.*, (1994) findings from NHSLs data showed the prevalence of EMS to be 15% for women and 24% for men. We can conclude that there were large gender differences in EMS behavior in the US in early 1990s. However, several questions remain unanswered. For example, what are the levels and trends of extramarital relations across demographic groups in the last three decades? Do rates differ for whites and blacks and for men and women?

This study represents the first research that examines changes in the prevalence and determinants of EMS by race and gender in the US in the last three decades. The analysis is based on the 15 waves of national representative samples of ever married individuals aged 18+ years interviewed in the GSS from 1991 to 2018.

Theoretical Perspectives

When it comes to extramarital affairs, the main question is why do people cheat on their spouses? Apart from a few cases, where spouses agree not to be sexually exclusive such as consensual non-monogamy (CNM) relationships (Edgar, 2017; Rubel & Bogaert, 2015), and relationships that include those couples with memberships in swing clubs where couples accept to exchange spouses for sex (Bartel, 1971), most married people in the US expect their spouses to be faithful (DeMaris, 2013). For example, in their analysis of the 1992 NHSLs data, Treas and Giesen (2000) found that 99% of respondents expected their spouses to have exclusive sexual relationships. The norm of sexual exclusivity implies that couples remain committed to each other. Thus, EMS is generally considered undesirable by the person betrayed and the cheater seeks to conceal the "undesirable" behavior. This is, perhaps, due to the Judeo-Christian

tradition that considers sex outside of marriage a sin for both men and women (Kyle, 2012). Based on this tradition, in the US, social construction of marriage is an expectation of sexual exclusiveness; and the assumption around most relationships is that of strict monogamy. Contrary to this, EMS is considered a threat to the stability of a couple's marriage and counteracts prevailing monogamous societies' norms.

Why then do some people cheat? We explore the question along the evolutionary theories of sexual and reproductive behavior initially developed primarily in the studies of non-human species. After reviewing Charles Darwin's theory of biological evolution thesis which defines sexual selection as competition within one sex for members of the opposite sex (Darwin, 1871), and subsequent research on sexual strategies of different species such as some flies like *Drosophila* (Bateman, 1948) and many birds (Verner & Willson, 1969), Robert L. Trivers (1972) constructed the parental investment theory. According to that theory, males and females' sexual selection and mating strategies are strongly linked to their relative contributions to their offspring's survival. Empirical research has explained this theory in great details. For example, in most mammals where females bear most of the parental investment burdens, males tend to be more sexually permissive than females (Clutton-Brock, 1991).

Applied to humans, we argue that in most societies, women's parental investment in their offspring's survival is higher than men's. This is because women's parental investment begins with 9 months of gestation on average, followed by months and sometimes years of breastfeeding and other infant care. Since in most species, women bear most of the parental investment burdens in terms of gestation and child-rearing, they are expected to be more sexually restrained than men. As such, we expect men to have higher rates of EMS than women, net of the effects of their socio-demographic characteristics. Other theories of social exchange can be used to explain the importance of habituation in sexual relations. According to George Homans, "The more often [...] a person has received a particular reward, the less valuable any further unit

of that reward becomes for him" (Homans, 1974:29). In terms of sexual relations, previous research has shown that sexual desire and arousal do decline in response to partner familiarity (Morton & Gorzalka, 2015; O'Donohue & Geer, 1985). Familiarity with the spouse can be indirectly measured through the duration of marriage. However, the GSS does not include information on duration of current marriage to test that hypothesis.

Further, numerous studies have compared white and black people's sexual behavior. The most consistent findings have been that blacks report higher rates of intercourse (Zelnik & Kantner, 1977), have higher lifetime coitus rates (Christensen & Johnson, 1978), and have more sexually permissiveness attitude than whites (Staples, 1978). Of the few studies that focused on racial differences in extramarital relations, race has been used primarily as a control variable. For example, Paul R. Amato and Stacy J. Rogers (1997) found that blacks were more likely to engage in marital infidelity than whites. Further, in their 2000 study on "*Sexual Infidelity Among Married and Cohabiting Americans*", Treas and Giesen (2000) found that African Americans were 106% more likely to report EMS than whites. Some have explained this racial difference in EMS as the result of the so-called "shortage of black men". It has been argued that the higher rates of EMS among blacks is due to the shortage of single black men, which ultimately creates greater opportunities for married black men to have sex with single black women (Wiederman, 1997; Choi, Catania, & Dolcini, 1994). However, the shortage of black men thesis has not yet emerged as a conclusive explanation of EMS.

Other researchers have found an association between the availability of potential sexual partners and EMS (South & Lloyd, 1992). The general explanation is that people who live or work in areas with high number of potential sexual partners are more likely to engage in EMS because they have more opportunities to form sexual relationships with other sexual partners. In this study, we revisit that hypothesis by analyzing the association between the size of place of residence (in terms of population) and EMS, as well as work status and EMS.

Research Hypotheses

Based on the theoretical perspectives discussed above, we developed the hypotheses below. First, consistent with the parental investment framework, we hypothesize that men will be more likely to engage in EMS than women. We test that assumption on data from all the 15 waves of the GSS covering the period of 1991-2018. Second, given recent changes in racial relations in the US, which suggest that black people's social statuses are highly linked to their economic conditions (Hunt & Ray, 2012), we expect a convergence in rates of EMS between whites and blacks, at least in recent years.

In addition to these two main hypotheses, we explore the influences of our independent variables on EMS. In line with the opportunity theory, which assumes that the availability of different types of goods will augment the opportunity to use more than one type of commodity (Fair, 1978: 47), we argue that the place of residence is associated with the likelihood of EMS because it affects the opportunities to form sexual relationships with other sexual partners where one lives. Scott J. South and Kim M. Lloyd (1992) found that residing in a community with a high proportion of potential sexual or marital partners increased the chances of finding an attractive partner for sex, which also increased the likelihood of EMS encounters. Further, Scott J. South, Katherine Trent, and Yang Shen (2001) point out that the risk of divorce is highest in areas where either husbands or wives encounter numerous alternatives to their current partner. Thus, we hypothesize that people who have opportunity to meet potential alternative mates will be more likely to engage in EMS than those who have limited access to alternative partners.

In this study, we consider the work status and size of place of residence as factors that increase an individual's exposure to alternative mates. An increase in one's status (work/career) increases the likelihood of engaging in EMS. Elizabeth S. Allen, David C. Atkins, Donald H. Baucom, Douglas K. Snyder, Kristina Coop Gordon, and Shirley P. Glass (2005) note that increased career/work status is associated with higher income and increased opportunities for travel, which takes one away from a spouse and increases access to potential alternative sex partners. We expect individuals working full time to be more exposed to alternative mates, therefore

more likely to have EMS than those who are not full-time workers. In the same way, we expect persons living in largely populated areas to be exposed to more alternative partners and thus, to have EMS more than those residing in less populated places.

Other studies have also examined a variety of other correlates of EMS that we include in our analysis. These are age, education, religion, and political affiliation. Some studies have shown higher levels of EMS in older age groups (Atkins, Baucom, & Jacobson, 2001) and others have not (Lawson & Samson, 1988). For example, Wiederman (1997) found that married men and women aged 40 – 69 and 40 – 49 respectively reported higher prevalence of EMS. In this study, we posit that older participants will have a higher probability of engaging in EMS than younger people.

Although individuals with higher education have accepting attitudes about EMS, research has shown that they are least likely to engage in extramarital relations (Fair 1978). But, these individuals with higher education have also reported higher lifetime levels of EMS (Atkins *et al.*, 2001). Previous studies have also shown that religious attendance is inversely related to the likelihood of EMS (e.g. Amato & Rogers, 1997; Atkins & Kessel, 2008; Atkins *et al.*, 2001; Burdette, Ellison, Sherkat, & Gore, 2007; Treas & Giesen, 2000). Therefore, we expect a negative association between frequency of attendance of religious services and marital infidelity. In addition, previous research has shown a higher level of EMS among Americans who hold liberal political views as compared to their conservative counterparts (Wright, 2016). We examine that relationship in this study by comparing moderates and liberals to conservatives.

Data and Methods

We use GSS data, a nationally representative survey of adults 18+ years to examine the levels and determinants of EMS in the US, with a focus on racial and gender differences. The National Opinion Research Center at the University of Chicago has conducted the GSS since 1972. The GSS is a comprehensive survey that collects data on contemporary American society in order to monitor and explain trends and constants in attitudes,

behaviors, and attributes. In addition to demographic, behavioral, and attitudinal questions, the GSS also asks respondents questions on a variety of topics including civil liberties, crime and violence, intergroup tolerance, morality, national spending priorities, psychological well-being, social mobility, and stress and traumatic events (GSS, 2020).

for which EMS data are available: 1991-2018. The EMS module was applied to only ever married participants, who were asked the following question: "Have you ever had sex with someone other than your husband or wife while you were married?" Thus, in our analysis of the trends in levels of EMS from 1991 to 2018 by gender (Figure 1) and by race (Figure 2), we excluded never married participants.

The GSS question on EMS was introduced in 1991. Therefore, our analysis covers the entire period

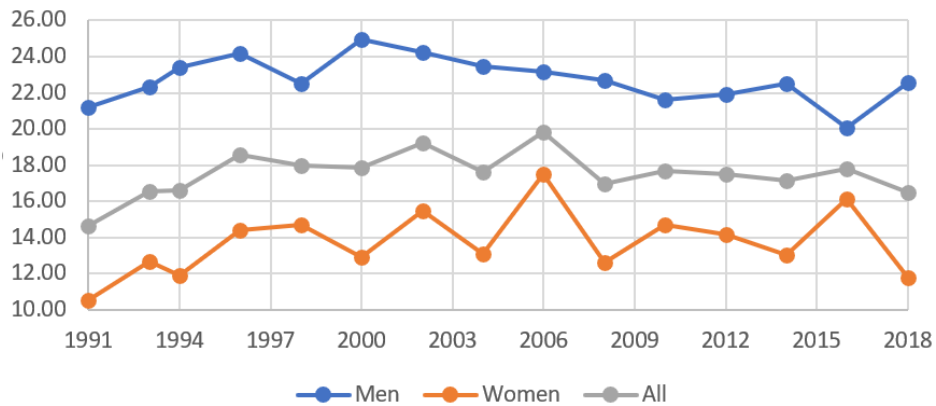


Fig. 1: Percent of Ever-Married Men and Women who Reported Extramarital Sex, GSS 1991-2018

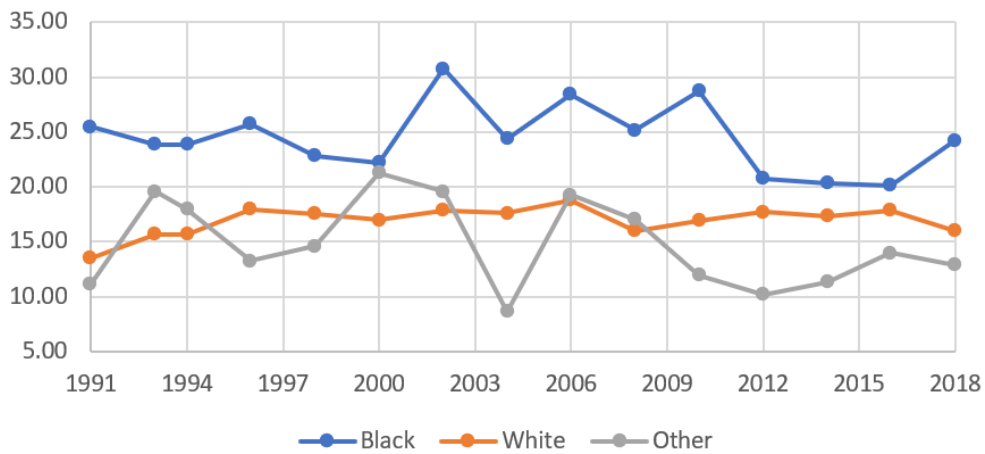


Fig. 2: Percent of Respondents who Reported Extramarital Sex by Race, GSS 1991-2018

We then examined the correlates of EMS in three models (Tables 1 and 2). The first model uses data from 1991, the year the GSS first introduced a question on EMS. The second model uses the most recent data collected in 2018. The third model includes data from all the 15 waves of the GSS, from 1991 to 2018. While the comparison of 1991

and 2018 year-models allows us to discuss eventual changes in the last three decades, the information in the combined dataset (1991-2028) is useful to assess the overall impact of our independent variables on the likelihood of EMS during the entire period.

Table: 1 Percentage distribution of ever married respondents who had extramarital sex by background characteristics, GSS 1991-2018

Background characteristics	1991		2018		1991-2018	
	N	% Extra-marital sex	N	% Extra-marital sex	N	% Extra-marital sex
All	998	14.63	965	16.48	22,467	17.64
Marital status						
Married	683	12.88	954	12.29	14,324	13.12
Widowed	131	6.11	100	17.00	2,460	12.40
Divorced	144	23.61	226	25.66	4,673	30.28
Separated	40	40.00	45	24.44	1,004	36.16
Sex						
Male	382	21.20	421	22.57	9,449	22.90
Female	616	10.55	544	11.76	13,018	13.82
Race						
White	869	13.46	765	15.95	18,697	17.00
Black	102	25.49	99	24.24	2,371	24.34
Other	27	11.11	101	12.87	1,399	14.80
Age group						
18-40	403	14.89	246	10.98	7,183	14.70
41-54	242	20.66	241	15.77	6,775	20.68
55-64	132	14.39	218	17.89	3,746	21.46
65+	220	7.73	258	21.32	4,719	14.79
Attend religious services						
Never	119	22.69	273	17.95	4,188	22.92
1-2 times/year	224	20.09	172	16.28	4,419	21.70
3+ times/year	106	16.04	106	18.87	2,598	17.28
1-3 times/week	116	13.86	135	12.59	3,467	16.35
Weekly or more	368	8.70	271	16.61	7,557	13.02
Educational attainment						
Less than HS	202	11.88	88	11.36	2,921	15.95
High school	544	17.28	455	18.46	11,637	18.75
Junior college	55	12.73	101	17.82	1,738	17.09
Bachelor	134	8.21	202	16.83	3,936	15.52
Graduate	59	15.25	119	10.92	2,209	18.29
Work status						
Full time	463	18.36	467	15.85	11,454	19.28
Part time	107	11.21	103	12.62	2,280	16.80
Other	428	11.45	394	18.27	8,727	15.70
Region of residence						
Northeast	217	14.75	152	13.16	3,852	15.60
Midwest	253	12.25	210	17.62	5,582	17.00
South	334	16.47	391	16.11	8,289	18.45
West	194	14.43	212	18.40	4,744	18.63
Size of place of residence						
< 6,000 people	313	11.82	194	20.10	5,535	16.55
6,000-24,999	238	15.97	265	14.34	6,124	16.35

	25,000-110,999	224	14.73	268	16.79	5,993	18.34
	111,000+	223	17.04	238	15.55	4,815	19.67
Political orientation							
	Liberal	237	18.99	246	22.36	4,966	21.97
	Moderate	321	12.46	352	16.48	7,485	15.22
	Conservative	409	14.43	335	13.43	7,590	17.15

Note: The total number of observations may not add up to the total reported in the first row, due to missing data in some variables.

Table 2: Logistic regression of likelihood of having had extramarital sex, ever married respondents, GSS 1991 and 2018

Background characteristics		1991	2018	1991-2018
Marital status				
	Married	1.000	1.000	1.000
	Widowed	0.861	1.369	1.207*
	Divorced	2.388***	2.496***	2.749***
	Separated	4.656***	2.867**	3.912***
Sex				
	Male	1.000	1.000	1.000
	Female	0.412***	0.420***	0.518***
Race				
	White	1.000	1.000	1.000
	Black	2.254*	1.736+	1.366***
	Other	0.795	0.934	0.840
Age group				
	18-40	1.000	1.000	1.000
	41-54	1.651*	1.328	1.413***
	55-64	1.247	1.427	1.585***
	65+	0.763	1.799+	1.270***
Attend religious services				
	Never	1.000	1.000	1.000
	1-2 times/year	0.840	0.898	0.977
	3+ times/year	0.612	1.305	0.777***
	1-3 times/week	0.472*	0.651	0.731***
	Weekly or more	0.399**	1.034	0.669***
Educational attainment				
	Less than HS	1.000	1.000	1.000
	High school	1.546	1.495	1.381***
	Junior college	0.934	1.751	1.222*
	Bachelor	0.698	1.432	1.184*
	Graduate	0.952	0.841	1.387***
Work status				
	Full time	1.000	1.000	1.000
	Part time	0.729	0.775	1.066
	Other	0.948	1.073	0.925
Region of residence				
	Northeast	1.134	0.664	0.855*

	Midwest	1.001	0.884	0.970
	South	1.093	0.855	1.066
	West	1.000	1.000	1.000
Size of place of residence				
	< 6,000 people	1.000	1.000	1.000
	6,000-24,999	1.358	0.756	0.985
	25,000-110,999	1.260	0.829	1.079
	111,000+	1.035	0.703	1.072
Political orientation				
	Liberal	1.000	1.923**	1.272***
	Moderate	0.785	1.249	0.909*
	Conservative	1.000	1.000	1.000
-2 Log Likelihood		700.763	769.448	17,016.388
Number of cases		949	924	19,772

+ P ≤ 0.10

*P ≤ 0.05

**P ≤ 0.01

***P ≤ 0.001

We employ logistic regression for the multivariate analysis to test our hypotheses and verify if racial and gender differences in EMS reported in previous studies are valid in our 1991-2018 datasets when other socio-demographic characteristics are held constant. The results from the three models – 1991, 2018, and 1991-2018 are shown in Table 2.

Results

We present the results in two steps. First, we examine the levels and trends of EMS in the last three decades. Second, we analyze the factors associated with the likelihood of having EMS in 1991-2018, and the combined dataset containing cases from all the 15 waves (1991-2018).

Trends in Extramarital Sex

The percentage of Americans who reported EMS has fluctuated in the last three decades for which we have data from the GSS. The first year (in 1991) when the question was included in the GSS questionnaire, 14.63% of ever-married Americans reported having had EMS. Nearly three decades later (in 2018), that figure was 16.48% (Table 1). The highest rate was reported in the 2006 GSS data, where almost 20 percent (19.84%) of Americans reported having had EMS experience in their lifetime (Figure 1).

Consistent with previous studies (Whisman & Snyder, 2007; Tafoya & Spitzberg, 2007), data show a difference in the level of EMS between men

and women. In 1991, about 11 percent (10.55%) of women had EMS compared to 21.20% of men. These rates increased slightly for both categories in 2018 to about 12 percent (11.76%) for women and 22.57% for men (Table 1). Overall, men have reported more sexual permissive behavior in the last three decades as compared to women (Figure 1).

Racial differences between blacks and whites have also been consistent in the last three decades (Figure 2). In 1991, 13.46% of white participants and 25.49% of black participants reported engaging in EMS. In 2018, the rate for blacks who reported engaging in EMS had decreased by one percent, whereas, the rate for whites increased by a little more than two percent (Table 1). Further, our findings show that individuals who were divorced and those who were separated reported higher rates of EMS than both currently married and widowed participants (Table 1).

Other interesting trends observed in Table 1 are on age, religiosity, and political orientation variables. In the 1991 data, participants in age group 65+ reported lower levels of EMS (7.73%). By contrast, the same age-group reported the highest levels of EMS in 2018 (21.32%), suggesting that the current trend in EMS is being driven by older generations. The information in Table 1 also shows that religiosity has a negative correlation with EMS behavior. However, this finding is only found in the 1991 data. Individuals who frequently attended

religious services were associated with a lower rate of EMS in the 1991 data, but not in the 2018 data. As much as religious practices and teachings seemed to strengthen participants' moral values in the 1991 data, the same was not found in the 2018 data. As for political orientation, liberals reported more EMS than conservatives and moderates. The binary associations between EMS and each of the following variables did not show clear trends in Table 1: education, work status, region of residence, and size of place of residence.

In the next section, we examine whether the results described above remain significant when other factors are considered? More specifically, is there a significant convergence or divergence in rates of EMS, for example, between white and black participants or between men and women?

Extramarital Sex Factors

The results from logistic regression models in Table 2 show significant changes in the likelihood of engaging in EMS by race and sex. The logistic regression models are presented for 1991, 2018, and 1991-2018. As earlier noted, the 1991 and 2018 models are used to examine the determinants of EMS in comparative perspectives to determine changes in years 1991 and 2018. The 1991-2018 model gives an overall view of the determinants of Americans' EMS in the last three decades.

Four of the 10 independent variables analyzed in this study are statistically significant correlates of EMS in all the three models in Table 2. These are marital status, sex, race, and age. In all three models, results show that divorced participants were 2 to 3 times more likely to report having had EMS as compared to currently married participants. The ratios were 3 to 5 times for separated participants. Although we are unable to establish a causation in this study, such findings suggest that some of those union dissolutions may be linked to EMS.

The gender effect is consistently significant across the three models. Women were less likely to report EMS than men. Similarly, blacks were more likely to report EMS than whites in 1991, 2018, and in the combined model (1991-2018). Age was statistically significant in each of the three models in Table 2,

but there were some important changes overtime. In 1991, only individuals in age-group 41-54 were statistically significantly more likely to report EMS than those below age 41. In 2018, only those in age-group 65+ were marginally significantly more likely to report EMS. In the combined model (1991-2018), all those in age-groups (41-54, 55-65, and 65+) were significantly more likely to report EMS than those in the younger cohort (18-40).

All other correlates show different associations in each of the three models. In the 1991 model, consistent with the results in Table 1, only religiosity was statistically significant, with those who frequently attended religious services being less likely to report having had EMS compared to those who did not attend such services. This variable was not significant in the 2018 model. In the 2018 model, only political orientation was statistically significant, with liberals being nearly 2 times more likely to report having had EMS than conservatives.

The third model combined data from all the 15 waves of GSS. The results are similar to those in the previous two models for marital status, sex, and race. For age, our data show higher probability of EMS in older generations compared to those in age group 18-40, however, the association is not all linear. In contrast, the results in the combined model show that religiosity was negatively associated with the likelihood of EMS; those who attended religious services more often were significantly less likely to report having had EMS.

The other significant variables in the combined data are education, region of residence, and political orientation. All respondents who had high school education or more were significantly more likely to report having had EMS than those with less than high school education. The region of residence also had significant impact on EMS, with those in Northeast significantly less likely to have engaged in EMS than their counterparts in the West. Finally, when we examined the entire period of 1991-2018, we found that participants with liberal political views were significantly more likely to report having had EMS than their conservative counterparts. Interestingly, "moderates" were significantly less likely to have engaged in EMS in the combined model.

We also ran a logistic regression model only for the year of the survey as an independent variable. The purpose of that model was to examine changes in the likelihood of EMS in each of the 15 cross-sectional GSS datasets, using the first survey (1991) as the reference category. The results revealed some significant variations overtime. For example, the 1996, 1998, 2000, 2002, 2004, 2006, and 2016 survey participants were significantly more likely to report having engaged in EMS than those interviewed in the first wave in 1991 (at $p \leq 0.05$), and marginally significant (at $p \leq 0.10$) for those interviewed in 2010, 2012, and 2014. No significant difference was found between the 1991 survey respondents and those interviewed in the 1993, 1994, 2008, and 2018 surveys.

Discussion and Conclusions

The purpose of this paper was to analyze the levels and trends in EMS in the US in the last three decades. The results showed a slight increase in the percent of participants who had engaged in EMS from 14.63% in 1991 to 16.48% in 2018, but that difference between the two years was not statistically significant. However, racial and gender differences were statistically significant in 1991 and 2018. Overall, the rate of EMS was higher for blacks than for whites and for men than for women, which confirmed our main gender difference hypothesis, but the racial convergence thesis.

The findings showed higher rates of EMS among blacks than among whites in the last three decades. Therefore, our hypothesis of racial convergence in EMS was not confirmed in this study. Rather, our results are consistent with previous studies which reported higher rates of EMS among blacks than among whites (Treas & Giesen, 2000; Amato & Rogers, 1997). The fact that our results showed significant racial differences throughout the last three decades even after controlling for the effects of other variables suggests the existence of social factors pertaining to EMS behavior specific to each race.

The results on gender differences confirm our hypothesis which predicted higher rates of EMS among men than women. These findings are consistent with previous studies which showed that around the world, and regardless of race and local cultural norms, men are more likely to engage in

EMS than women (Schmitt 2003). These findings provide strong support for the evolutionary thesis that men follow psychological adaptation strategies that motivate a desire for EMS. Because of their lower investment than women in the lives of their biological offspring, men don't lose much from engaging in EMS (Trivers 1972). This may explain why men tend to seek a variety of noncommittal short sexual relationships than women (Buss & Schmidt, 1993: 210).

In addition, we found significant associations between EMS, marital status and age in all our models. The results on marital status are consistent with previous work that showed a positive association between marital affairs and union dissolution. Like in Elizabeth S. Allen and David C. Atkins' (2012) study, we found that compared to currently married individuals, those who were separated or divorced were significantly more likely to have had EMS. Although we are unable to establish causation in this study, the direction and strong significant association between reporting EMS and being divorced or separated suggests that a large number of participants who were no longer married at the time of the survey may have dissolved their marital union as a result of extramarital affairs. The findings on age show higher probability of EMS among older participants as compared to those aged 18-40 years; but that association was not linear. Nonetheless, the older generations exhibit higher tendencies to engage in EMS in recent years, confirming our sexual habituation or satiation (O'Donohue & Geer, 1985; Homans, 1974) hypothesis of the positive association between age and marital infidelity.

The results on religiosity, which measures the frequency of attendance in religious services, show a significant change in the last three decades. In 1991, individuals who reported attending religious services more frequently were less likely to engage in EMS, whereas those who attended less often were more likely to report infidelity. This is consistent with previous studies that used data from the 1990s (Amato & Rogers, 1997; Choi *et al.*, 1994). However, in 2018, religiosity was no longer statistically significant, suggesting a decline in the role of religiosity as a moral guiding factor in marital fidelity. But when we analyzed the combined data from last three decades, religiosity remained an important

factor of EMS. This finding suggests a moral facet at play; where, most religions and societies have moral codes for marriage that indicate EMS behavior to be morally wrong. Married couples take vows to be faithful and therefore, breaking the promise of fidelity is a form of cheating or deception.

Education was not statistically associated with EMS in 1991 and in 2018, except when data from all the 15 survey waves (1991-2018) were combined and analyzed. In the three-decade model, education was statistically significantly associated with EMS even though the relationship was not linear. While we are not sure why people with a high school level of education and above engage in EMS than their counterparts with less education, we can speculate that education probably reduces the fear of social control and conformity to traditional values. It is also possible that education is a factor of exposure, which increases the opportunity to alternative mates.

Like education, the results for region of residence were only significant in the three-decade model, where residents from the Northeast were significantly less likely to engage in EMS than those in the West (the reference category). As for political orientation, there were no significant differences between liberals, moderates, and conservatives in 1991. However, liberals were more likely to engage in EMS than conservatives in the 2018 data. This pattern remained constant even when all the three-decade data were pooled together; liberals were significantly more likely to have engaged in EMS than conservatives. It was interesting to note that moderates were significantly less likely to engage in EMS in the three-decade model. In contrast, we did not find any significant correlation between the size of place of residence or work status and EMS.

Overall, our results show that despite the sociodemographic changes observed in the three decades, there are still significant racial and

gender differences in EMS in the US. While gender differences are now well explained along the evolutionary psychology theory, more research is needed to develop robust theoretical frameworks for studying racial differences in EMS in the US.

We recognize the limitations of the data due in large part to their cross-sectional nature and the potential reporting bias, which leads to validity issues. This bias pertains to the measure of EMS; thus, it is likely that the behavior was underreported. Further, it is unlikely that the measure includes EMS that is condoned (swingers), tolerated (non-committed monogamy), or yet to be discovered. Nevertheless, our findings show that racial and gender differences in extramarital sexual behavior in the US have remained statistically significant in the last three decades. However, more theoretical developments are needed to explain higher rates of extramarital sex among blacks than whites and other racial groups.

Acknowledgement

Preliminary results of this research were presented at the annual meeting of the Population Association of America held in Austin, Texas (USA) in April 10-13, 2019. The authors thank conference participants for their useful comments and suggestions that were used to improve the quality of this article. The authors are also grateful to the anonymous reviewers for their comments and suggestions.

The views expressed in this article are those of the authors, and do not represent the views of the California Department of Public Health or East Carolina University.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Conflict of Interest

The authors declare no conflict of interest.

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