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AN EXAMINATION OF GENDER DIFFERENCES IN HEALTH CARE FRAUD

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ABSTRACT

Last year, The National Health Care Anti-Fraud Association estimated that 3% to 10% of the nation's annual health care outlay is lost to fraud and abuse and that millions of Americans were affected (2017). With the prevalent nature of health care fraud in our social fabric, it is important for researchers to better understand and bring awareness to this serious problem. This honors thesis contributes to past research on financial fraud both in general and as regards to the extent and nature of female involvement in it. This thesis builds in particular on Steffensmeier and colleagues' study of female involvement and gender differences in corporate financial fraud, titled: *Twenty First Century Corporate Crime: Female Involvement and the Gender Gap in Enron-Era Corporate Frauds* (2013). Four main questions are addressed in this honors thesis: (1) What effect does gender have on involvement in health care fraud and in different types of healthcare fraud? (2) What effect does gender have on the organization of the fraud (e.g. solo male, all-male, solo female, all-female, mixed-gender groups)? (3) What effect does gender have on the relationship that offenders have with others in mixed-gender groups? (4) What effect does gender have on the roles offenders play in mixed-gender groups?

The primary source used to explore gender differences in health care fraud were collected from the United States Department of Justice (DOJ) Health Care Fraud Unit (HCF) press releases. Key findings were as follows: Overall, less women were involved in health care fraud than men. Findings also indicate that when it comes to the organization of fraud incidents, there are important differences by gender. A majority of males choose to work alone or in all-male groups, whereas females rarely commit fraud alone or with other females. Instead, an

overwhelming proportion of females choose to work in mixed-gender groups, often playing a minor role. By extension, when females are offending within a mixed-gender group, a sizable portion commit heath care fraud with their family or kin. A gender disparity is also evident when looking at the type of fraud committed by gender. Of the five distinctive categories of health care fraud (e.g. pharmaceutical, reimbursement claims, kickbacks, medicare/medicaid, and money laundering), the majority of female defendants committed health care fraud in the form of kickbacks. Overall, the findings were similar and consistent with past research on gender and financial fraud.

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Chapter 1

INTRODUCTION

In the 2017 fiscal year, The United States Department of Justice (DOJ) obtained more than $2.4 billion in healthcare settlements and judgements from civil cases involving fraudulent behavior and false claims against the government. This represented the eighth straight year that healthcare frauds exceeded $2 billion dollars. Because health care fraud affects so many Americans per year and has such a large economic impact, it is important for researchers to study these frauds in order to better understand and prevent them.

Despite the economic and financial cost of health care fraud (HCF), there has been very little research examining the case and offender attributes that characterize health care fraud. There is a scarcity of research in particular that examines the relationship between gender and involvement in health care fraud. With more women entering the health care field than ever before (Rock Health, 2017), understanding female involvement and the gender gap in HFC is an important theoretical and policy issue.

This thesis investigates the relationship between gender and involvement in health care fraud (HCF), using data on health care fraud that falls under the jurisdiction of the Department of Justice's Health Care Fraud Unit. This thesis builds on related research by Steffensmeier and colleagues that investigated the relationship between gender and corporate financial fraud, titled: *Twenty First Century Corporate Crime: Female Involvement and the Gender Gap in Enron-Era Corporate Frauds* (2013).

The data for this study was collected from press releases from health care fraud cases prosecuted by the *Health Care Fraud Unit* (HCF) of the United States Department of Justice (DOJ). The press releases provide: the date when the fraud was committed, the gender of defendant(s), age of defendant, organization of the fraud (solo male, solo female, all male, all female, and mixed-gender), the relationships among co-defendants in mixed-gender cases, and a brief description of the type of health care fraud committed. By coding key information from the HCF Press Releases, a dataset was developed that covers 104 cases of healthcare fraud involving 126 offenders.

The research questions this study sought to answer are as follows: (1) What effect does gender have on involvement in health care fraud and in different types of healthcare fraud? (2) What effect does gender have on the organization of the fraud (e.g. all-male, all-female, mixed-gender groups) (3) What effect does gender have on the relationship that offenders have with other defendants in mixed-gender groups? (4) What effect does gender have on the roles offenders play in mixed-gender groups?

What follows is a brief review of prior literature on gender differences in corporate and occupational fraud, after which the dataset and variables used in this study are described in detail and the research findings are presented. Next, a comparison is provided of this thesis' findings to those of the Steffensmeier et al study on corporate financial fraud, "Gender and Twenty First Century Corporate Crime." Lastly, conclusions are drawn based on the findings of this study and future areas of research are suggested.

Review of Prior Literature

An early perspective on gender and criminality is that women are less likely to commit crime when compared to men. Steffensmeier et al.'s research on the gendered paradigm of female offending concluded that this is a result of gendered focal concerns, which includes six factors: Gender norms, moral development and affiliative concerns, social control, physical strength and aggression, sexuality, and access to criminal opportunity (Steffensmeier and Allan 1996). These six factors can be used as indicators to predict the extent of female involvement in crime.

Gender norms, or the societal expectations and stereotypes that shape female identity and behavior, are one of the strongest factors in the gendered paradigm of female offending. In conventional society, women have been shaped from birth to conform to social rules. They are often rewarded for building and nurturing a family. By extension, Steffensmeier and Allan (1996) further concluded that women are socialized toward an "ethic of care" that inclines them toward having a greater level of empathy and sensitivity for others. This behavior also refrains them from criminal behavior. Men, on the other hand, are conditioned to engage in higher risk-taking behaviors that, coupled with the perceived stereotype of masculinity, contributes to higher male involvement in crime and in more serious forms of criminality. In particular, men more often engage in more serious forms of criminality compared to women due to gendered socialization practices (Steffensmeier et al 1996, 2013). As Steffensmeier and colleagues put it, "the separation between what is feminine and what is criminal is sharp, whereas the dividing line between what is masculine and what is illegal is often thin" (Steffensmeier et al. 2013, 452).

Key to the present analysis, Steffensmeier and colleague also highlighted that relational bonds may play a major role into female's motivation for committing crime. Within the context

of criminal involvement with their intimate partners, the struggle between conformity versus crime and maintaining existing bonds may push women to co-offend with male spouses or family members. This includes being an accomplice or taking on a minor role in the crime (Steffensmeier et al. 2013).

Women also have less access to illegitimate opportunities than men, since it is uncommon for women to hold traditionally male jobs such as truck driver and dock worker. Coincidentally, these are also jobs that are highly valued by the criminal underworld (Steffensmeier & Terry, 1986). The "glass ceiling" and the gender stratification of the criminal underworld makes it extremely challenging for women to succeed within it. Women often lack the crime mentoring and skills development that would allow them to commit crime and join criminal networks (Commonwealth of Pennsylvania, 1991).

The *Gender and Twenty-First-Century Corporate Crime* study by Steffensmeier, Schwartz and Roche (2013) served as an important basis for this thesis. With the use of an online databank of corporate financial fraud cases as provided by the Corporate Fraud Task Force of the Department of Justice, Steffensmeier and colleagues created a database consisting of 83 fraud cases and 436 offenders in order to study the involvement of women and the gender gap in corporate financial fraud (CFF). The Steffensmeier et al. study addressed four main questions: First, are there gender differences in involvement in corporate financial fraud? Second, are there gender differences in the organization of corporate financial fraud (e.g. solo male, solo female, all males, all females, and mixed-gender)? Third, when involved in mixed-gender fraud cases, what co-offender roles do women play in the fraud incident (e.g. ringleader, major player, in-between, minor player)? Fourth, do women's relationships with co-offenders (e.g. family, business) influence their decision to participate in corporate financial fraud.

Key findings from the study were as follows. First, Steffensmeier and colleagues concluded that male involvement in corporate fraud dominates that of females. When analyzing the degree of female's participation in corporate crime, only 9 percent of all corporate offenders were female (2013). This result is significant as it highlights that rarely are women involved in corporate financial fraud. Second, the researchers also noted that all female corporate fraud involvement took place within the mix gendered group. In contrast, a large percentage of male involvement took place as a solo offender or in all-male groups. Within the organization of the fraud, therefore, there were large gender differences.

Third, Steffensmeier et al. also examined the roles that defendants played in the corporate fraud. A majority of females played minor, or secondary roles in the frauds, typically connected with a spouse or family co-offender. In all, the study found that only three female offenders were identified as ringleaders or principal initiators of the fraud, two of whom were co-ringleaders with a male ringleader.

Fourth, the Steffensmeier study examined the motivational pathways of female offenders in mixed-gender groups. There are two main pathways identified in the study as highly significant in contributing to female involvement: relational and utility. The female defendant who follows the relational pathway was engaged in a romantic or a close personal relationship with a main male co-conspirator. In the utility pathway, the female defendant occupied a strategic role within the company, such as an auditor, that is critical for enabling the fraud to succeed (Steffensmeier, et al., 2013). Within the Steffensmeier study population, 68 percent of female co-offenders fall within the utility pathway. They often had job duties that were instrumental to the commission of the fraud and served as a conduit for its occurrence.

Research Questions and Hypotheses

Drawing on previous research and themes, this thesis examines female involvement and the gender gap in health care fraud (HFC) in context of the following research questions and hypotheses. Four research questions are addressed: (1) What effect does gender have on involvement in health care fraud and in different types of healthcare fraud? (2) What effect does gender have on the organization of the fraud (e.g. more all-male than all-female groups)? (3) What effect does gender have on the relationship that offenders have with others in the fraud incident? (4) What effect does gender have on the roles offenders play in mixed-gender groups?

From these research questions, four testable hypotheses were developed.

Hypothesis 1: Women's involvement in healthcare fraud will be less than men's involvement.

Hypothesis 2a: Women will be less likely to commit healthcare fraud in same sex groups.

Hypothesis 2b: When involved in healthcare fraud, women's involvement will be most heavily located in mixed-gender incidents or groups.

Hypothesis 3: Within a co-offending relationship in mixed-gender groups, women will be more likely than men to co-offend with family or kin (e.g. spouse, intimate partner, sibling, etc.).

Hypothesis 4: Within a co-offending relationship in mixed-gender groups, women will be less likely than men to be play a leadership role.

Chapter 2

DATA AND METHODS

Background and Dataset

The Department of Justice (DOJ) is a federal department within the executive branch of the United States government that is responsible for the enforcement of laws and ensuring public safety and wellbeing through the prosecution of unlawful behavior. Managed by the Office of the Attorney General with the passing of the Judiciary Act of 1789, and established through a congressional act in 1870, DOJ has the power to both criminally and civilly prosecute those who threaten the interest of the United States (The Department of Justice, n.d.). Within the criminal division of the DOJ, the Health Care Fraud Unit (HCF) was established and tasked with the role of investigating and prosecuting all health care frauds perpetrated in violation of applicable U.S. federal statutes. The HCF Unit collaborates with state and local governments to develop interagency teams to investigate and prosecute suspects throughout the United States.

Information on cases prosecuted by the HCF unit is provided on DOJ's website in the format of *Press Releases*. The press releases include the following kinds of information:

(1) Date of Offense/health care fraud

(2) Gender of Defendant(s)

(3) Age of Defendant(s)

(4) Number of Defendant(s)

(5) Organization of the fraud and gender composition in mixed-gender incidents

(6) Summary description of the type of healthcare fraud.

Information contained in the DOJ-HCF press releases serve as the primary data source for this study. Cases were taken from the years of 2015 to 2017 and restricted to those in which one or more individuals were convicted of fraud. Cases were excluded from the study if there were no defendants identified in the press release. This study was reviewed and approved by the Pennsylvania State University's Institutional Review Board.

Defendant and Case Characteristics

A codebook for manual collection of data was developed based on prior research and preliminary reviews of HCF press releases. (Reader can find the codebook in Appendix B: Code Book). Beginning with December 2015, information from each HCF press release was coded onto an Excel spreadsheet by: (1) Date of the fraud, (2) Gender of defendant(s), (3) Age of defendant(s), (4) Organization of the fraud (e.g. solo male, solo female, all male, all female, mixed-gender), and (5) Gender composition and co-offender relationship in mixed-gender incidents (husband/wife, boyfriend/girlfriend, business relationship/ partners, kin/family). The coding of information was as follows:

Sex of Defendant refers to the gender of the offender. The variable is coded as: (1) male and (2) female. If the gender of the defendant was not indicated in the DOJ Press Release, further research of the case was conducted online. If additional research did not yield any additional information, the sex of the defendant was assumed through their name.

Age of Defendant refers to the age of the offender(s) at the time of the press release. DOJ-HFC press releases are released approximately the same day the defendant(s) is charged or found guilty of the fraud and therefore is likely to be highly accurate in correlating the reported age with when they committed the crime. When age was not stated in the DOJ HCF Press Releases, additional research was conducted online.

Gender Composition of Group Member(s) Gender composition refers to whether the defendant worked alone or worked with others to commit the health care fraud, and whether his/her co-offenders were male or female. Five categories were used for the coding: (1) solo male, (2) all males, (3) solo females, (4) all females, (5) mixed-gender.

Co-offender Relationship refers to the relationship between two or more co-offenders in mixed-gender groups. Six categories were used for the coding: (1) romantic: husband/wife, partners, (2) romantic: boyfriend/girlfriend, (3) kin/family, (4) business relationship/partnership, (5) other, (6) unknown.

Offender Role refers to the level of defendant involvement and seriousness in the fraud. Five categories were used for the coding: (1) ringleader, (2) major player, (3) In-between, (4) minor player, (5) unknown.

Fraud Categories were identified based on key phrases of the Department of Justice (DOJ) Heath Care Fraud Unit (HCF) press release. Five categories were used for the coding: (1)

Pharmaceutical, (2) Reimbursement Claims, (3) Kickbacks, (4) Medicare/ Medicaid, and (5) Money Laundering.

Pharmaceutical, this includes the marketing or selling drugs through illegal means for financial or benefits, such as the evasion of the Food & Drug Administration's regulations or by charging patients' higher prices than allowed by law. In addition, the theft of drugs is also included in this category.

Reimbursement Claims, this is the intentional submission of mispresented claims to acquire claims reimbursement from healthcare providers for which no entitlement exists.

Kickbacks, this is a form of negotiated bribery in which a commission or financial benefit is accepted in exchange to promote, refer, sell, or perform procedures that is otherwise not medically necessary.

Medicare/Medicaid, this includes activities that result in fraudulent claims to government healthcare programs such as Medicare and Medicaid.

Money Laundering, this is the concealment of illegally obtained money by passing it through a complex sequence of financial transactions.

Analysis Methods

As noted, the information in this study's database was taken from HFC press releases on the DOJ website and coded into Excel. The coding in Excel was reformatted into the Statistical Package for the Social Sciences (SPSS). Descriptive statistics and frequency distribution tables were principally used in this study. As defined below, the *gender gap* as well as male-specific and female-specific profiles were used to provide between and within-sex comparisons.

The Gender Gap is a between-sex measure that refers to the percentage of females involved in the commission of healthcare fraud out of the total number of fraud offenders (i.e. both male and female offenders). The formula used to calculate the gender gap (i.e. the female percentage of all fraudsters) is:

$$\text{Gender Gap (female \%)} = \frac{\text{Number of Female Offenders}}{\text{Total Number of Offenders}} \times 100$$

The male or female profile percentage is a within-sex comparison that refers to the percentage of male or female offenders involved in the commission of a specific type of health care fraud out of either all male offenders or all female offenders. Below is the formula used to calculate female profile percentage and then male profile percentage:

$$\text{Female Profile Percentage} = \frac{\text{Number of Females in Specific Fraud Category}}{\text{Total Number of Female Offenders}} \times 100$$

$$\text{Male Profile Percentage} = \frac{\text{Number of Males in Specific Fraud Category}}{\text{Total Number of Male Offenders}} \times 100$$

Chapter 3

FINDINGS

In this section, the data was analyzed to answer the four main research questions of this study: (1) What effect does gender have on involvement in health care fraud and in different types of healthcare fraud? (2) What effect does gender have on the organization of the fraud (e.g. all-male, all-female, mixed-gender groups) (3) What effect does gender have on the relationship that offenders have with other defendants in mixed-gender groups? (4) What effect does gender have on the roles that offenders play in mixed-gender groups?

Defendant and Case Characteristics

Table 1 provides a gender breakdown of the HCF incidents and the offenders involved. Of the total sample of 126 defendants, 102 were males and 24 were females. The large majority of offenders were male (81 percent) as compared to females (19 percent). These gender patterns were consistent with the first hypothesis, that women will be less involved in the commission of healthcare fraud as compared to men.

Table 1: Commission of Health Care Fraud by Gender

Gender	Frequency	Percent
Male	102	81
Female	24	19
Total	**126**	**100.00**

Table 2 expands the information in Table 1 by showing the effects of gender on the organization of the fraud incident (i.e. whether it involves solo male, all males, solo females, all females, or mixed-gender groups). As can be seen in Table 2, there were 73 cases of HCF that involved 126 defendants. The largest category by case was solo male with 39 cases (53.4 percent), followed by all males with 12 cases (16.4 percent). Thus, roughly 70 percent of all HRC incidents (or cases) involved male offenders only (as either offending alone or with other males). In comparison, solo female cases and all female cases at 1.4 percent and 6.8 percent, respectively, represented a very small proportion of all cases. In turn, 16 cases (at 22 percent of all cases) involved a mix of male and female offenders.

Table 3 provides a breakdown showing the numbers (and percentages) of male defendants and female defendants involved in each of the five organizational categories. Overall, one third of defendants fell within the mixed-gender group (33.3%). The second largest category of offenders was solo males with 39 defendants (31%) followed by all males with 38 defendants (30.2 percent). The smallest numbers involved solo female defendants, comprising 5 defendants and 4 percent of the sample, and then the single all female group, which with only 2 defendants at 1.6 percent of all offenders in the sample. These finding were highly consistent with patterns of female involvement and the gender gap in financial fraud as reported in prior research (Steffensmeier and colleagues, 2013).

Table 2: Gender and Organization of Fraud by Cases

Group Composition (By Case)	Frequency	Percent
Solo Male	39	53.4
All Males	12	16.4
Solo Female	5	6.8
All Females	1	1.4
Mix-Gender	16	21.9
Total	**73**	**100**

Table 3: Gender and Organization of Fraud by Defendants

Group Composition (By Defendant)		Frequency	Percent	M % Profile	F % Profile
Solo Male		39	31	38.2	-
All Males		38	30.2	37.3	-
Solo Female		5	4	-	20.8
All Females		2	1.6	-	8.3
Mixed-Gender					
	Males	25	19.8	24.5	-
	Females	17	13.5	-	70.8
Total		**126**	**100**	**100**	**100**

Next, Table 3 further refines Table 2 by examining the organization of the case by the number of defendants and by the gender composition in mix gender fraud cases. The second hypothesis in this study predicts that when women were involved in the commission of healthcare fraud, they were likely to co-offend with male offenders. Table 3 indicates that, while a majority of the offenders in mixed-gender groups were males at sixty percent and only forty percent were female, a very large majority of female offenders were located in mixed-gender frauds. Specifically, 71 percent of all female offenders were in mixed-gender groups, notwithstanding that they represented only 40 percent of all mixed-gender co-offenders. Much more so than committing fraud alone or with other females, women were much more likely to co-offend with male offenders. In contrast, males were more likely to work either alone or in all male groups compared to mixed-gender groups.

Table 4: Organization by Gender Composition of Mixed-Gender Fraud Cases

Gender	Frequency	Percent
Males	25	59.6
Females	17	40.4
Total	**42**	**100**

Table 4 provides an overall breakdown of fraud involvement across types of healthcare fraud as well as a breakdown of gender differences in fraud involvement for each type of health care fraud. First, the table indicates that the most common fraud category was medicare/medicaid with 43 defendants at 34 percent of all frauds, followed by kickbacks with 38 defendants at 30.2 percent of the total. The least common fraud type was money laundering with 12 defendants at 9.5 percent of the total.

Second, turning to the gender gap (defined as the female percentage of all fraud offenders), Table 4 shows that the fraud category with the smallest gender gap (highest female percentage) was kickbacks with a female percent of 31.6 of total fraud offenders, followed by reimbursement claims at 21.1 percent, and money laundering at 16.7 percent. The fraud category with the largest gender gap was medicare/medicaid (female share of total at 9.3 percent).

Table 5: Gender by Type of Health Care Fraud

Fraud Type	Frequency	Percent	# of M	# of F	Gender Gap
Pharmaceutical	14	11.1	12	2	14.3
Reimbursement Claims	19	15.1	15	4	21.1
Kickbacks	38	30.2	26	12	31.6
Medicare/Medicaid	43	34.1	39	4	9.3
Money Laundering	12	9.5	10	2	16.7
Total	**126**	**100**	**102**	**24**	**19.1**

Next, Table 6 shows the within-gender profile percentage by type of fraud. First, looking at the within sex profile for males, the highest involvement by fraud type for male offenders was medicare/medicaid (38.2 percent), followed by kickbacks (25.5 percent), reimbursement claims (14.7 percent), pharmaceutical (11.8 percent), and money laundering (9.8 percent). On the other hand, the highest involvement for female offenders by fraud type was kickbacks (50 percent), followed by reimbursement claims and medicare/medicaid with each type 16.7 percent. Women were least involved in pharmaceutical and money laundering with each at 8.3 percent. A comparison between male and female profiles shows that they share some similarities as well as some differences in the types of HCF they commit. For example, both males and females were least likely to commit money laundering, while the remaining fraud types were fairly evenly distributed between males and females. It is also important to note that the female profile reflected a much greater proportionate involvement in kickbacks, presenting one-half of all female frauds.

Table 6: Gender Specific Profiles by Fraud Type

Fraud Type	# of M	# of F	Profile % M	Profile % F
Pharmaceutical	12	2	11.8	8.3
Reimbursement Claims	15	4	14.7	16.7
Kickbacks	26	12	25.5	50
Medicare/Medicaid	39	4	38.2	16.7
Money Laundering	10	2	9.8	8.3
Total	**102**	**24**	**100**	**100**

Table 7 below examines the co-offender relationship in mixed-gender frauds. Recall in mixed-gender cases, 25 offenders were males and 17 offenders were females. It is important to note that there were no cases in the dataset involving boyfriend and girlfriend. Also, the cases

involving husband or wife, and family or kin were combined. The third research question in this study concerns the co-offender relationship of women defendants involved in mixed-gender frauds. As shown in Table 7, the majority of women in a co-offending relationship committed health care fraud either with their business partners (58.8 percent) or with family/kin (41.2 percent). This result was considerably different when compared to male profiles, in which a disproportionate 72 percent of males committed health care fraud in a business context, followed by family/kin (28 percent). Consistent with Steffensmeier and colleagues research on corporate financial fraud, the differences in gender profile could indicate that women were more susceptible to committing health care fraud with family or people close to them.

Table 7: Co-offender Relationship in Mixed-Gender Group

Relationship Type	# of M	# of F	Profile % M	Profile % F
Family/Kin	7	7	28	41.2
Business Relationships	18	10	72	58.8
Total	**25**	**17**	**100**	**100**

Finally, Table 8 below shows the relationship between gender and the role played in the fraud in mixed-gender cases. As is shown in Table 7, males accounted for 85 percent of the ringleaders, whereas females made up 15 percent of ringleaders. Approximately 73 percent of males and 27 percent of females played a major role in health care fraud. It was important to note that due to the high level of missing data in the HCF press releases about the defendant's role in the fraud cases, the findings might be interpreted as somewhat inconclusive.

Table 8: Gender and Role in Mixed-Gender Frauds

Role in Fraud	# of M	# of F	M %	F %
Ringleader	17	3	85	15
Major Player	8	3	72.7	27.3
In-between	0	1	0	100
Total	**25**	**7**	**-**	**-**

Chapter 4

CONCLUSION

Main Findings and Comparison to Prior Research

In this thesis, I examined female involvement and the gender gap in health care fraud. The database of this project was assembled from the DOJ HCF press releases; if information on the variables collected was not available from the press releases, additional research was conducted online. The four hypotheses examined in this thesis are as follows: (1) Women's involvement in healthcare fraud will be less than men's involvement. (2a) Women will be less likely to commit healthcare fraud in same sex groups. (2b) When involved in healthcare fraud, women's involvement will be most heavily located in mixed-gender incidents or groups. (3) Within a co-offending relationship in mixed-gender groups, women will be more likely than men to co-offend with family or kin (e.g. spouse, intimate partner, sibling, etc.), (4) Within a co-offending relationship, women will be less likely than men to be play a leadership role in mixed-gender group.

Through this study, my research goal was to make contributions to the literature on female involvement and the gender gap in financial fraud as well as healthcare fraud. Similar and consistent with Steffensmeier and colleagues 2013 research on corporate fraud offenders, my study also found significant gender differences in involvement, organization of same sex and mixed-gender groups, co-offending relationships, and leadership roles in the commission of health care fraud. Principal findings from my research were as followings:

First, the majority of healthcare frauds were committed by male offenders. As evident in Table 1 “Commission of Health Care Fraud by Gender”, less than two in ten were female offenders. Supporting hypothesis 1, the overall pattern showed that women’s healthcare fraud involvement was lower than men’s involvement. Second, when women do partake in health care fraud, they overwhelming participate within a mixed-gender group. As indicated in Table 2 “Gender and Organization of Fraud by Cases”, women’s involvement in same sex groups was minimal and extremely rare, as the dataset yielded only a single all-female case involving a mother and daughter duo. By comparison, over 7 of 10 female cases (70%) were in mixed-gender groups. Affirming hypothesis 2, women were less likely to commit healthcare fraud in same sex groups, and much more likely proportionally than males to commit health care fraud in a mixed-gender group.

Moving on, whereas the overwhelming majority of male offenders in mixed-gender groups committed health care fraud within the context of a business relationship (e.g. co-workers, employee, partner, etc.), women on the other hand were more likely than men to co-offend with their family or kin (e.g. spouse, intimate partner, siblings, etc.). As Table 7 “Co-offender Relationship in Mixed-Gender Group” shows, over four in ten females committed health care fraud with their family or kin.

Finally, within their mixed-gender group, there was also a disparity in the likelihood of women holding a leadership role as compared to men. As specified in Table 8 “Gender and Role in Mix-Gender Frauds”, the majority of ringleaders and major players were male offenders. Out of twenty ringleaders identified in mixed-gender frauds, only three females were identified as ringleaders.

Overall, I have high confidence in these findings of my study because they fall within the overall gender and financial fraud patterns and are consistent in particular with Steffensmeier and colleagues' twenty first century research on gender difference in corporate financial fraud. Although there may be some differences in the motivations of criminality because corporate fraud is different from health care fraud, it is also reasonable to make comparisons between the two kinds of financial fraud. First, both studies find that men were more involved in the commission of fraud than women. Second, both studies found a strong relationship (one third in Steffensmeier el al. and two-fifths in this thesis) of female defendants committing fraud with their family or kin. Third, women seldom played a ringleader role in health care fraud and in corporate fraud. Steffensmeier and colleagues projected that these results could be a result of the marginalization of women in the criminal world. This hindered women's opportunity to participate in fraud and thus substantially excluded women in taking on major roles (2013).

As the study's findings show, the characteristics of health care fraud offenders represented in the HCF press releases were consistent with Steffensmeier and colleagues' theoretical framework of gendered focal concerns and socialization, and the gendered nature of crime opportunity (2013).

Limitations and Future Research

As is true in most research, there are always areas of improvements. The central shortcomings in this study derive from the Department of Justice (DOJ) Health Care Fraud Unit (HCF) dataset. The first limitation pertains to the overall lack of cases and defendants in the dataset. Although adequate, the DOH HCF dataset is not substantive enough. Over the coding of

a three-year period (2015-2017), information on only 104 cases, and 126 defendants was able to be collected. The small size of the study population may be susceptible to outliers and thus the resulting findings may be skewed or biased.

The second limitation of the HCF press releases pertains to the lack of clarity of the offender's role in commission of the fraud in mixed-gender groups. Being that defendant and case characteristics were limited to the available summary statement in the press release and online, a sizeable portion of women's role in the fraud were left unknown. This information would have been beneficial in providing a more comprehensive understanding of whether women play a major or minor role when committing health care fraud. Knowing this result can also allow this study to affirm or challenge Steffensmeier and colleague's pervious conclusion of women's roles in mixed-gender frauds with greater certainty (2013).

In the future, the research in this study could be built on by comparing the results to findings of the Uniform Crime Reports (UCR) dataset in the general category of fraud. Additionally, further research is also needed to look into the age crime curve of health care fraud. Questions such as: Whether or not health care fraud follows the normal age crime curve? Or how does the age crime curve of health care fraud compare to other fraud categories is an area of interest and should be investigated further.

Last, researchers can also pursue how occupational factors influence outcomes in the commission of health care fraud. The health care industry is a regulated field, and with more female representation in roles such as doctors, nurses, nurse practitioners, pharmacists and care givers in the health care field, more research should be done to analyze to what extent the commission of health care fraud is constrained by opportunities that are only available in an occupational and professional setting.

Appendix A

Health Care Fraud Categories: Case Examples

Pharmaceutical Fraud: In 2016, there was a woman who co-owned and operated several pharmacies in the Miami area. She then came up with a pharmaceutical scheme that paid beneficiaries and patient recruiters for prescriptions that were medically unnecessary. After being caught, it was discovered that she stole a total of 9.5 million dollars.

Reimbursement Claims: In 2017, there was a licensed neurosurgeon who owned and operated two companies had various locations in the Eastern District of Michigan. He misleads his patients into undergoing “instrumentation”, or spinal fusion surgery, for the purposes of stabilizing and strengthening the spine. Ultimately, he never performed any of the procedures or surgeries and billed the patient and healthcare benefit programs for those fraudulent services.

Kickbacks: In 2017, there was an individual in New Orleans that created a scheme to provide medically unnecessary equipment to patients and beneficiaries alike. It was discovered that the induvial has received kickback payments from the equipment supply company in return for obtaining physician signatures on order forms and providing beneficiaries and patients’ personal information to the company.

Medicare/Medicaid Fraud: In 2017, there were three individuals from Brooklyn who scheme to defraud the Medicare and Medicaid programs by having patients undergo medically unnecessary health services, including physical and occupational therapy provided by unlicensed staff. They also falsified patient charts and medical billing documents to the government to have their payments approved. When they were caught, they had stolen over 55 million dollars from the Medicare and Medicaid programs.

Money Laundering: An individual obtains prescription drugs at low prices that were only available to pharmacies that agreed to use the drugs to fill patient prescriptions. Instead of filling the drug prescriptions, the female defendant sold the drugs to drug wholesalers for more than she paid. Because the scheme involved transacting monies through the banking and financial industry, Money Laundering charges were brought forward.

Appendix B

Code Book

Codebook of DOJ Health Care Fraud Unit Press Release

1. Date of release: according to the DOJ Health Care Fraud Task Force Press Release (year-month-day-story number)
2. State of the Press Release
3. Sex of Defendant
    1. Male
    2. Female
4. Age (#)
5. Organization and Sex composition of Fraud Incident:
    1. Solo Male
    2. All Males
    3. Solo Female
    4. All Females
    5. Mixed-Gender
    6. Unknown
6. Group Size - # of Offending Including offender
7. Co-offender Relationship Type:
    1. Romantic- husband/wife; partners (as if or close to being married)
    2. Romantic- boyfriend/ girlfriend; dating
    3. Kin/family only (e.g. parent-child; siblings; relatives)
    4. Business relationships/partnerships only
    5. Other
    6. Not specified
8. Primary Fraud Offense:
    1. Pharmaceutical
    2. Fraudulent Reimbursement Claims
    3. Kickbacks
    4. Medicare/Medicaid
    5. Money Laundering
9. Other Offense(s):
    1. No other offense
    2. Other offense
    3. “Red Flag” offense (e.g. homicide)

10. Monetary Loss or Profit - Amount entered in columns

11. Role Played by Defendant
    1. Ringleader
    2. Major Player
    3. In-between
    4. Minor Player
    5. Unknown

12. Charged or Conviction
    1. Charged, Pending Disposition/Verdict
    2. Pled Guilty
    3. Found Guilty
    4. Guilty, Pending Sentence

13. If Found Guilty, Sentencing Outcomes:
    1. Probation
    2. Jail/Prison
    3. Other

14. Sentence Length if Probation - Insert # of Months (if no information or not applicable, leave blank)

15. Sentence Length if Jail/Prison - Insert # of Months (if no information or not applicable, leave blank)

16. Punishment - Restitution - Insert Monetary Amount in USD (if no information or not applicable, leave blank)

17. Punishment - Seizures - Insert Monetary Amount in USD (if no information or not applicable, leave blank)

18. Punishment - Other - Insert Details (if no information or not applicable, leave blank)
19. Occupation Specified in the DOJ Press Release?
    1. Yes
    2. No

20. Insert Name of Occupation (If yes to Q#19)

21. Other Info. Copy any other relevant information here (e.g., role in crime, sentencing outcome, etc.)

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EDUCATION

The Pennsylvania State University University Park, PA
Schreyer Honors College, Area of Honors: Sociology
Paterno Liberal Arts Undergraduate Fellow

Bachelor of Arts in Sociology, College of Liberal Arts
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Honors Thesis Title: An Examination of Gender Differences in Health Care Fraud
Thesis Supervisor; Dr. Darrell Steffensmeier

Independent Research Project: Social Media and Wellbeing
Research Supervisor, Dr. Samar Farage

RELATED EXPERIENCE

Pennsylvania State University, University Park, PA Fall 2017- Fall 2018
Teaching Assistant, Dr. Samar Farage
Soc 405, Soc 424

- Planned student project schedules and graded exams and essays
- Organized discussion questions for assigned readings

Pennsylvania State University, University Park, PA
Smeal Student Council (SCC), Development Committee Fall 2017- Spring 2018

- Collaborated with multiple organizations to promote Smeal College of Business
- Planned and managed logistics in recruiting and designating positions for members and volunteers in various events

COMMUNITY SERVICE

Peru Community Service Project Initiative May- August 2015
Volunteer

- Worked in a team of five to organize and coordinate five fundraising projects for local non-profit organizations
- Help devastated local areas by tutoring at local schools, promoting community rebuilding efforts, and offering support to upcoming service work projects.