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## Keeping Their Distance: A Comparison of 2009 and 2013 Domestic Violence cases in Seminole County that utilized GPS Technology to Determine Effectiveness of Program

Rachel Rados  
*University of Central Florida*



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KEEPING THEIR DISTANCE: A COMPARISON OF 2009 AND 2013  
DOMESTIC VIOLENCE CASES IN SEMINOLE COUNTY THAT  
UTILIZED GPS TECHNOLOGY TO DETERMINE EFFECTIVENESS OF  
PROGRAM

by

RACHEL RADOS  
M.S. University of Central Florida, 2004  
B.S. California State University, Chico, 2003

A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Sociology  
in the College of Sciences  
at the University of Central Florida  
Orlando, Florida

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Major Professor: Jay Corzine

## **ABSTRACT**

This study examines the implementation and effectiveness of the Seminole County Sheriff's Office Global Positioning System (GPS) when ordered by the court for "no contact" in Domestic Violence cases, specifically Intimate Partner Violence. The research evaluates violations, which occurred while arrestees were assigned to GPS in 2009 and 2013; the programs first year and the most recent with complete data available. The results found limited factors that could be identified as predicting violations for those who violated the GPS, but the qualitative interviews shed much more light on the value of the program. The qualitative interviews were conducted with various stakeholders ranging from law enforcement to victim's advocates, and from state attorneys to public defenders. The overwhelming response rang loud, GPS allowed victims to feel safer and required more accountability on the part of the offender.

## ACKNOWLEDGMENTS

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## TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGMENTS .....	iii
TABLE OF CONTENTS.....	v
LIST OF FIGURES .....	vii
LIST OF TABLES .....	viii
CHAPTER ONE: INTRODUCTION.....	1
CHAPTER TWO: LITERATURE REVIEW .....	4
Domestic Violence Statistics .....	4
Theoretical Background.....	5
GPS Monitoring Within the Criminal Justice System.....	8
Law Enforcement Intervention in Domestic Violence .....	12
Hypotheses.....	20
Significance of Study.....	21
Contributions of Study.....	21
CHAPTER THREE: METHODS.....	23
Quantitative Assessment of Program Effectiveness .....	23
Qualitative Assessment of GPS-Based Monitoring.....	24
CHAPTER FOUR: DESCRIPTIVE STATISTICS.....	27
Dependent Variable .....	27
Independent Variables .....	28
Victim Characteristics.....	28
Suspect Characteristics .....	30
Incident Characteristics.....	32
CHAPTER FIVE: REGRESSION ANALYSES.....	35
Independent Variables .....	35
Results.....	37
Discussion.....	39

CHAPTER SIX: QUALITATIVE SURVEYS.....	41
Benefits .....	41
Improvements .....	43
CHAPTER SEVEN: CONCLUSIONS .....	45
Discussion and Policy Implications .....	45
Further studies.....	47
APPENDIX A: PERMISSION TO USE SCSO DATA .....	51
APPENDIX B: SURVEY DISCLOSURE AND QUESTIONAIRE.....	53
Participant Waiver for Survey .....	54
Survey with the Seminole County Domestic Violence Employees (Deputies, State Attorney’s Office, Probation) .....	56
APPENDIX C: SPSS LOGISTIC REGRESSION RESULTS .....	57
APPENDIX D: IRB LETTER .....	77
REFERENCES .....	79

## LIST OF FIGURES

Figure 1: Total GPS Violations Broken Down by Category .....	28
Figure 2: Age of Each Victim at the Time of Their Incident.....	30
Figure 3: Age of Each Suspect at the Time of the Incident .....	31
Figure 4: Gender of Victims and Suspect, by Percentage .....	32
Figure 5: Relationship Status Based on Percentage During Time of Incident .....	33
Figure 6: Type of Weapon Used (if any), by Percentage .....	34



## LIST OF TABLES

Table 1: Description of Variables in Logistic Regression Models .....	37
Table 2: Logistic Regression Results- Dep. Variable Violation of GPS .....	38

## CHAPTER ONE: INTRODUCTION

“If the numbers we see in domestic violence were applied to terrorism or gang violence, the entire country would be up in arms, and it would be the lead story on the news every night.”

-Rep. Mark Andrew Green

Recently a Victim’s Advocate said “you cannot place your trust in the system” and the comment was subsequently published in a local Central Florida newspaper. This statement was in reference to domestic violence victims and the ability of the United States government and its entities to assist in protecting them. Carol Wick, of Harbor House Orlando<sup>1</sup>, continued by stating “The worst thing you can do is have someone think they have protection, when, in fact, it’s not working” (Bay News, 2013). This statement was brought on by a reaction to an offender who was on GPS (Global Positioning System) and committed a shooting, then cut off the strap that attaches the device to his person, and was on the run for approximately a week. The use of GPS devices in response to domestic violence (DV) crimes has grown throughout the United States over the last ten years, yet very little research has been conducted to evaluate their efficiency and deterrence. This study tests the hypotheses that the utilization of this technology decreases the likelihood of violating no contact orders by these violent offenders and does, in fact, give additional protection to the victims. GPS for DV programs first emerged in the 1990s, but their numbers have since been steadily increasing. GPS utilized for DV programs has been developed

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1. <sup>1</sup> Harbor House of Central Florida is a non-profit state-certified domestic violence shelter near Orlando, in Orange County, Florida.

by innovators within the field looking for a new way to have an additional layer of protection for victims. Since 2000, twenty-one states and the District of Columbia have enacted legislation mandating or recommending the employment of this technology (Gur, Erez and Ibarra 2011), with up to 11 more proposing legislative.

GPS technology has become more advanced over the last decade as well since, prior to this innovation, radio frequency (RF) based monitoring was the only technology available. RF monitoring had limited abilities and was only capable of determining when the subject was in the proximity of the “home” device, which literally was placed in subjects’ homes and/or the victims’ home with a monitoring range of 500 feet. The RF system was not capable of providing the location of the subject outside of the 500-foot proximity of the “home” device, so maintaining accountability for the offender’s movements was very limited. The new development of GPS allows law enforcement real time location of the subject and allows for “zones” to be established where the offender cannot enter, and if in violation the monitoring agency is alerted and law enforcement is notified. GPS monitoring technology operates on the principle of “geofencing” meaning that it can be programmed to establish *multiple* and potentially *unlimited* “zones of exclusion and inclusion” (Crowe et al., 2002), including the victim’s home, workplace, house of worship, and children’s school(s). GPS exclusion zones can be programmed to any area imaginable and can be as large as whole states, which means that the victim, or law enforcement, can have more time in which to respond to a zone violation by the offender.

This study will focus on GPS used in DV cases and the utilization of it during the pretrial stage of cases. It evaluates the demographic characteristics that can identify who is violating the GPS restrictions, and whether there are any situational factors (prior offenses, weapons used, etc.) that are more likely to lead to violation of GPS boundaries. Furthermore, it examines if the length of time an offender is on GPS monitoring increases the likelihood of violating the no contact orders/exclusionary zone, and, lastly, it will look at the transformations of the victims and suspects as seen by the stakeholders involved. The stakeholders are defined as law enforcement, state attorneys and defense attorney's, probation officers, dispatchers, guardian ad litem, and victim advocates. They were able to comment about the "changes" victims go through with the GPS systems being utilized, as well as the suspects' perceptions.

There is very little information available on offenders and victims after the conclusion of the DV relationship, and this period needs to be the focus of further research. Utilizing this basic data analysis of this investigation, we can continue to evaluate future cases and identify if suspects and victims fall back into a domestic violence situation with other individuals or with each other once more.

## **CHAPTER TWO: LITERATURE REVIEW**

### **Domestic Violence Statistics**

Domestic Violence (DV) often involves lengthy and severe abuse (Rennison, 2003; Tjaden & Thoennes, 2000a; 2000b), and reports to law enforcement typically only occur when the victim has reached a breaking point (Fischer & Rose, 1995). Victims typically endure multiple types of victimization including intimidation, harassment, stalking, sexual assault, and/or physical assault (Tjaden & Thoennes, 2000a; 2000b). Domestic Violence is a serious issue within the United States, and it has generated substantial research and multiple social programs that attempt to reduce what some call an epidemic. Statistics show that family violence is accountable for approximately 11% of all reported cases of violence between 1998 and 2002 and the violence between intimate partners' equals almost half (49%) of all family violence (Durose et al., 2005). This translates into roughly 1.75 million acts of violence per year (Durose et al., 2005). Across a lifespan, approximately one in four women will report physical abuse by a male partner at some point during their lifetime (Tjaden & Thoennes, 2000). Research has demonstrated that minority women report higher rates of IPV, with approximately twenty percent of minority and poor women reporting an incident within a one year period of time (Tjaden & Thoennes, 2000). At an astronomical figure, between 600,000 and 6 million women and between 100,000 and 6 million men are victims of domestic violence each year, depending on the type of survey used to obtain the data (Rennison, 2003; Tjaden & Thoennes, 2000, Straus, 1990). This epidemic is not just one-sided; it affects everyone, including the children, that are involved in these households.

The ultimate end of IPV can be lethal violence, and on average, more than three women and one man are murdered by their intimate partners in the United States every day (Centers for Disease Control and Prevention (CDC), 2010). The Bureau of Justice produced statistics in 2000 showing 1,247 women and 440 men were killed by an intimate partner that year alone (CDC, 2010). Intimate partner homicides accounted for thirty percent of the murders of women and five percent of the murders of men. Most intimate partner homicides occur between spouses, though boyfriends/girlfriends have committed about the same number of homicides in recent years, which has brought up a new focus and subsequent statutory regulations on dating violence as well (CDC, 2003). The Centers for Disease Control and Prevention also examined the health care cost associated with domestic violence and estimated it exceeded \$5.8 billion each year, with \$4.1 billion for direct medical expenses and \$1.8 for loss of wages (CDC, 2003).

### **Theoretical Background**

Many theories have been utilized in attempting to explain domestic violence including exchange theory, culture of violence theory, resource theory, patriarchal theory, ecological theory, social learning, evolutionary, sociobiological, social conflict, and general systems theory. Current thinking has a split in the leading theories related to domestic violence, with some of the them being patriarchal, family violence theory, and integrated theory. Patriarchal theory is one of the dominant perspectives explaining the cause of domestic violence and sexual assault crimes, and its theoretical basis is that violence is justified against women and children as a way to preserve domination and control by males. The behaviors of the offender are parallel to the

brainwashing behaviors described by Biderman (1957), yet his explanation can be applied universally to both genders. Biderman created the scale of coercion, which stated the five steps to gain control over someone include: 1) omnipotence, 2) threats of violence and violent attacks, 3) isolation, 4) emotional abuse, and 5) kindness. But domestic violence research has created a partisan view of the issue, as seen in the multitude of theories that focus on male offenders, and where perpetrators are viewed as wholly or excessively male.

More current research has shown that the function of the gender hypothesis was to generate social change in a direction that righted an imbalance against women (see Dobash & Dobash, 1978, 1979; Dobash, Dobash, Wilson, & Daly 1992; Patai, 1998; Walker, 1989; Yllo & Bograd, 1988). The result, however, has misdirected social and legal policy, and misinformed custody assessors, police, and judges to disregard data sets contradictory to the prevailing theory, and partially led to unsuccessful therapeutic changes for perpetrators (Corvo & Johnson, 2003; Dutton, 1994; George, 2003).

Social theories of family violence focus on developments that are shaped from interactions with others in one-to-one relationships or in larger groups. The three social theories discussed are control, resource, and exosystem factor. Control theory is based on the premise that an individual needs to obtain and maintain the power and control within a relationship. This violence is used to control the target's actions and behaviors until the victim begins to alter their behavior in attempts to minimize the violence (Hyde-Nolan & Juliao, 2012). Resource theory suggests a link between wealth and violence, where those with less wealth are likely to respond quicker with violence because they have limited access to resources with which to control their

spouses (Hyde-Nolan & Juliao, 2012). Exosystem factors focus on the external stressors to relationships, stating that as stressors present themselves (loss of jobs, deaths, affairs, etc) and exceed their resources, then violence may be the response (Hyde-Nolan & Juliao, 2012). Clearly, many of the theories focused on family violence show the primary limiting factors are outside resources, connections with the community, or the ability to communicate with other family members/friends about the stressors that occur in our lives. There is not a one-size fits all scenario, so multiple theories have been integrated to provide a larger overview of domestic violence and the causal relationships. Including the history of violence that individuals were raised in, the community relationships, and the present stressors they are experiencing really present a risk scale showing the likelihood of domestic violence occurring within their household at any given time.

The current research and analysis will focus on the data obtained from law enforcement and the effect of GPS monitoring and utilize deterrence theory to accompany the explanation of hypotheses based on the utilization of GPS technology. Deterrence theory can be dated back to the late 1700 in writings by Cesare Beccaria and Jeremy Bentham, with the underlying idea stating people will commit crimes to the extent they are more pleasurable than painful. Certain, severe, and swift legal punishments increase the pain for crimes and, thereby, can deter people from committing them. Neither Beccaria nor Bentham systematically defined deterrence, but Gibbs's (1975) definition is conventional: deterrence is the omission or curtailment of a crime from fear of legal punishment. No single version of deterrence theory is accepted universally. However, any version is likely to include something like this: the greater the certainty, severity,



and celerity of legal punishment for a type of crime, the less the rate of that crime. Certainty refers to the likelihood of legal punishment; severity refers to the punishment's magnitude; and celerity refers to its swiftness. In 1978, the National Academy of Sciences published a report, *Deterrence and Incapacitation: Estimating the Effects of Criminal Sanctions on Crime Rates*, which advocated for more thorough assessments of policies and practices based on social control theories and use of deterrence for crime control. Based on the Academy's recommendations, the National Institute of Justice began funding studies related to the deterrent effects of criminal sanctions. In 1980, the Minneapolis Domestic Violence Experiment was a sponsored study that evaluated the effects of mandatory arrest in domestic violence offenses (Sherman & Berk 1984). This experiment concluded there was a successful deterrence effect on individuals when there was a mandatory arrest to this offense, yet multiple studies after have yet to yield such a strong connection, but still show a decrease in recidivism (Sherman, 1992).

Sherman's original study was released quickly and the results led to enormous changes in police responses to domestic violence incidents. This report will hopefully lay the groundwork for additional evaluations of GPS programs which can inform law enforcement what is successful and how to proceed to maintain the safety of victims while spending money on programs that work and not others.

### **GPS Monitoring Within the Criminal Justice System**

In the 1960s, twin brothers Robert and Kirk Gable were studying psychology at Harvard and wanted to develop a way to monitor the movements of juvenile offenders to reward them for

showing up to places on time. They used old military equipment and created a system in which offenders would wear radio devices that communicated their physical location, and when they showed up on time the Gable brothers would be able to give the simple awards like haircuts or free lunches, relying on positive reinforcement to continue the improvement in behavior (<https://rgable.wordpress.com/electronic-monitoring-of-criminal-offenders/>).

Through the years with the increase in overcrowding of jails and overall expense of incarceration, many states and agencies have turned to electronic monitoring devices as a way to lessen these conditions instead of its inventors original intention. The devices have been used for offenders charged with DUI's, burglaries and now for offenders in domestic violence offenses. The technology will continue to develop and along with it the research evaluating it will continue to be generated.

Prior to the development of the electronic monitoring devices, the victims of DV only had the ability to keep individuals away from them by obtaining protective, or restraining, orders. In a study conducted in Kentucky they showed half of the study participants indicated that the protective order had been violated during the six months after receiving it, yet they also stated the abuse was significantly reduced over time (Lyons et al, 2009). Restraining orders typically only outraged the offenders, and there was no ability to track the offender nor have any more than the victim's statement when the violation of the no-contact order occurred.

The original implementation of Electronic monitoring across the United States has quickly evolved from the basic RF models, where an individual was only monitored when they arrived home (or where the base device was located) to the current GPS cell tower based

programs. These programs have almost unlimited ability to track the offender, as well as send notifications to law enforcement, probation officers, and victims. The use of GPS on pretrial offenders has been implemented in almost half of the states for about 5-10 years and is now finally being evaluated on best practices, as well as legal parameters. An article utilizing Kentucky for its research presented multiple findings for a “best practice” in regards to changes in the legislation for the use of GPS for pretrial release and for violations of protective orders (Santry, 2011). The key elements they found that need to be included in future legislation included:

- 1) a lethality assessment to evaluate the risk of continued and escalating violence in the situation;
- 2) an initial judicial review of the lethality assessment and other conditions of dangerousness to determine whether imposition of GPS tracking of the offender is warranted as opposed to incarceration;
- 3) continued monitoring of the situation by authorities, including violation of provisions of any protective order entered by the court, to determine if subsequent imposition of GPS tracking will assist in the enforcement of the terms of the protective order;
- 4) use of reverse tagging GPS in order to augment the effectiveness of both tracking and notification;
- 5) incarceration of the offender upon sufficient demonstration of danger to the victim in order to prevent re-assault of the victim; and
- 6) use of information obtained through GPS tracking only for purposes related to the domestic assault (Santry, 2011, pg. 1123).

A national level review of GPS technology utilized in intimate partner cases was published in 2012 through the National Institute of Justice and clearly demonstrated the differences across the nation in regard to who was placed on these programs, the supplemental programs that accompany the monitoring, and the resultant prosecution or violations. This article had three different aspects. First, there was one being a quasi-experimental design broken down into “Midwest,” “West,” and “South.” They examined the impact of GPS technology on DV defendants’ program violations and re-arrests during the pretrial period (referred to as the

“short term”), and on re-arrests during a one-year follow-up period after case disposition (referred to as the “long term”). Their results showed GPS had a positive impact on the behavior of program participants over both short and long terms, with practically no contact attempts during the short term. The Midwest and West sites had a lower probability of re-arrest during the long term period, yet the South showed no difference and the authors had two possible causes that they presented for this. They stated “the heterogeneity of the defendants who are placed on GPS at this site, and the different method for generating the South sample of DV defendants (discussed below), may account for the absence of GPS impact on arrest in the long term” (Erez, et al, 2012). The lack of findings may also be related to the type of population enrolled in the program. The population of DV offenders in the South versus the other two sites also showed that their criminal records were less extensive than found in the other two regions and that more women offenders were included in the comparison groups. The differences in program practices may also have relevance to these results, which were identified in the qualitative part of the study.

The qualitative aspect included in-depth individual and group interviews with stakeholders in domestic violence cases. The interviews shed light on the variance of approaches to organizing GPS programs, with associated benefits and liabilities. They found that victims largely felt they were provided relief from the kind of abuse suffered prior to GPS, while defendants found they were being protected from false accusations yet found stigma and restrictions were difficult based on some of the GPS programs.

Interviews with criminal justice personnel in the South revealed that individuals may enter the GPS program for reasons other than risk to the victim or community, such as being indigent and unable to post bond. Furthermore, judges also understood the additional assistance provided to those on GPS (more of a social work emphasis), so sometimes they were offered the GPS program to obtain these additional resources. In short, the sample of GPS defendants in the data from the South are far more heterogeneous than was found in the other two sites, potentially diluting the impact of GPS.

The sense that programs have a “win-win” dynamic perhaps accounts all their interviewed professionals from across the justice system spoke highly about what they perceive as the positive attributes or ramifications of GPS for DV. “They include prosecutors who can address victim concerns, judges who can release defendants with some degree of assuredness that he is monitored, and defense attorneys who see it as a tool for getting their clients out of jail as well as a bulwark against false accusations made by the victim (though defense attorneys’ enthusiasm for the programs was certainly more qualified than that of other justice professionals)” (Erez, 2012, pg. 149).

### **Law Enforcement Intervention in Domestic Violence**

When a victim of domestic violence attempts to separate from the offender or reports the violence to the police, the risk of violence increases (Mahoney, 1991; Kurz 1996). Block (2003) found that three-fourths of female homicide victims and 85 percent of women who experienced severe but nonfatal violence had left or tried to leave their batterers within one year of the

incident. Historically, it has proven difficult to protect women in abusive relationships when they report abuse or leave their abuser, but there have been many resources developed over recent years to help assist in their protection and transition. With these advancements victims no longer have to abandon their life and go into hiding at “safehouses”, although many still do. Utilizing GPS technology allows victims to be notified if an offender is in the area of their home, workplace or place of worship. The alerts of exclusionary zones can be sent to them in order to seek shelter, but allows for more freedom than prior to this advancement.

Preventing or deterring contact is difficult in DV cases for a multitude of reasons, most of them unavoidable. The offender is often extremely knowledgeable of the victim’s routines and social relations, which means the victim is constantly worried and concerned about being intercepted or ambushed, even when he/she is away from home. The offender knows where the victim works, where the children go to school, the stores at which they shop, the residences of friends and family, and their home, cellular, and work telephone numbers, as well as the travel routes to arrive at each location. Knowledge of the routines provides the abuser with frequent opportunities to harass, stalk, intimidate, or assault the victim in spite of protection orders which are still highly utilized today (Erez, Ibarra and Lurie, 2004).

Protection orders are intended to restrict the abuser from contacting the victim in person or through other identified means (e.g., by telephone, email, social media, SMS). Although such orders can be beneficial in some situations, they are simply a piece of paper, which can be difficult to enforce when not complied with (Harrell, 1993; Harrell and Smith, 1996), and they offer little threat to a motivated offender and little protection to a petrified victim. These

protection orders have been shown to be less effective when there is a violent offense history (Keilitz et al., 1998; Jordan et al., 2010), or when the offender does not respect the protective orders (Erez and Belknap, 1998; Jordan, 2004). In some cases, protection orders have angered offenders to the extent where they take out revenge on their victims (Erez and Belknap, 1998; Shim and Hwang, 2005).

Due to the dynamics of DV, many abused women are still emotionally or economically attached to the batterer and/or share parenthood of children. They desire to have non-violent contact with the offender and are reluctant, indecisive, or afraid to participate in the prosecution of their significant other (Dichter et al., 2011). At times, due to these dynamics, they will allow their abuser to contact them despite the presence of a court order banning such association, or meet with the abuser at his/her temporary residence or a predetermined public meeting place (Erez et al., 2004). This has led to the death of many DV victims, even when the offenders were placed on GPS monitoring because the victims and offenders met outside of the geo-fencing area identified for their case.

Previous research in DV cases primarily focused on the overall expansion of the RF-based programs in previous years for post-trial sentencing, as well as “no contact” orders issued to the offender in relation to the victim. The research supported the fact that offenders on RF were less likely to violate these orders than those simply issued a no-contact order (Erez et al., 2004). Over a five-year period in the more active of the two sites utilized by Erez in her research *Applying Electronic Monitoring to Domestic Violence Cases*, only one home region incursion was attempted that actually involved victim endangerment; the less active site did not report any

such contacts over an even longer period of time (Erez et al., 2004). Victims in the programs who could augment no-contact orders with electronic monitoring devices found they were strengthened by RF, stating that before the offender would routinely ignore the protection order; now they were rigorously observing it. The victims also accredited this contact-free period to the effectiveness of the technology (Erez & Ibarra, 2007). Not only did this technology advancement assist in preventing future contact by the offender; it was also seen to empower the victims again giving them an improved quality of life at their home instead of being uprooted to a women's shelter (Erez & Ibarra, 2007). Participation in these electronic monitoring programs also brought about a greater percentage of victims who stayed with the court system process, and were willing to testify and less likely to recant, attesting to the fact the defendants had less power with victims than what often occurs in DV cases (Hart, 1993; Worden, 2000). With an increase in the participation by the victims, dismissal rates are lowered significantly, since most states will not prosecute without a willing and cooperative victim.

On the other side, defendants who participated in Ibarra and Erez's research in 2005 stated the bilateral RF experience was "particularly onerous, as something that they wanted to avoid at all costs, so renewed contact with the victim was not worth the risk of new entanglement with an EM program (pg. 267)." They recognized and coped with the strain of being constantly monitored, and depending on how stringent the program is, can actually be contacted once a week by law enforcement, or a representative, to be asked questions or have a drug test administered. On a more positive note, many individuals felt that "participation in the bilateral RF program provided their lives with "structure" that they otherwise lacked, helped them make a



‘fresh start,’ and impressed upon them that they could function without the victim in their lives” (Ibarra & Erez, 2005, pg. 271).

A criticism of diversion programs, which can also be applied to RF programs, that should be noted and addressed is identified by a term called “net widening” (Cohen, 1985; Decker, 1985). Net widening refers to the idea that alternatives to penal strategies represent an extension of penal control by the criminal justice system over civil society (Austin & Krisberg, 1981; McMahon, 1990). This happens when people who are brought into the system would have already been processed or served time and exited the criminal justice system if it had not been for the added diversion program, which also tends to be more intrusive in an individual’s personal life. Net widening is pertinent because DV cases usually have high non-prosecution and dismissal rates relative to other violent offenses (Fagan, 1995), and with the added surveillance of RF programs, defendants are being scrutinized more so than ever before. The net widening thesis suggests that participants in bilateral RF programs, or any GPS program, are more likely to remain entangled in criminal justice processing than nonparticipants. Research completed by Ibarra and Erez in 2005 corroborates these findings, showing that dismissal rates of RF participants is only 14% compared to 44% of non-participants, and the average number of days spent on the program was 18 more than those who did not participate and spent their punishment in jail instead. Although men historically have been the majority of clients subjected to court ordered interventions for DV, and hence the likeliest recipients of net widening effects, arrests of women for domestic violence has been increasing over the past three decades (DeLeon-Granados et al., 2006).

Judges have broadened the focus of EM programs for DV beyond violence between intimate partners to include such circumstances as assaults on or by the third party in a lover's triangle, or parent-child altercations. In addition, although it happens infrequently relative to women, men do seek out protection orders against women (Durfee, 2011). The implication of these trends is that women are becoming likelier candidates for EM programs, raising questions about how women involved in the programs are affected when they have been almost wholly designed with male batterers in mind (Ibarra & Erez, 2011).

Currently the most advanced utilization of electronic monitoring consists of GPS tracking systems, and this is the tool that the Seminole County Sheriff's Office in Central Florida labels "EMPACT," for Electronic Monitoring Protection and Crime Tracking. Seminole County obtains its GPS services from an outside agency, iSecureTrac Systems & Services at the time of this study. Information obtained from their website (<http://www.isecuretrac.com/>) explains in detail what services are available. Their site states that they offer "[their] own proprietary user-friendly, web-based software" which collects data from its monitoring systems that can be set in four ways, active or passive GPS, house arrest, and alcohol monitoring, and violations can then be sent via voice alerts, text messages, and e-mails to the needed personnel.

Supervising personnel and officers also have remote access to this software via a secure internet connection, where upon logging in they can enroll new individuals, establish or edit schedules, assign or reassign equipment type and electronic boundaries, also known as inclusion and exclusion zones, and set the preferred notification preferences. This software also provides access to all report information and key events and can be utilized in solving criminal

investigations. This can be done by pulling up the date and time of the incident and using Microsoft Virtual Earth to view the participant's location, the history, or the date track of the subject. The iSECUREtrac mapping database utilizes an animated mapping overlay that works very similarly to a VCR. "By simply clicking the 'play' button, historical tracking data will be depicted indicating the client's travels including a date/time/velocity stamp for each tracking point gathered"(iSECUREtrac website) . The mapping database offers "pan controls" to slide the map and "zoom features" that are capable of providing street-level geographic information and can also "reverse geo-code" where an approximate physical address for the tracking point will be provided.

An agency has the ability to "...establish boundaries for the zones, either for individual clients or entire caseload populations. This provides for flexible scheduling and curfews that are location-dependent and offers maximum flexibility to agencies as needs and programs change" (iSecure). The zones can range from a whole state or entire city, to a city block or a specific parcel of land and can include multiple zones, which can be created and edited, applied to one or more clients, and resized larger or smaller to best fit the needs of the agency and the victim. Schedules can be assigned based on particular days as well, which is most useful for sessions that the offender is supposed to be attending each week or month like anger management courses or when the victim attends church only on Sundays and that is the day the offender is not permitted in the area.

iSECUREtrac management software also allows agencies to determine the mode of notification, whether it be text, call, fax or email. The notification selection can also be set to

change at certain times of the day or based on type of violations. For example, if the subject is in range of the victim's residence it will generate a call to the investigator based on the inputted information that she is home during certain hours, versus sending a text or email when the violation is at her place of work in the middle of the night and the system identifies as less hazardous since she should only be in this location 8 am through 5 pm. The company also maintains a monitoring center where operators can assist in receiving violations or follow detailed instruction of notifications set forth by the enforcing agency. Many reports can be generated from the system and records are accessible for 90 days until after the offender is removed from the system; then it's permanently archived in the system and could be requested from the company.

Through all of these data, one of the most important findings was released in 2009 by the National Institute of Justice. The report showed that prosecution of domestic violence cases can reduce subsequent arrests and violence. The study said that "more intrusive" sentences, such as jail time and electronic monitoring result in decreased recidivism rates (accessed by arrest records), giving support to the fact that GPS may not solve all violent offenses after its placement but decreases the likelihood of future violations.

The literature presented demonstrates the problematic level of domestic violence within the United States and the evolution of electronic monitoring devices in such circumstances. With the evolution of the technology, and the subsequent use of it specifically for domestic violence offenses, new longitudinal data needs to be evaluated. The following hypotheses expand upon the data that identifies the benefits of GPS monitoring (Durfee, 2011, Ibarra &

Erez, 2005 and 2011) by presenting what specific areas have been improved by the implementation of this method of monitoring and diversion.

## **Hypotheses**

With regard to the above review of existing literature, the current study is designed to examine the following hypotheses and questions, using quantitative and qualitative data obtained from Seminole County Sheriff's Office personnel, state attorney's, victim advocates, probation officers and guardian ad litem who are involved in the GPS system. The Sheriff's Office has utilized GPS monitoring for over five years so there is sufficient longitudinal data to evaluate the effects prior to the initiation of the program and the pursuant change(s) afterward. The study is designed to provide answers to the four following hypotheses presented below.

*Hypothesis 1:* It is expected that there will be a significant decrease in the number of violations by offenders in 2013 compared to 2009 as the program continues to grow.

*Hypothesis 2:* It is expected offenders who utilized weapons during the documented incident(s) will be more likely to violate their GPS boundaries (increase in violence).

*Hypothesis 3:* It is expected suspects in domestic violence incidents where the parties are married are more likely to violate GPS than those in dating and/or family types of relationships.

*Hypothesis 4:* The longer a suspect is on GPS monitoring the greater likelihood of violating the GPS restrictions, due to an increased length of time being monitored.

The hypotheses include analysis on the immediate effect, long term effects, and overall effectiveness of the GPS program in order to determine the changes the utilization of the program truly has on individuals and their long term change in behavior.

### **Significance of Study**

This is important policy-based research because what law enforcement does needs significant empirical findings to support its cost and its role in keeping people safe. This topic does not lack the support because of non-significant findings, it lacks it because the idea of utilizing GPS for DV was simply adapted from other types of crimes using the same technology. The system has been in place since 2008 at Seminole County Sheriff's Office, yet basic questions fail to be answered. The four hypotheses posed will begin to expand the knowledge of the costs and benefits of this program and be able to provide an avenue to maintain, or even expand, the data to even expand with more research or more specific questions to be answered in the future.

### **Contributions of Study**

Since the program has evolved after the initial implementation at Seminole County Sheriff's Office there will be an attempt to determine any advantages or disadvantages to different GPS programs or accompanying approaches such as outreach programs or weekly check-ins from law enforcement. The study will also attempt to identify a way to evaluate, based

on historical cases within Seminole County, the characteristics of future cases that should mandate GPS monitoring for the offender as the agency currently requests ALL domestic violence offenders be placed on the GPS program EMPACT. The advancement in technology also needs to be presented to show the full capabilities of current GPS programs compared to the old RF platform.

This study will also attempt to evaluate the initial comment made by the Director of Central Florida Harbor House at the beginning of this paper, “the worst thing you can do is have someone think they have protection, when, in fact, it’s not working. The evaluation will document the common issues that arise from GPS programs and how they are handled and present what information is received by law enforcement. It will also demonstrate the overall quality of life this program is granting to victims who prior to it had no other option than to escape from their normal daily routines or live in fear of not knowing when the offender could be around the corner from their home, school or work. This will promote knowledge and possible future changes in the use and development in GPS monitoring for DV cases within Seminole County, Florida, and the United States.

## **CHAPTER THREE: METHODS**

This study is comprised of two parts. First is an evaluation of a GPS systems' effectiveness in deterring violations during the pretrial stage of the case, and what factors can be identified that contribute to a possible violation. A quasi-experimental design will be developed to achieve this by analysis of quantitative data collected by the Seminole County Sheriff's Office, which shifted from no electronic monitoring techniques 10 years ago to an established GPS program. Second, questions about the implementation, effectiveness, and impact of GPS will be addressed through in-depth interviews with parties involved with the program utilized in Seminole County including the sheriff's office personnel, probation officers, the state attorney's office staff, and victims advocates.

### **Quantitative Assessment of Program Effectiveness**

Seminole County Sheriff's Office and its employees participated in the quantitative component of the study, by providing the documentation to review their highly developed GPS platform. Their evolution as a DV program, their caseload, their data quality and accessibility makes them the perfect resource. Specifically, data were obtained for all cases assigned to the GPS program, DV-EMPACT, starting from 2008 to present from the sheriff's office reporting system. The data of approximately 2700 cases broken down as follows by year; 2008=12, 2009=245, 2010=322, 2011=544, 2012=512, 2013=713 and 2014 count of 354. The only two years utilized in this research were 2009 and 2013, to measure the change in the number of GPS violations from the first year the program was initiated and 4 years later. The data consist of



offender and victim demographics, locale of incident, severity of incident (measured by weapon utilized), and if a suspect violated the GPS and how they did.

The quantitative data from the sources were gathered and subsequent analyses were performed utilizing appropriate bivariate and multivariate analyses. The resultant information assists in answering all of the above hypotheses. Prior IRB approval was not needed, as the only data being utilized is from public records, and the data will be secured on a computer that can only be accessed by my fingerprint swipe. No identifying names or numbers were included in this data for any of the cases and will only be known to the researcher. This information will only be kept on the fingerprint swipe secured computer and extrapolated straight from the system (CAFÉ) that deputies input data into during the initial arrest. These data were placed into an excel spreadsheet to utilize SPSS to analyze the information obtained. The research uses a quasi-experimental based design on the lack of a random sample and lack of a control group, as the first 102 cases from each year were utilized (excluding duplicate offenders). In 2009 there was only a total 102 intimate partner suspects that were placed on GPS, so to avoid having to weight the findings, only 102 cases were selected from 2013.

### **Qualitative Assessment of GPS-Based Monitoring**

Complementing the quasi-experimental components of the study was the qualitative component using an in-depth survey. The in-depth survey is the preferred approach in qualitative research because it enables investigators to document, in the persons own terms, the issues and problems that concern them (Rubin & Rubin, 1995). The qualitative data documents

stakeholders' experiences and perspectives, and enables an in-depth analysis of how agencies are applying GPS to DV cases. The in-depth survey consists of ten questions, is primarily open-ended and are conducted with all parties involved, directly or indirectly, with GPS-based monitoring for DV cases at participating agencies within Seminole County (See Appendix 1). This was initially designed to be interviews, but due to conflicting schedules, surveys were identified as the technique to allow for more insight from the stakeholders. Such data are essential for shedding light on statistical findings, as well as for revealing contextual issues and social processes otherwise unobservable through administrative data alone. Hypotheses 1 evaluates contact occurring between victim and suspect after placement of GPS. Some of these data can be easily obtained by the CAFÉ system, as a new arrest or a violation of probation could be documented. But the probation officers, road deputies and legal entities involved in these cases may have valuable insights about the reasons for the contacts that have been made, if they are keeping their victims safe, and if their victims feel any safer.

Respondents will be drawn from social service providers, sheriff's office employees, state attorney's responsible for prosecuting DV cases as well as public defenders, probation officers and anyone else later determined to have an impact on the process and belong to the Domestic Violence Task Force. A request to complete the questionnaire was blind-copied emailed to a group email of employees who are involved in domestic violence cases, a total of 29 individuals. They were informed about the purpose of the questionnaire and assured that no one would be named in the report, only the type of profession they stem from. The 14 out of 29 that

responded included three law enforcement officers, two probation officers, three victim advocates, one guardian ad litem, two dispatchers, two state attorneys, and one private attorney.

The topics covered during the surveys were designed to obtain the most pertinent descriptions and evaluations that representatives of each group could offer based on their expertise and/or experience. Although the topics of the surveys were wide-ranging, their central focus was on determining the legal, organizational, and technological distinctions and practices that define and structure the program's working environment, the overall impact that GPS program participation has on defendants and victims (including the latter's safety), and lastly, the quality and intensity of victim support and offender supervision built into the program's design. Thus, questions probed the history and evolution of the interviewees' encounters with the technology, the technology's effects on those who use it, and the support for social interactions for those involved in the case.

The in-depth surveys were reviewed and generalized in the Qualitative Findings Chapter. They were able to help provide in-depth explanations of the positive effects of the program, addressed any issues, and presented resolutions which were all addressed in the policy implications section.

## CHAPTER FOUR: DESCRIPTIVE STATISTICS

### Dependent Variable

The dependent variable noted if a GPS violation was documented during its placement on the suspect. Out of the 204 cases that were selected chronologically based on their case number, 102 came from 2009 and 102 came from 2013. Random selection was not utilized in 2009 as the 102 cases used were the total number of individuals placed on GPS that year for intimate partner violence. For 2013, the 102 cases were selected in order of their “DE” case number, which is assigned when they are physically placed on GPS. Out of the 204 cases, a violation occurred on 41 of the cases (2009=26, 2013=15), or approximately 20% of the time when the number is totaled together. The violations were categorized as cuff tamperers, exclusionary zone violations, victim contact by phone or in person, or more than one type of violation. There were 3 cuff tamper violations (1.4%) (where a suspect attempts removal of GPS equipment or is successful at the removal), 15 exclusionary zone violations (7.3%), 19 times a victim was contacted either in person or by phone (9.3%), and 4 incidents (2%) where there was more than one type of violation (See Figure 1 below). Since there were only a total of 20% of violations that occurred, all types were combined into one category, which created a bivariate variable.



**Figure 1: Total GPS Violations Broken Down by Category**

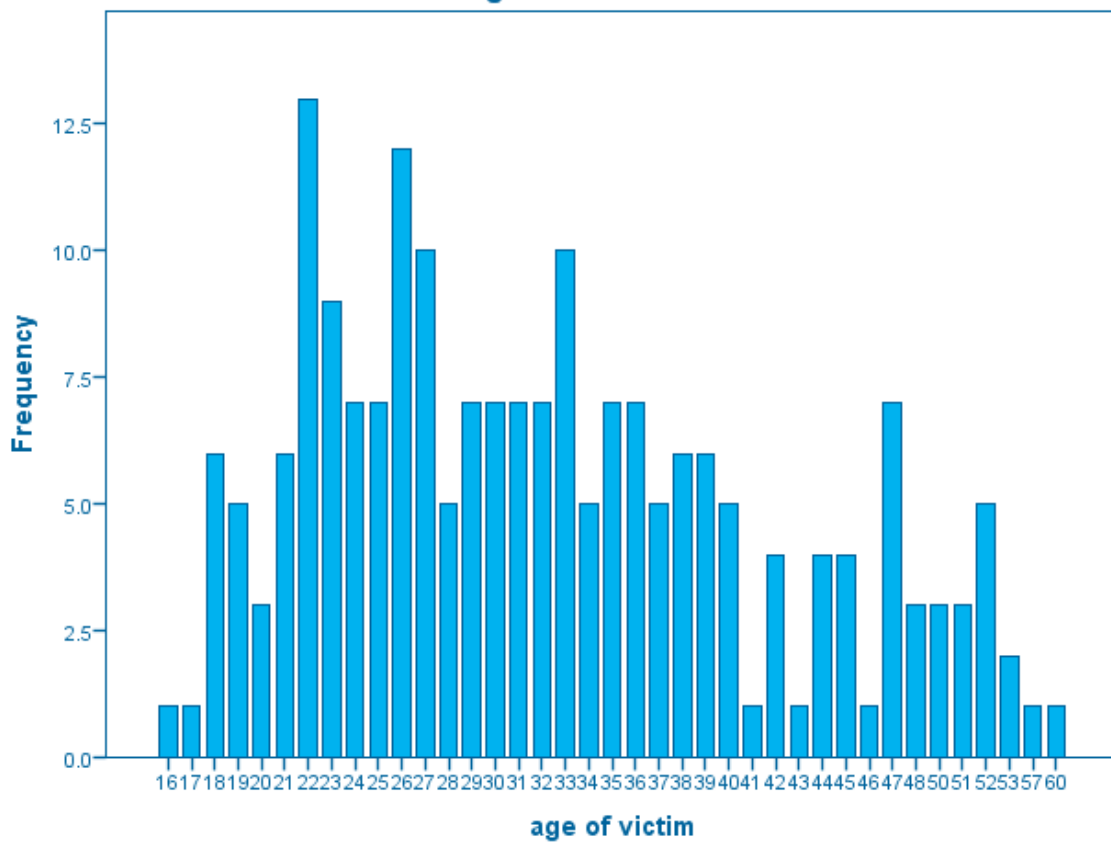
**Independent Variables**

Independent variables detailed below were selected based on the literature discussed above and focus upon victim and offender characteristics and contextual factors.

**Victim Characteristics**

The 204 cases analyzed had singular victims, with the overall majority being female (193 or almost 95%) (See Figure 4 below). The victim’s race was originally documented as white, black, Asian, Native American or Alaskan Native, Pacific Islander, and other since these are the six categories allowed in the documentation system at the Sheriff’s office, but there are so few of all categories but Caucasian, the others were combined together as “other” for the purpose of

analysis. Seventy-four percent of the victims were white and twenty-six percent were other, which is similar to the overall demographics for the county, where eighty percent of the total population are white. The continuous measurement of age by years is presented in the bar graph below, which illustrates the overall distribution (See figure 2 below). The largest percentages of victims ranged from the ages of 20-29 (N=79) and 30-39 (N=67), with them accounting for 38.7% and 32.7 of the total respectively. This appears to be in general agreement with prior research on the ages of DV victims (BJS, 2010). Analysis was also conducted to examine prior incidents of domestic violence for each victim, which showed 65 victims, about 31.9%, had previously been a victim that was documented in the Sheriff's Office reporting system. The 65 that had been re-victimized had done so at the hands of the same suspect, as well as with other offenders about half of the time. Evaluation of the victim's employment found the majority of the documentation was missing in the reporting system, with 128 out of 204 missing, or 62.7%. The remainder showed 26 victims unemployed, 47 employed, and 3 students. Due to the high number of missing cases, this variable was not used in the regression analysis but is used for discussion for policy implications in Chapter 7.

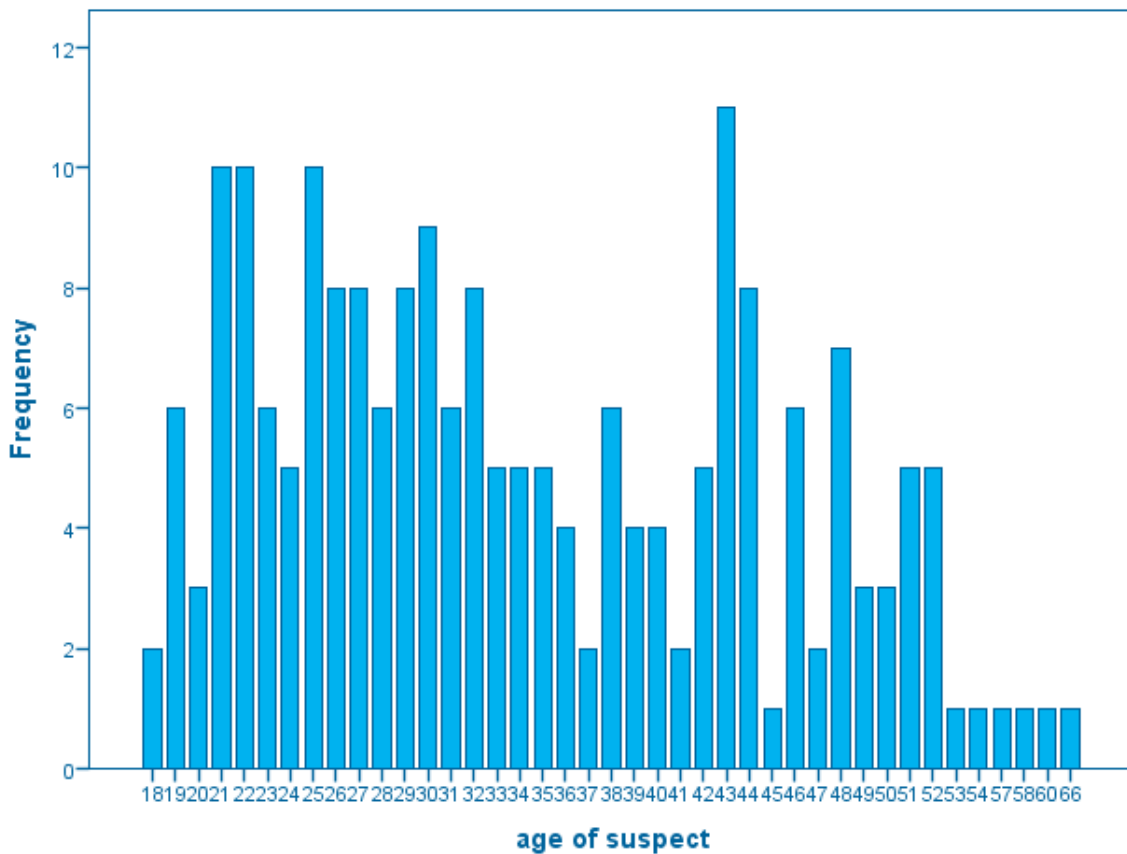


**Figure 2: Age of Each Victim at the Time of Their Incident**

**Suspect Characteristics**

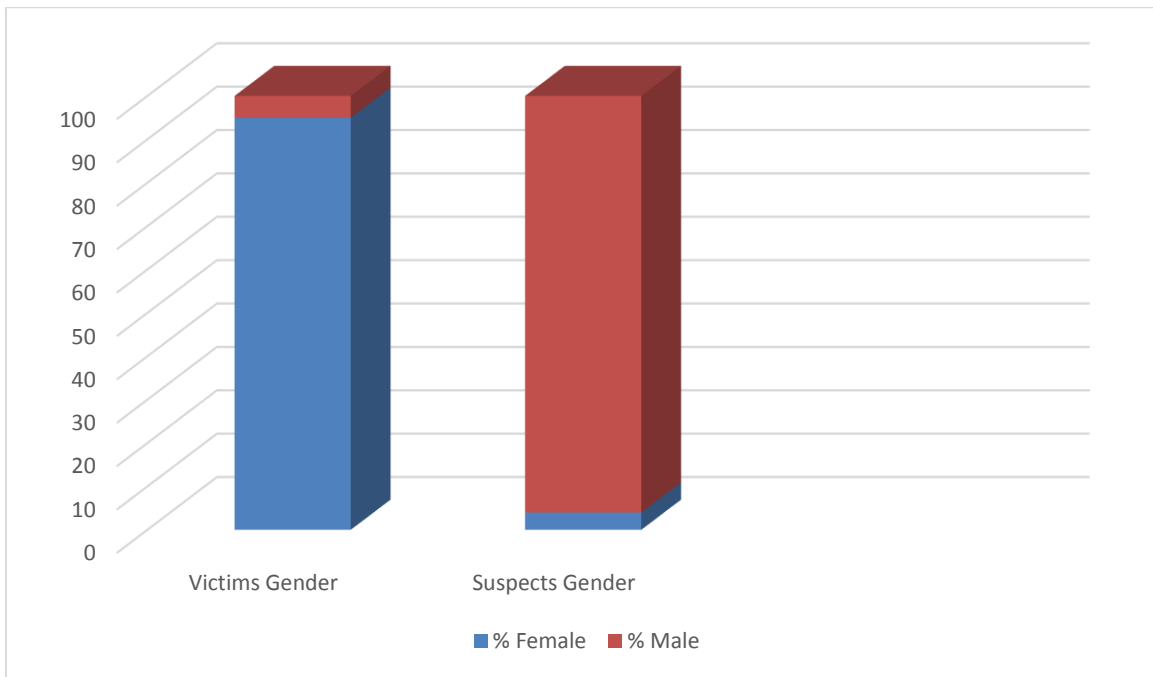
Out of the 204 cases, 196 or 96% were male suspects, with the remaining 8, or 4%, being female (See Figure 4 below). They consisted of 136 Caucasians and 68 other, being 66.7% and 33.3% respectively. This number is lower than the 80% white demonstrated in the census for Seminole County. The range of ages of the suspects was illustrated in the bar graph below, shown in years (See figure 3 below). Again the majority of the offenders landed in the range of 20-29 (N=78) and 30-39 (N=54), representing 36.2% and 26.6% of the total, respectively. An

evaluation of previous domestic violence offenses committed by these suspects and documented in our reporting system found 71 out of 204, or 34.8%, had previously offended within Seminole County. An evaluation of domestic violence offenses committed by these suspects within three years after this incident where they had been placed on GPS showed that 38 out of the 204 reoffended, approximately 18.6%. This variable was not used in the regression analysis but was utilized to Chapter 7 as part of the discussion.



**Figure 3: Age of Each Suspect at the Time of the Incident**



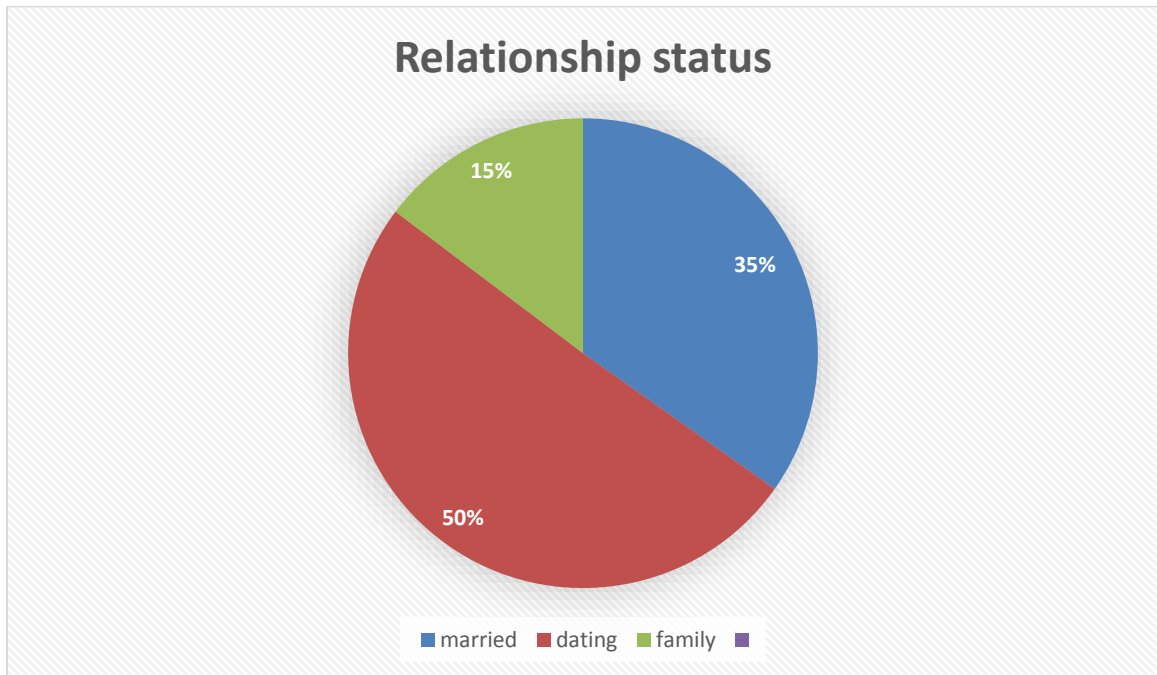


**Figure 4: Gender of Victims and Suspect, by Percentage**

**Incident Characteristics**

The date of the incident is a bivariate variable, 2009 (N=102) and 2013 (N=102), chosen to represent the progress the program has taken from its first full year (2009) until the end of 2013. The relationship of the victim and offender fell into one of three labels; spouse, dating, or family. Spouse is a legally married couple, identified as common law, or if they were currently estranged (in process of divorce or living separately) (N=71). Dating are those individuals involved in a romantic relationship within the last six months and who could also reside together but had never been married nor did they have children in common (N=103). Family meant the

pair had at least one child in common and were no longer in a formal or romantic relationship, so they could either be divorced or the dating relationship had discontinued (N=30) (See Figure 5 below).

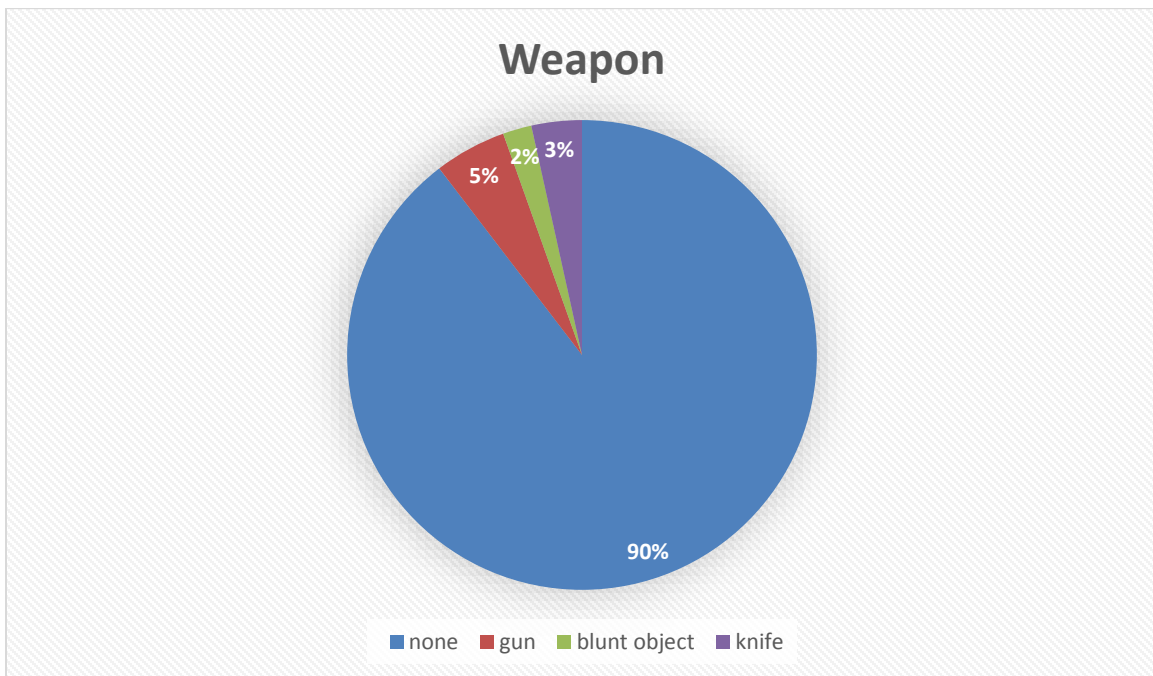


**Figure 5: Relationship Status Based on Percentage During Time of Incident**

The length of time a suspect was placed on GPS (N=204) is a continuous variable labeled by the number of days they were assigned to GPS. The range was one day to five hundred and eleven days, with the median being 73 days a suspect was on GPS during their pretrial status.

The weapons variable was bivariate, due to the small number of individuals who utilized a weapon during the domestic violence incident. The positive response was determined by whether the suspect at any time during the incident presented or used a weapon, to create fear of

imminent danger to the victim. A “weapon” consisted of any gun, sharp force instrument (knife, etc.) or blunt force instrument (bat, stick, etc.). When frequencies were run 183 suspects did not have any weapons involved and 21 cases did have one or more weapons. The other 183 suspects had utilized their hands as weapons, ranging from pushing, grabbing, and slapping to punching and strangulation (See Figure 6 below).



**Figure 6: Type of Weapon Used (if any), by Percentage**

## **CHAPTER FIVE: REGRESSION ANALYSES**

The detailed description of the data from the Seminole County Sheriff's Office were calculated in Chapter Four above. Regression models were then estimated to test the incident and individual level factors that might lead to a violation of GPS by the suspect. Because the dependent variable (violation of GPS vs. no violation) was dichotomous, logistic regression was the most appropriate statistical technique to complete the analysis. Independent variables were grouped into three blocks, with the first block containing demographic characteristics and the year of incident, the second containing the above plus incident factors, and lastly the addition of the duration of GPS monitoring.

### **Independent Variables**

The first analysis, which contained suspect and victim demographics and the year in which the event occurred, was comprised of 8 variables. Dateofincident was a variable indicating that the incident occurred either in 2009 or 2013 (0,1). Genderofsuspect referred to the gender of the offender (0=male, 1=female), ageofsuspect referred to the age of the offender (continuous variable), and DummyRaceSus referred to the race of the offender (0=white, 1=other). The victims' variables were described similarly, with vicgen referring to the gender of the victim (0=male, 1=female), ageofvictim referring to age of the victim (continuous variable), and dummyRaceVic referring to the race of the victim (0=white, 1=other). Also included in this block is the variable "relationship," which refers to the type of relationship the victim and offender were in during the date of the incident (spouse=0, dating=1, family=2, with family

being child in common but no intimate relationship occurring at the time of incident). This variable was of interest because we have very little information on the effects of “dating violence” as it is a newer law, passing in the State of Florida in 2008, and the recidivism or occurrences of violations of offenders while on GPS.

The second block added situational variables from the historical activity of both the victim and suspect, plus situational factors of the incident, with a total of 3 more variables included. *Priorincidentbysuspect* is a dummy variable that documents if there were any other domestic violence incidents documented in Seminole County by the offender (0=no, 1=yes), and *priorincidentbyvictim* is a dummy variable documenting any domestic violence cases the victim had previously been in within Seminole County as well (0=no, 1=yes). The variable *weaponused* was a dummy variable noting if any weapons were utilized during the incident to include guns, sharp force instruments and/or blunt force instruments (0=no, 1=yes).

The third block incorporated all of the above variables, as well as the length of time the suspect was placed on GPS. *GPS* is a continuous variable that documents the number of days the suspect was being monitored through GPS on pretrial release and controls for the length of time the suspect is at risk of violation. Table 1 below outlines these variables and their values.

**Table 1: Description of Variables in Logistic Regression Models**

Variable Name	Measurement
DepVioofGPS (dependent variable)	0=no violation of GPS, 1=Violation of GPS
Genderofsuspect	0=male, 1=female
Ageofsuspect	Continuous variable, age of offender in years
DummyRaceSus	0=white, 1=other
Dateofincident	0=2009, 1=2013
vicgen	0=male, 1=female
dummyRaceVic	0=white, 1=other
Ageofvictim	Continuous variable, age of victim in years
Relationship	0=spouse, 1=dating, 2=family (kids in common)
priorincidentbysuspect	0=no, 1=yes
Priorincidentbyvictim	0=no, 1=yes
Weaponused	0=no, 1=yes
GPS	Continuous variable, number of days on GPS

## **Results**

The results of the regression models (Table 2 below) show that very few variables were significant indicators of GPS violations. Overall, the first model, which contained the demographic variables, was highly significant ( $p=.001$ , Chi-square=26.869,  $df=9$ ), and had a <sup>2</sup>Nagelkerke that was .195. In this model two variables were significant, the race of the suspect

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<sup>2</sup> We report the value of the Nagelkerke R Square in the table, although this statistic is frequently misinterpreted in the literature. There have been numerous attempts to develop a measure that is comparable with R-squared in OLS regression, but there are important differences. Notably, there is no sampling distribution for measures employed in Logistic Regression, so significance tests are not available (Knoke & Bohrnstedt, 1994), and the pseudo R square measures are not interpretable as the proportion explained variance in a model (UCLA Academic Technology Services, 2011). Their correct interpretation remains unclear.

and date of the incident. The model predicts that the odds of violating GPS are 3.765 times higher for minorities than they are for whites ( $p < .01$ ). It also showed that the odds of violating were .465 times higher in 2009 than in 2013 ( $p < .05$ ). None of the remaining demographic variables (age of victim or suspect, race of victim, or the gender of victim or suspect) were found to be significant in the model.

**Table 2: Logistic Regression Results- Dep. Variable Violation of GPS**

Variable	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE B</i>	<i>Exp(B)</i>	<i>B</i>	<i>SE B</i>	<i>Exp(B)</i>	<i>B</i>	<i>SE B</i>	<i>Exp(B)</i>
Gender - Suspect	20.26	14405.	$6.2 \times 10^7$	20.20	14460	$5.8 \times 10^7$	19.29	14706	$2.4 \times 10^7$
Race of Suspect	1.33	.49	3.76**	1.40	.51	4.04**	1.42	.52	4.13**
Age of Suspect	-.003	.03	.997	-.001	.03	.999	.008	0.31	1.01
Gender -Victim	39.59	17923	$1.5 \times 10^{12}$	39.41	18005	$1.3 \times 10^{12}$	38.25	18378	$4.1 \times 10^{15}$
Race of Victim	.06	.50	1.06	.09	.50	1.09	.14	.52	1.15
Age of Victim	.04	.03	1.04	.04	.03	1.04	.03	.03	1.03
Date of incident	-.77	.39	.465*	-.79	.39	.455*	-.65	.40	.524
Relationship									
Dating	.49	.44	1.628	.50	.44	1.69	.50	.45	1.66
Family	-.30	.67	.74	-.28	.68	.758	-.24	.69	.784
Weapon Used				-.36	.64	.699	-.71	.68	.492
Prior Inc. to Vic.				.32	.58	.1.38	.23	.60	1.26
Prior Inc. by Sus.				-.42	.57	.655	-.41	.58	.662
GPS							.006	.002	1.01*
<i>R</i> <sup>2</sup>		.195			.201			.241	

Note: Type of relationships was represented as three dummy variables with 0 serving as the reference group (spouses).

\* $p < .05$ . \*\* $p < .01$ .

In Model 2, the demographic variables, the date of incident, relationship status, and situational variables were included. This model was less significant ( $p=.01$ ), and the pseudo R-squared number was .201 (Nagelkerke). When the situational variables were included the suspect race continued to be significant and the model predicts that the odds of violating GPS are 4.040 times higher for minorities than they are for whites ( $p<.01$ ). It also showed that the odds of violating were .455 times higher in 2009 than in 2013 ( $p<.05$ ). None of the situational factors (relationship status, prior incidents of suspect or victim or weapons used) or remaining demographic factors were found to be significant in the model.

In Model 3, all of the above variables were included and the number of days the suspect was on GPS was added. The Model was highly significant ( $p=.001$ ) and had a Nagelkerke result of .241. The length of days a suspect was on GPS was highly significant and predicted that the odds of violating GPS rules are 1.006 times higher each additional day a suspect is assigned to be monitored on GPS. With the addition of the length of days on GPS, the date of incident lost significance but the race of the suspect maintained it. The model showed that the odds of violating GPS were 4.127 times higher for minorities than whites ( $p<.01$ ). None of the situational factors or remaining demographic factors were found to be significant. See Appendix X for full regression output from SPSS.

## **Discussion**

While the results of the logistic regression were not exactly what was expected the significant results are important. The two models did not differ much in significant variables or



overall model fit, even when variables were added that I believed could play a part in increasing likelihood of an individual violating the GPS parameters. Obviously, the current regression models do not capture all the variables impacting whether an offender violates their GPS, but they do show there is a significant difference between 2009 and 2013, which is a main focus of this paper. The only significant variable in regard to demographics was race of the suspect, with minorities more likely to violate than whites. Lastly, the length of time a suspect is on GPS is significant. None of the situational factors were significant, leaving minimal direction to identify what types of suspects should be placed on GPS based on factors of the domestic violence act or prior actions.

Of course, the above regression results represent only one part of the current study. It is important to consider all available data, including input from those involved in these incidents and the process of placing offenders on GPS. Chapter Six: Qualitative Surveys will describe the stakeholders input on the change that GPS technology has brought about in the cases of domestic violence in Seminole County.

## CHAPTER SIX: QUALITATIVE SURVEYS

Although the logistic regression results show minimal factors that support the effectiveness of the domestic violence GPS Empact program, the qualitative surveys of stakeholders show an in-depth perception of the change they have seen arise since the implementation of this program. Fourteen surveys were collected and the overwhelming majority came to the same conclusion-the use of GPS increased the safety of the victim. It appears that in every aspect of the process, those that are involved hear the same thing from the victims, the knowledge that wherever the suspect travels it will be documented and monitored, allowing the victims to feel they are safer while the GPS is in place (See Appendix B for Survey questions).

### **Benefits**

Survey responses were submitted by law enforcement, probation officers, telecommunications supervisors (dispatchers), victim advocates, attorneys and Guardian Ad Litem (a guardian appointed by the court to represent the interest in juveniles) and although they have very different responsibilities within the Domestic Violence Empact program, they all were supportive of the use of the GPS monitoring system. The domestic violence investigator from Seminole County Sheriff's office stated she has observed that the utilization of the GPS has benefited the victim "because they feel safe in their own home. They have peace of mind knowing that their offender can't come within 1500 feet of their house without them knowing." The Victim advocate responded to the same question with "I have seen a decrease in reported

events of aggressive behavior towards the victim, and an increased sense of security/safety.

Though only temporary, I have found that most victims, who find it beneficial, often wish it were a more lengthy period of time.”

The victim advocate, as well as most others, said that there was a small group of victims who did not find it beneficial, and those primarily consisted of spouses who didn't want to follow-up with charges or those that relied on child care responsibilities by the offender. As stated by the DV Investigator “It's not up to the victim whether GPS is ordered or not, it's all up to the judge...when the offender can't live in the house with them anymore they can get pretty angry and anything to get the GPS removed.” The probation officer responded to the same question that the “victims that do not want help and have a pattern of this (being involved in DV cases with the suspect or others) actually complain and do what they can to circumvent the GPS program by meeting offenders outside of the zone.” To attempt to minimize this type of contact the sheriff's office does random “show-ups” at the offender's residence, where if the victim is found in contact with the offender, they would be arrested again.

Very few respondents had any involvement with the judicial system and/or prosecution to offer valid input on the effects this program has had on prosecution rates, but the Supervisor of the Domestic Violence Unit was able to, she stated that “the prosecution rates only improved once a domestic violence unit was developed where they could develop the relationships with the state prosecutors to push cases that they believed were the most volatile and detrimental to the victim. [When there is a violation of GPS] the state still wants to know the “intent” of the offender when they are in the violation zone prior to going forward with prosecution.” The 40

cases where an offender had violated the GPS consisted of two tamper cases (where offender cuts off GPS or doesn't charge it), 15 exclusionary zone violations, 19 contacts with the victims (either by phone or person) and four where it included more than one of the previous listed violation methods. More of these violations occurred in 2009 versus 2013 and not only is the word spreading about the likelihood that GPS will be used, but also that since 2012 there has been the new formation of a domestic violence unit, that will do unannounced home checks on suspects and follow-up on cases that they deem need special attention. This combination is what the Sergeant feels is making the biggest difference stating "Seminole county was the number one in the state per capita for domestic violence homicides at the time when all of these initiatives were developed and implemented in 2008. As of the implementation of the GPS Impact program, there has not been one domestic violence homicide while the offender was on GPS."

## **Improvements**

The questions regarding needed improvements primarily focused around technology (software issues) and the "false alarms" that arise or when they lose connection all together with a device. In addition, two individuals commented on the lack of up to date residential information for the victim. The victim advocate stated her biggest concern would be "inaccurate address/information of the victim that is passed on from the law enforcement report. This in turn increases the likelihood that the defendant can make contact with the victim and possibly cause more harm." The communications specialist reiterated this thought stating "it would be beneficial if victim information was more accurate, at times it is incorrect and outdated."

Clearly this is an aspect of the program that was not able to be identified in the quantitative data collected and is one that needs to be addressed further in the discussion chapter to follow.

This year (2016) the Seminole County Sheriff's Office began utilizing a new company with new software and GPS bracelets, which have already shown a great improvement in reducing the number of false alarms. They are also able to offer the victims a piece of equipment that is about the size of a cell phone to carry with them that allows them to receive notification if their offender is within 1500 feet of them. They no longer have to remain in the "protected areas" to know her offender is being monitored, she will be able to shop at the mall, go out to dinner and to the beach and still be alerted if he is within 1500 feet, and, it will contact law enforcement for her.

Communications supervisors stated there can be difficulty communicating with the offender when they receive an alert. This information needs to be passed onto probation and then onto the developer/service provider and see if there is a way to communicate more effectively. This project has brought this issue to light and the information has already been disseminated to the appropriate section to seek improvements.

## **CHAPTER SEVEN: CONCLUSIONS**

### **Discussion and Policy Implications**

The purpose of this study was tri-fold. First, this project was to test the effectiveness of the Domestic Violence GPS Empact program by measuring the violations which occurred in 2009 and 2013. Second, it was to see that if the presumed benefits tested were identified and felt by the persons involved in various aspects of the program including law enforcement, State Attorney's Office, Victim's Advocates, and employees of supporting entities. And lastly, it was to try and identify which characteristics led to violations based on demographic and situational factors. In the end, the results were mixed. The quantitative results showed that only the race of the suspect was significant, so identifying why the program has significantly less violations in 2013 was not able to be determined. The qualitative interviews led to the overwhelming majority finding the implementation of this program to not only be beneficial but necessary.

During the quantitative data gathering there were multiple items that were identified that should be addressed with policy improvements. The policy improvements would include a section in the data system where there could be cross identification of the arrest report and the GPS case number, follow-up with missing data (primarily employment information—multiple reasons, help with job placement if needed or for GPS boundary), and make sure investigators are following up to correct any wrong residential information (primarily for protection of the victim).

During the initial data collection, it was quickly learned that there was no accurate way to pull information from our domestic violence arrest reports at the sheriff's office and know which

offenders had been placed on GPS. Within our reporting system these are labeled as “OR” reports (offense reports), instead of “DE”, or Domestic Empact. A case number had to be what was utilized to see who was placed on GPS Empact, which had little to no information about the actual incident. Once I was able to pull the information about the offender from the “DE” case number, I had to search back through the records by offender name and find the related “OR” to retrieve detailed information. The inability to link the two cases in our reporting system makes it impossible for researchers, or just as importantly our crime analysts, to relate the two cases. This is something that can be improved easily by the IT department of the sheriff’s office and make future inquiries much quicker and efficient.

Also identified during the initial collection period was the lack of employment information for the victim and suspect. Although I wanted to know the employment information for the victim so I could examine it as a variable for GPS violation (contact more likely when they are unemployed), it is important to know employment for both parties for safety reasons as well. Having information about where an offender should be located, as in the suspects place of business, helps in the immediate need to make contact with them, and further if there are concerns about their behavior and whereabouts if the suspect is to cut off the GPS bracelet. Having victim information about employment again helps in multiple aspects including immediate access to information law enforcement has during emergencies, information for probation when identifying locations of violation, and for victims advocates to have knowledge of this to assist in either transitional housing or other assistance if unemployed. This section should be completed by the initial responding deputy, reviewed by a supervisor for completeness

and, if still incomplete, completed by the investigator, if one is assigned. There are already multiple layers of review in place for this to be completed, and the importance of the completeness of the reports may just need to be reiterated to deputies and supervisors.

Lastly, identified by the qualitative surveys was the possibility of the victims' residential information not being up-to-date, possibly delaying response time or a violation not even being identified. If the new address is not in the violation zone, an alert would never occur. This information needs to be updated as quickly as possible when a move happens, and that needs to be shared with the victims throughout the process. Many of the victims will not have contact with law enforcement again after the arrest of the offender, so a victim must call in and update their information to probation, since probation is ultimately responsible for setting boundaries for the program.

### **Further studies**

After completing the data collection, I quickly realized how much data collection and future studies could be conducted. The most important items that I identified were expanding the variables on prior or future violations outside of Seminole County, analyzing overall DV arrests for the year, and comparing the number of males versus females placed on DV Empact. There also needs to be an evaluation of the cases where the suspect is identified as deceased after the arrest or where the suspect or victim suffers from mentally ill, drug, and alcohol abuse during the incident. If we are able to identify these health issues early on in the incident, resources could be utilized to assist in recovery of drug or alcohol addiction or mental health counseling can be



offered. Lastly, there were many noted violations of injunctions leading to GPS placement, which needs to be examined for the efficacy of a method that clearly does not work because the lack of monitoring that a piece of paper offers. Each of these items would likely produce substantial findings for domestic violence research and can be added to the present data.

One limitation that was noted during this research was the prior offenses variable and reoffending within three years variable only included violations, which occurred within Seminole County. The reporting system includes all cities within the county, but any offenses that occurred in other counties or states were not accounted for, minimizing the number of individuals who previously offended or reoffended. These variables may have to be adjusted for future research but it could lead to a more in-depth perspective as well, especially since we are examining the program as a deterrence to reoffend knowing as an offender your movements would be monitored 24 hours a day. If an offender is attempting to elude this type of punishment they could force their family to move to other counties or states, creating protection for themselves and more danger for the victims. In addition, utilizing the measure of repeat domestic violence through re-arrest was likely to miss incidents since we know abuse may not be reported for multiple reasons (e.g., finances, fear, or dependence) but the offending continues. However, it was not in the scope of this research to obtain data from victims about unreported abuse but it clearly minimizes the number of violations in the findings.

Utilizing one hundred and two GPS Empact cases from 2009 and one hundred and two from 2013 completely negated any evaluation on the total number of domestic violence arrests for each year and who was actually placed on GPS. An analyzation of overall DV arrests for the

year and comparison of how many of those are placed on GPS would be important to know. This would allow the agency to explain “who” is being placed on GPS monitoring based on the type of crime committed during the domestic violence incident or if it is based on prior history, etc. During this analysis it would also be intriguing to determine if there is a difference between the number of males and females placed on the program. Adding these data to those already collected can answer a multitude of questions about the offenders being placed on the program, which would be beneficial for the stakeholders involved in the process.

The length of time offenders are placed on GPS would be an important variable to incorporate, as one of the other things that was noted was the number of violations that occurred while someone had an injunction but not on GPS. Clearly sending someone to the courthouse for them to receive an injunction against their significant other is not doing a sufficient job of protecting them. During the course of this dissertation an estranged husband murdered his wife, two children and then committed suicide during an active injunction in Seminole County.

The qualitative aspect of this project was limited in that it primarily relied on surveys as the method for documenting the perspectives of stakeholders. Although the survey covered the basic feelings about the Domestic Violence Empact program, ideally it is complemented with extensive observational fieldwork, as the latter provides insights into a more thorough understanding that may not emerge in the course of someone responding to a survey. This would entail involving direct conversations with those involved in this process and evaluate each case in a more thorough process and then compare them to those not being placed on GPS.

There were multiple elements that came into play when reviewing all the narratives for data collection that in future research could be added and can assist victims advocates and others in determining assistance and possibly causal factors of domestic violence incidents. Of the 204 cases there were two incidents that ended with the suspect subsequently committing suicide, and more than half where drugs, alcohol or mental illness played a part during the incident.

Intimate partner violence continues to plaque our communities and the only way to continue addressing is the constant development in research, policy and practice. This will be most effective by partnering up with our local law enforcement agencies and non-governmental organizations and continuing the push for the improved safety and support for the victims. The victims rely on the continued improvements of the use of these GPS programs and the support from our communities to regain their independent, healthy lives.

## **APPENDIX A: PERMISSION TO USE SCSO DATA**



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**TO: Sheriff Donald Eslinger**

**Via: Chain of Command**

**FROM: Rachel Rados**

**DATE: 09/10/12**

**SUBJECT: Doctorate Dissertation**

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In January of 2013, I will begin dissertation hours at the University of Central Florida and have it proposed to be completed in December 2013. I would like to conduct research on our Domestic Violence EMPACT program at the agency, focusing on how the program has provided our citizens with an extra layer of protection. I know this statistical analysis will show we are not only saving lives but decreasing the recidivism of stalking and harassment by the perpetrators. I have spoken with Captain Ryan, and she is in support of this research and has offered any assistance to make this successful for the agency and for my dissertation.

Please contact me if you have any questions, and thank you for your consideration.

**APPENDIX B: SURVEY DISCLOSURE AND QUESTIONNAIRE**

## **Participant Waiver for Survey**

You are invited to partake in a survey about the use of Electronic Monitoring (EM) technologies currently utilized within Seminole County, Florida. Your input will be used to help achieve a better understanding of protective potentials, costs, accuracy, reliability, versatility and progress of EM technology.

Please review the following information before the start of the interview:

Your participation in this project is voluntary and you are free to withdraw at any time.

If you agree to participate, you will be asked to complete a 10 questions survey that should take approximately 30 minutes of your time.

There are no anticipated risks to you participating. If you do not feel comfortable answering a question you may skip it.

The survey will be anonymous; there will be no identifying factors used to be linked to you. All responses (recordings) will be kept in a secure location to which only I will have access (fingerprint scanner laptop).

Your participation in this survey will give you the opportunity to voice your concerns about public safety issues. By participating in this survey, you are helping to evaluate the current system and advancements still need to be made.

Remember, your participation in this project is voluntary. You are free to withdraw at any time or refuse to answer questions you are not comfortable answering.

I have read the above information. My signature below means I agree to participate in this research.

---

SIGNATURE



**Survey with the Seminole County Domestic Violence Employees (Deputies,  
State Attorney's Office, Probation)**

1. What is your name and what is your current employment? (This will be maintained by the interviewer only)
2. Within this employment do you have interaction with domestic violence victims, suspects or the process of GPS monitoring? If yes, what is this interaction?
3. What are your initial thoughts about the transition to GPS monitoring for suspects versus non GPS?
4. What benefits have you observed with the utilization of GPS monitoring in regards to overall public safety (primarily to the victim)?
5. Among the stakeholders (law enforcement, SAO, PD, victims advocated, the jail) involved which one do you believe are benefiting from the usage of GPS? Why? Which one do you believe are not benefitting and why?
6. Have you experienced/observed any differences in recidivism of suspects placed on GPS versus those not placed on GPS?
7. Have you experienced/observed any change in behavior of victims when the suspect is placed on GPS versus not placed on GPS?
8. Have you observed any change in prosecution rates since the initiation of the GPS program?
9. What complications have you observed with the utilization of GPS monitoring (two part: mechanically/technically versus psychologically/behavioral)?
10. What improvements do you think could be made in the overall process of GPS monitoring?

## **APPENDIX C: SPSS LOGISTIC REGRESSION RESULTS**

**Case Processing Summary**

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	204	100.0
	Missing Cases	0	.0
	Total	204	100.0
Unselected Cases		0	.0
Total		204	100.0

a. If weight is in effect, see classification table for the total number of cases.

**Dependent Variable Encoding**

Original Value	Internal Value
NO	0
YES	1

**Categorical Variables Codings**

		Frequency	Parameter coding	
			(1)	(2)
relationship	SPOUSE	71	.000	.000
	DATING	103	1.000	.000
	FAMILY	30	.000	1.000
weapon used	NO	183	.000	
	YES	21	1.000	
dummy race of suspect	white	136	.000	
	other	68	1.000	
date of incident	2009	102	.000	
	2013	102	1.000	
dummy race of vic	white	151	.000	
	other	53	1.000	
prior incident by suspect	NO	133	.000	
	YES	71	1.000	
prior incident by victim	NO	139	.000	
	yes	65	1.000	
gender of suspect	MALE	196	.000	
	FEMALE	8	1.000	

## Block 0: Beginning Block

Classification Table<sup>a,b</sup>

	Observed	Predicted			
		DepVioofGPS		Percentage Correct	
		NO	YES		
Step 0	DepVioofGPS	NO	163	0	100.0
		YES	41	0	.0
	Overall Percentage				79.9

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	-1.380	.175	62.404	1	.000	.252

Variables not in the Equation

	Score	df	Sig.
Step 0 Variables			
genderofsuspect(1)	.299	1	.584
ageofsuspect	.165	1	.685
DummyRaceSus(1)	9.539	1	.002
dateofincident(1)	3.694	1	.055
vicgen	2.925	1	.087
dummyRaceVic(1)	3.001	1	.083
ageofvictim	1.028	1	.311
relationship	1.654	2	.437
relationship(1)	1.329	1	.249
relationship(2)	1.002	1	.317
Overall Statistics	21.798	9	.010

## Block 1: Method = Enter

**Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	26.869	9	.001
	Block	26.869	9	.001
	Model	26.869	9	.001

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	177.848 <sup>a</sup>	.123	.195

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

**Classification Table<sup>a</sup>**

		Predicted			
		DepVioofGPS		Percentage Correct	
		NO	YES		
Step 1	Observed				
	DepVioofGPS	NO	158	5	96.9
		YES	39	2	4.9
Overall Percentage					78.4

a. The cut value is .500

**Variables in the Equation**

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	genderofsuspect(1)	20.258	14405.224	.000	1	.999	627835901.251
	ageofsuspect	-.003	.029	.014	1	.907	.997
	DummyRaceSus(1)	1.326	.498	7.099	1	.008	3.765
	dateofincident(1)	-.765	.391	3.830	1	.050	.465
	vicgen	39.587	17923.481	.000	1	.998	155679387373074336.000
	dummyRaceVic(1)	.061	.500	.015	1	.903	1.063
	ageofvictim	.038	.030	1.634	1	.201	1.039
	relationship			2.238	2	.327	

relationship(1)	.487	.435	1.256	1	.262	1.628
relationship(2)	-.301	.673	.200	1	.655	.740
Constant	-42.497	17923.481	.000	1	.998	.000

a. Variable(s) entered on step 1: genderofsuspect, ageofsuspect, DummyRaceSus, dateofincident, vicgen, dummyRaceVic, ageofvictim, relationship.

## Block 2: Method = Enter

**Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	.843	3	.839
	Block	.843	3	.839
	Model	27.713	12	.006

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	177.005 <sup>a</sup>	.127	.201

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

**Classification Table<sup>a</sup>**

		Predicted			
		DepVioofGPS		Percentage Correct	
		NO	YES		
Step 1	Observed				
	DepVioofGPS	NO	160	3	98.2
		YES	38	3	7.3
		Overall Percentage			79.9

a. The cut value is .500

**Variables in the Equation**

		B	S.E.	Wald	df	Sig.	Exp(B)
Step	genderofsuspect(1)	20.195	14460.474	.000	1	.999	589799506.806
1 <sup>a</sup>	ageofsuspect	-.001	.030	.002	1	.969	.999
	DummyRaceSus(1)	1.396	.509	7.523	1	.006	4.040
	dateofincident(1)	-.788	.393	4.013	1	.045	.455
	vicgen	39.411	18005.230	.000	1	.998	130558942016770848.000
	dummyRaceVic(1)	.089	.504	.031	1	.860	1.093
	ageofvictim	.040	.030	1.700	1	.192	1.040
	relationship			2.235	2	.327	
	relationship(1)	.499	.439	1.296	1	.255	1.648
	relationship(2)	-.278	.679	.167	1	.683	.758
	priorincidentbysuspect(1)	-.422	.573	.544	1	.461	.655
	priorincidentbyvictim(1)	.321	.582	.305	1	.581	1.379
	weaponused(1)	-.358	.638	.315	1	.575	.699
	Constant	-42.403	18005.230	.000	1	.998	.000

a. Variable(s) entered on step 1: genderofsuspect, ageofsuspect, DummyRaceSus, dateofincident, vicgen, dummyRaceVic, ageofvictim, relationship, priorincidentbysuspect, priorincidentbyvictim, weaponused.

**Case Processing Summary**

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	204	100.0
	Missing Cases	0	.0
	Total	204	100.0
Unselected Cases		0	.0
Total		204	100.0

a. If weight is in effect, see classification table for the total number of cases.

**Dependent Variable Encoding**

Original Value	Internal Value
NO	0

YES	1
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**Categorical Variables Codings**

		Frequency	Parameter coding	
			(1)	(2)
relationship	SPOUSE	71	.000	.000
	DATING	103	1.000	.000
	FAMILY	30	.000	1.000
dummy race of suspect	white	136	.000	
	other	68	1.000	
date of incident	2009	102	.000	
	2013	102	1.000	
dummy race of vic	white	151	.000	
	other	53	1.000	
gender of suspect	MALE	196	.000	
	FEMALE	8	1.000	

**Block 0: Beginning Block**

**Classification Table<sup>a,b</sup>**

			Predicted		
			DepVioofGPS		Percentage Correct
			NO	YES	
Observed					
Step 0	DepVioofGPS	NO	163	0	100.0
		YES	41	0	.0
Overall Percentage					79.9

a. Constant is included in the model.

b. The cut value is .500

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	-1.380	.175	62.404	1	.000	.252



**Variables not in the Equation**

			Score	df	Sig.
Step 0	Variables	genderofsuspect(1)	.299	1	.584
		ageofsuspect	.165	1	.685
		DummyRaceSus(1)	9.539	1	.002
		dateofincident(1)	3.694	1	.055
		vicgen	2.925	1	.087
		dummyRaceVic(1)	3.001	1	.083
		ageofvictim	1.028	1	.311
		relationship	1.654	2	.437
		relationship(1)	1.329	1	.249
		relationship(2)	1.002	1	.317
		priorincidentbysuspect	.217	1	.641
		priorincidentbyvictim	.159	1	.690
		weaponused	.016	1	.899
		GPS	11.301	1	.001
		Overall Statistics			30.716

**Block 1: Method = Enter**

**Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	33.780	13	.001
	Block	33.780	13	.001
	Model	33.780	13	.001

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square

1	170.938 <sup>a</sup>	.153	.241
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a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

**Classification Table<sup>a</sup>**

	Observed	Predicted			
		DepVioofGPS		Percentage Correct	
		NO	YES		
Step 1	DepVioofGPS	NO	160	3	98.2
		YES	33	8	19.5
	Overall Percentage				82.4

a. The cut value is .500

**Variables in the Equation**

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	genderofsuspect(1)	19.299	14706.402	.000	1	.999	240743870.093
	ageofsuspect	.008	.031	.070	1	.791	1.008
	DummyRaceSus(1)	1.418	.522	7.363	1	.007	4.127
	dateofincident(1)	-.646	.404	2.559	1	.110	.524
	vicgen	38.247	18378.822	.000	1	.998	40790518130210480.000
	dummyRaceVic(1)	.140	.515	.074	1	.786	1.150
	ageofvictim	.033	.031	1.113	1	.292	1.034
	relationship			2.112	2	.348	
	relationship(1)	.504	.449	1.262	1	.261	1.656
	relationship(2)	-.244	.688	.126	1	.723	.784
	priorincidentbysuspect	-.413	.584	.499	1	.480	.662
	priorincidentbyvictim	.232	.597	.151	1	.698	1.261
	weaponused	-.709	.677	1.095	1	.295	.492
	GPS	.006	.002	5.758	1	.016	1.006
	Constant	-41.894	18378.822	.000	1	.998	.000

a. Variable(s) entered on step 1: genderofsuspect, ageofsuspect, DummyRaceSus, dateofincident, vicgen, dummyRaceVic, ageofvictim, relationship, priorincidentbysuspect, priorincidentbyvictim, weaponused, GPS.

**Case Processing Summary**

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	204	100.0
	Missing Cases	0	.0
	Total	204	100.0
Unselected Cases		0	.0
Total		204	100.0

a. If weight is in effect, see classification table for the total number of cases.

**Dependent Variable Encoding**

Original Value	Internal Value
NO	0
YES	1

**Categorical Variables Codings**

		Frequency	Parameter coding	
			(1)	(2)
relationship	SPOUSE	71	.000	.000
	DATING	103	1.000	.000
	FAMILY	30	.000	1.000

**Block 0: Beginning Block**

**Classification Table<sup>a,b</sup>**

			Predicted		
			DepVioofGPS		Percentage Correct
			NO	YES	
Step 0	DepVioofGPS	NO	163	0	100.0
		YES	41	0	.0

Overall Percentage				79.9
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- a. Constant is included in the model.
- b. The cut value is .500

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	-1.380	.175	62.404	1	.000	.252

**Variables not in the Equation**

	Score	df	Sig.
Step 0 Variables relationship	1.654	2	.437
relationship(1)	1.329	1	.249
relationship(2)	1.002	1	.317
Overall Statistics	1.654	2	.437

**Block 1: Method = Enter**

**Omnibus Tests of Model Coefficients**

	Chi-square	df	Sig.
Step 1 Step	1.722	2	.423
Block	1.722	2	.423
Model	1.722	2	.423

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	202.996 <sup>a</sup>	.008	.013

- a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

**Classification Table<sup>a</sup>**

		Predicted			
		DepVioofGPS		Percentage Correct	
		NO	YES		
Step 1	Observed				
	DepVioofGPS	NO	163	0	100.0
		YES	41	0	.0
Overall Percentage					79.9

a. The cut value is .500

**Variables in the Equation**

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	relationship			1.626	2	.444	
	relationship(1)	.304	.385	.623	1	.430	1.355
	relationship(2)	-.376	.619	.370	1	.543	.686
	Constant	-1.495	.307	23.751	1	.000	.224

a. Variable(s) entered on step 1: relationship.

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
DepVioofGPS * relationship	204	100.0%	0	0.0%	204	100.0%
DepVioofGPS * weapon used	204	100.0%	0	0.0%	204	100.0%
DepVioofGPS * prior incident by suspect	204	100.0%	0	0.0%	204	100.0%
DepVioofGPS * prior incident by victim	204	100.0%	0	0.0%	204	100.0%

**DepVioofGPS \* relationship**

**Crosstab**

Count

		relationship			Total
		SPOUSE	DATING	FAMILY	
DepVioofGPS	NO	58	79	26	163
	YES	13	24	4	41
Total		71	103	30	204

**Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.654 <sup>a</sup>	2	.437
Likelihood Ratio	1.722	2	.423
Linear-by-Linear Association	.039	1	.844
N of Valid Cases	204		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.03.

**DepVioofGPS \* weapon used**

**Crosstab**

Count

		weapon used		Total
		NO	YES	
DepVioofGPS	NO	146	17	163
	YES	37	4	41
Total		183	21	204

**Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.016 <sup>a</sup>	1	.899		

Continuity Correction <sup>b</sup>	.000	1	1.000		
Likelihood Ratio	.016	1	.898		
Fisher's Exact Test				1.000	.581
Linear-by-Linear Association	.016	1	.899		
N of Valid Cases	204				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.22.

b. Computed only for a 2x2 table

### DepVioofGPS \* prior incident by suspect

#### Crosstab

Count

		prior incident by suspect		Total
		NO	YES	
DepVioofGPS	NO	105	58	163
	YES	28	13	41
Total		133	71	204

#### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.217 <sup>a</sup>	1	.641		
Continuity Correction <sup>b</sup>	.080	1	.778		
Likelihood Ratio	.219	1	.640		
Fisher's Exact Test				.716	.393
Linear-by-Linear Association	.216	1	.642		
N of Valid Cases	204				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.27.

b. Computed only for a 2x2 table

## DepVioofGPS \* prior incident by victim

### Crosstab

Count

		prior incident by victim		Total
		NO	yes	
DepVioofGPS	NO	110	53	163
	YES	29	12	41
Total		139	65	204

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.159 <sup>a</sup>	1	.690	.851	.422
Continuity Correction <sup>b</sup>	.045	1	.833		
Likelihood Ratio	.161	1	.688		
Fisher's Exact Test					
Linear-by-Linear Association	.158	1	.691		
N of Valid Cases	204				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.06.

b. Computed only for a 2x2 table

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Days on GPS * DepVioofGPS	204	100.0%	0	0.0%	204	100.0%

Days on GPS \* DepVioofGPS Crosstabulation



Count

		DepVioofGPS		Total
		NO	YES	
Days on GPS	1	0	2	2
	2	2	0	2
	4	1	0	1
	5	1	0	1
	7	2	1	3
	8	1	0	1
	10	2	0	2
	11	2	0	2
	12	2	0	2
	16	2	0	2
	17	1	0	1
	18	1	0	1
	19	6	0	6
	20	1	0	1
	21	2	0	2
	22	2	0	2
	23	2	0	2
	25	3	0	3
	26	2	0	2
	27	4	0	4
	28	0	1	1
	29	3	0	3
	30	4	1	5
	31	3	0	3
	32	1	1	2
	34	2	1	3
	35	2	0	2
	36	0	1	1
	37	1	0	1
	39	1	0	1

40	1	0	1
41	1	0	1
42	2	0	2
43	1	1	2
44	1	0	1
45	2	0	2
46	2	0	2
47	0	1	1
49	2	0	2
51	2	0	2
52	1	1	2
53	2	0	2
54	1	0	1
55	4	1	5
56	1	0	1
57	0	1	1
58	3	0	3
59	3	0	3
60	0	1	1
61	3	0	3
62	0	1	1
63	1	1	2
64	1	0	1
66	0	1	1
67	2	0	2
68	4	0	4
69	2	0	2
70	1	0	1
71	1	0	1
72	3	0	3
73	3	0	3
75	0	1	1
76	1	0	1

77	1	0	1
80	3	0	3
81	1	0	1
82	1	0	1
83	1	0	1
84	1	0	1
86	1	0	1
87	2	1	3
89	1	0	1
91	2	0	2
92	1	0	1
93	0	1	1
94	1	0	1
96	3	0	3
98	2	0	2
99	0	1	1
100	1	0	1
101	2	0	2
102	1	0	1
103	0	1	1
104	1	0	1
105	1	0	1
108	1	0	1
109	0	1	1
111	0	1	1
112	2	0	2
113	1	1	2
118	2	0	2
119	0	3	3
121	2	0	2
127	1	0	1
128	0	1	1
130	0	2	2

135	2	0	2
136	1	0	1
137	1	0	1
144	1	0	1
146	1	0	1
147	1	0	1
150	1	0	1
152	1	0	1
155	1	0	1
158	0	1	1
160	2	0	2
162	1	0	1
188	0	1	1
190	0	1	1
192	0	1	1
197	0	1	1
205	0	1	1
218	1	0	1
259	1	0	1
263	0	1	1
329	1	0	1
342	1	0	1
351	0	1	1
352	1	0	1
370	1	0	1
419	1	0	1
475	0	1	1
511	0	1	1
Total	163	41	204

**Chi-Square Tests**

	Value	df	Asymptotic Significance (2- sided)

Pearson Chi-Square	166.014 <sup>a</sup>	123	.006
Likelihood Ratio	169.389	123	.004
Linear-by-Linear Association	11.246	1	.001
N of Valid Cases	204		

a. 248 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

## **APPENDIX D: IRB LETTER**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-882-2012, 407-882-0889 or 407-823-2508  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

**From:** UCF Institutional Review Board  
FWA00000351, Exp. 7/24/2019, IRB00001138  
**To:** Rachel Rados

**Date:** November 16th, 2016

**Study Title:** Survey with the Seminole County Domestic Violence Employees (Deputies, State Attorney's Office, Probation)

Thank you for contacting the IRB office regarding your Dissertation.

Per federal regulations and UCF policy, when UCF is engaged in human subjects' research, the study must be submitted to UCF-IRB for review determination. It would violate Federal statute and university policy to approve a study after it is initiated or completed.

As you know, the IRB cannot provide an official determination letter for your research because it was not submitted into our iRIS electronic submission system prior to you completing the research.

However, if you had completed an iRIS submission, the IRB could make one of the following research determinations: "Not Human Subjects' Research," "Exempt," "Expedited" or "Full Board."

Based on the explanation provided by you and your faculty advisor, the IRB determination most likely would have been Expedited #7.

If you have questions, please phone the IRB office at 407-882-2012.

Sincerely,

A handwritten signature in black ink, appearing to read "Sophia F. Dziegielewski".

Sophia F. Dziegielewski, Ph.D., LCSW  
Chair, University of Central Florida, Institutional Review Board  
Editor, Journal of Social Service Research  
University of Central Florida  
P.O. Box 163358  
Orlando, FL 32816-3358  
Social Work Office: 407-823-6342  
IRB Office: 407-823-0884  
FAX: 407-823-5697  
[Sophia.Dziegielewski@ucf.edu](mailto:Sophia.Dziegielewski@ucf.edu)  
or [irb@ucf.edu](mailto:irb@ucf.edu)  
UCF IRB Web- <http://www.research.ucf.edu/>

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