

DO VICTIM IMPACT PANELS REDUCE DUI RECIDIVISM?

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ABSTRACT

This study looks at Victim Impact Panels as an effective program for reducing recidivism of convicted drunk drivers. Researchers collected data on a group of DUI offenders who were sentenced to attend a Victim Impact Panel (VIP) after being convicted of a DUI (410 cases) and a group of DUI offenders who were sentenced by a judge who did not order them to attend a VIP (373 cases). Using logistic regression, researchers found those offenders who were sentenced to attend a Victim Impact Panel were significantly less like to reoffend, both in terms of subsequent DUI convictions, and criminal offenses in general. In addition, this study showed Victim Impact Panels proved to be beneficial to those offenders who have had previous DUI convictions, and have attended a Victim Impact Panel in the past. The resulting policy and program implications are discussed.

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CHAPTER 1. INTRODUCTION

Drunk driving is a continuing public safety issue plaguing communities across the country. Depending on the state, drinking and driving is referred to as Driving Under the Influence (DUI) or Driving While Intoxicated (DWI). Both terms will be used interchangeably throughout this paper, depending on the source being cited. In North Dakota, state law refers to drunk driving as Driving Under the Influence (DUI). According to the National Highway Traffic Safety Administration's (NHTSA) 2014 data, there is an alcohol related crash resulting in a fatality every 53 minutes (NHTSA, 2015). The Center for Disease Control and Prevention (CDC) reports 1.1 million drivers being arrested for DUI (alcohol or narcotic related) in 2014. That equates to percent of the 121 million self-reported episodes of alcohol impaired driving each year (CDC, 2016). NHTSA conducted a study in 1995, and found 31 percent of all drivers arrested for DUI had prior arrests or convictions for DUI (NHTSA, 2014). The study was completed again in 2014, recidivism rates were down, but only to 25 percent (NHTSA, 2014). In an effort to curb the devastation brought on by the offenders who chose to drink and drive, states and communities have stiffened the sanctions applied to DUI offenders. Increased sanctions have included longer incarceration times, higher fees and fines, and 24/7 programs (Kilmer et al., 2013). Therapeutic programs have also been developed focusing on increasing the awareness of the immediate and long term consequences of drinking and driving, both for the offender and the community around them (Vosas et al., 2011; Jornet-Gilbert et al., 2013; Schell et al., 2006). Few evaluations have been completed to determine the effect of these new programs/policies and their ability to deter DUI offenders from continuing to drink and drive. This thesis looks at the effectiveness of Victim Impact Panels (VIP), and their role in deterring both subsequent drunk driving incidents and other criminal conduct among offenders. Specifically, does

the Victim Impact Panel program in Cass County, North Dakota have the desired effect of reducing recidivism among its attendees when compared to DUI offenders not sentenced to attend VIP?

For my thesis, I will investigate the effectiveness, measured by DUI recidivism rates, of the Victim Impact Panel put on by Cass Public Health in Cass County, North Dakota. Attendees of the panel were sentenced to attend the VIP upon conviction of a DUI or reckless driving charge by either Cass County District Court, or one of the municipal courts under Cass County jurisdiction. I will compare attendees of the VIP to those convicted of DUI in the same time frame, and jurisdiction, who did not attend a VIP. Record of attendance for the VIP were provided to me by Cass County Public Health, and will serve as my treatment group. Court records were provided to me by the Cass County Clerk of Court for a District Court Judge who did not sentence those convicted of DUI to a VIP, and this will serve as my control group. Public record searches will be conducted through both North Dakota and Minnesota to determine if the offender has recidivated.

In determining if VIPs are having the intended effect of reducing DUI recidivism, insight into the effectiveness of the VIP program, specifically in Cass County, North Dakota, will be gained. This will help determine if Cass County Public Health should continue hosting the panels for DUI offenders. This study will inform the courts of the effectiveness of the sanction, and guide them in their future judgements placed on DUI offenders. Time, money, and effort (both emotional and physical) are put into VIP by all those involved, to include the offenders, the sponsors of the panels, and the panelists themselves. The current belief is the panels aide in reducing DUIs, and ultimately increase public safety, by changing offender's habits, reducing future drinking and driving occurrences. If it is not having the desired effect, that time, money, and effort can be transferred to other programs which have either been proven effective or promising. It is hypothesized that the

offenders who are sentenced and attend VIP will have lower DUI recidivism rates than those offenders who do not participate in VIP.

1.1. Current Strategies

Current programs prevent DUIs by utilizing both general and specific deterrence. Deterrence theory works by passing criminal laws with well-defined punishments to discourage individual defendants from becoming repeat offenders, and to discourage others in society from engaging in similar criminal activity. General deterrence focuses on the general public, which includes offenders and non-offenders. General deterrence works by promoting the message that drunk driving will not be tolerated, and *when* you are caught (certainty), the consequences will be severe. This message has been pushed through the media to both educate and warn the public of focused enforcement on intoxicated driving. On a local level, the media picks up on the passing of new legislation. Nationally, the National Highway and Traffic Safety Association (NHTSA) has a large media campaign promoting several messages such as “Buzzed driving is drunk driving,” “Drive sober or get pulled over,” and “They’ll see you before you see them” all aimed at deterring people from drinking and driving (NHTSA, 2015).

Specific deterrence is aimed at the offender, applying swift sanctions severe enough to prevent them from committing the crime again. The problem is that most DUI offenders are not caught, and in fact most drinkers drive intoxicated 50-200 times before they are arrested by law enforcement (Beitel et al., 2000). This negates the “certain and swift” component of deterrence theory, as the likelihood of being caught and sanctioned is not a likely probability.

Ahlin et al. (2011) studied recidivism rates of first time DUI offenders who were both convicted of DUI immediately, and those who were diverted to administrative and alternative sanctions. The results showed that regardless of how first time DUI offenders were sanctioned, they

had similar risk of reoffending (Ahlin et al., 2011). Administrative penalties allow for sanctions in favor of public safety (i.e., license suspensions) to be imposed quickly appealing the “swift” component of deterrence theory. However, this may not occur fast enough for the offender to make the connection between their actions of drinking and driving, and the sanction.

Rehabilitation versus punishment has been an ongoing debate. Taxman & Piquero (1998) looked at the effects of both, finding rehabilitation in the forms of alcohol treatment (17% less likely) and alcohol education (22% less likely) significantly reduced the risk of re-conviction for DUI offenders (Taxman & Piquero, 1998). They also found age and prior number of traffic convictions to be significant in increasing odds of re-conviction (Taxman & Piquero, 1998).

The National Highway and Traffic Safety Administration (NHTSA) has identified several sentencing practices that appear to have a positive effect in reducing recidivism among those convicted of Driving Under the Influence. A few of those practices include DWI Courts, Staggered Sentencing, Ignition Interlocks, and Victim Impact Panels. All of the practices mentioned go beyond deterrence theory, and offer some level of education and therapy for the offender. They allow the offender to right their wrongs, while educating them on the consequences of non-responsible alcohol use (NHTSA, 2004).

DUI Courts are utilized post-conviction, and incorporate intensive supervision and treatment to help the offender change their behavior, not just to prevent a future-conviction, but their attitudes toward alcohol use as applied to everyday life (National Center for DWI Courts, 2015). As of December 2011, there were 192 registered DWI Courts, and 406 hybrid courts – drug courts with a DUI tract incorporated for those offenders (National Center for DWI Courts, 2015).

Current research suggests that DUI courts are cost effective (Crancer, 2003; Guerin & Pitts, 2002; Eibner et al., 2006), however their effect at reducing recidivism are not (Bouffard, Richardson,

& Franklin, 2010; Cavanaugh & Franklin, 2012; Eibner et al., 2006). Bouffard, Richardson, and Franklin found no significant difference in rearrest rates between the treatment and control groups, with the treatment group being more likely, 17.9 percent, to be arrested for DUI following a VIP than the control group, 6.7 percent (Bouffard, Richardson, & Franklin, 2010). This study found that DUI courts are not effective for repeat DUI offenders (Bouffard, Richardson, & Franklin, 2010). Eibner et al. (2006) found no statistical difference between the treatment and control group in alcohol and DUI related behaviors, including no significant difference in self-report and official DUI recidivism rates (Eibner et al., 2006). Eibner et al. (2006) did find DUI courts to be cost effective for third time offenders, saving the Criminal Justice System \$2,000/offender in jail sentence savings (Eibner et al., 2006). Cavanaugh and Franklin (2012) found DUI courts to be ineffective due to the control group significantly out-performing the treatment group when it came to days til new arrest (Cavanaugh & Franklin, 2012).

Staggered Sentencing has the offender serve part of their incarceration period right away (swift), and the second part of it up to a year later. In the interim, the offender actively participates in treatment which includes Home Electronic Alcohol Monitoring (HEM), AA meetings, and probation officer visits. Clear consequences for specific violations are laid out in the beginning of the program. This approach, developed by Judge Dehn in Minnesota, has produced a 50 percent decrease in rearrests for successful completers (NHTSA, 2004).

Ignition Interlocks are another way for offenders to maintain their freedom, by allowing them to take care of their responsibilities while being in the presence of supportive social circles. The interlock, which can be a substitute for vehicle surrenders and license suspensions, serves as a constant reminder that driving is a privilege contingent upon their sobriety. A benefit of interlocks,

suspensions, and vehicle sanctions is their ability to be applied quickly after an arrest. Offenders are 50 percent less likely to reoffend within three years after being assigned an interlock (NHTSA, 2004).

1.2. Victim Impact Panels

Victim Impact Panels are also on NHTSA's list of promising sentencing practices. Unlike traditional programs and the ones previously mentioned, Victim Impact Panels get away from the education, monitoring, and license controls, and focus on the emotional aspect of drunk driving. By presenting offenders with first hand stories of drunk driving victims, offenders are exposed to the strong emotions created by drunk driving tragedies, with the intent of producing an emotional motivation for offenders to refrain from drinking and driving in the future (Fors & Rojek, 1999).

Victim Impact Panels were established by Mothers Against Drunk Driving (MADD) in 1982. The program uses the trauma caused to both the victims and families of DUI to alter the perceptions of convicted DUI offenders in hopes of reducing/eliminating further acts of drunk driving. MADD also recognizes these panels as a therapeutic program for victims of drunk driving.

A typical Victim Impact Panel is made of four or five victims, who each speak approximately 10-15 minutes on how driving under the influence has changed their lives. The panel can consist of direct victims, such as those involved in a drunk driving accident, or the families of those involved who have lost their loved ones. The victims tell their stories in hopes of altering the perceptions of DUI offenders, and relaying onto them their actions can have real life, far reaching consequences beyond going to jail for a night. The non-confrontational setting is designed not to condemn the offender, but to focus on the victim's own trauma and tragedy as a way to get the offender to understand the long lasting effects of their actions. There is often a time for questions and answers, but the focus of the panel is not the interaction between the victims and offenders, but rather the story of the victims.

MADD's intention for Victim Impact Panels is to put a "human face" on the serious consequences of impaired driving. They hope by having real people present their experiences with the emotional, physical, and/or financial pain of DUI, they can help the offenders get over their "own bad luck" of being caught and change their perceptions of DUI. As part of the restorative justice movement, Victim Impact Panels were enacted to assist victims in their healing process.

Inclusionary Social Control is shaming conducted by community members. Inclusionary Social Control is more effective than shaming conducted through the state, which is impersonal. When the state applies shaming, it comes across as impersonal, and is easily dismissed (Rojek et al., 2003). Inclusionary Social Control allows victims of drunk driving crashes to confront offenders with first hand testimony, and help the offenders understand the far reaching consequences of their actions on a more personal level. Victims can be individuals directly impacted by drunk driving crashes (injured) or the families of those killed in crashes caused by drunk drivers. The victims are able to share the effects the crash has had on their life, and how quickly a decision to drive can change someone's life forever. It promotes the notion that drunk driving crashes are not "accidents," and they can be prevented. Not all DUIs have victims, but drunk driving is a risky behavior that can result in a life being changed, or lost, forever. By sharing victim's stories, hopefully offenders will choose not to drink and drive in the future to avoid causing the devastation they witnessed a victim share. This will ultimately reduce drunk driving crashes, saving lives (AAA DUI Justice, 2015).

There are three main goals VIP hope to accomplish in combating this social problem. First, they hope to help offenders understand the impact their crime has not only on direct victims, but communities as a whole. Second, they provide victims with a structured, positive outlet to share their personal experiences and to educate offenders, justice professionals, and others about the

physical, emotional and financial consequences of crime. Lastly, the programs hopes to build partnerships among victim service providers and justice agencies that can raise the individual and community awareness of the short and long term impacts of crime (NIJ, 2015).

MADD encourages the use of Victim Impact Panels as a supplement to legal sanctions, not a substitute. VIP educate the offender on the possible impact their decision could have had, even though their situation may have turned out “okay.” By bringing these issues to light, it will help the offender understand why there were formal sanctions placed on their judgement. With the emotional aspect in place, they will more fully understand why they are being punished the way they are for a “victimless” crime.

MADD discourages chronic offenders from attending Victim Impact Panels, due to the issue of alcohol dependence. A person who is struggling with dependence will not benefit from hearing the tragic stories presented to them without treatment to aide in their recovery. Victim Impact Panels are designed for first time DUI offenders. The panels have been shown to be most effective on males, age 35 or older (Lord, 2001). It has not been determined why VIP are most effective on this population. One idea is it is a combination of their age and gender. Another is that they easily relate to the average panel speaker, who is 46 years old, and describing a child who has been killed by a drunk driver (Lord, 2001).

By looking at this data, researchers will be able to provide both Cass County Public Health and Cass County District Court with some guidance on the current VIP program. Most importantly, we will be able to provide data on whether or not it appears to be reducing DUI recidivism, and specifically who does it appear to be working for. This will assist Cass Public Health in determining the impact of the program, and whether they should continue with the program as is, make changes, or begin to utilize an alternative program. The data derived from this study will be able to give

direction to the District Court Judges (as well as the other municipal judges in the county) as to who, if anyone, this program is benefiting. By using this information, the judges will be able to make better informed decisions as to who will benefit from attending a VIP.

CHAPTER 2. LITERATURE REVIEW

Research studies looking at the effectiveness of Victim Impact Panels on recidivism rates have shown positive results (Satterfield-McLeod, 1989; O’Laughlin, 1990; Sprang, 1997; Fors & Rojek, 1999; Rojek, Coverdill & Fors, 2003; Crew & Johnson 2011). Early research found very significant results when comparing re arrest rates for those who attended Victim Impact Panels. Satterfield-McLeod found only 9 percent of VIP attendees were rearrested for DWI 18-24 months after attending a panel, which was significant compared to the motor vehicle estimates for that county which showed a 42 percent estimate that arrestees have prior DUI arrest (Satterfield-McLeod, 1989). However, the nature of the study did not allow the investigators to attribute the difference in DWI arrest rate to the VIP program alone.

O’Laughlin (1990) compared a group of offenders who attended a VIP to offenders who were convicted of DUI prior to implementation of VIP sentences. This study found the odds of re-arrest to be less than half of those who did not attend the VIP. A study weakness is the time frame used to measure re-conviction rates. For the control group, the one year period in which re-convictions were tallied began on the day of conviction. For the treatment group, it was significantly later, to allow for attendance at the panel. The one year period began when they attended the panel. This may, however, add to the validity of the significant results, as the offenders went “longer” without getting a re-conviction (O’Laughlin, 1990).

Fors and Rojek (1999) completed a quasi-experiment looking at re-arrest rates. The experiment produced positive results over the 12 month follow up period. Attendees of the victim impact panel had a re-arrest rate of 5.94 percent, while those who did not attend a victim impact panel had a re-arrest rate of 15.08 percent (Fors & Rojek, 1999). In addition to the positive re-arrest

rate data, the VIP program was found to be cost effective. Suggestions to build off the study included a longer follow up period, and a larger demographic group.

Rojek, Coverdill and Fors (2003) worked with the same original data from the Fors and Rojek (1999) study, and conducted a five year follow up study. They found the hazard rate of re-arrest for the victim impact attendees decreased 55.7 percent overall (Rojek, Coverdill & Fors, 2003). The VIP attendees had a 15.8 percent recidivism rate, versus the non-attendees who had a 33.5 percent recidivism rate (Rojek, Coverdill & Fors, 2003). This supported the early research that VIPs help reduce recidivism among those convicted of DUI, however Rojek, Coverdill, and Fors (2003) looked further into the data and found that the effects of the VIP wear off after about two years. The hazard rate of re-arrest was 75 percent lower for the VIP group in the first two years, but only 5.6 percent lower in the subsequent three years of the study (Rojek, Coverdill & Fors, 2003).

A larger study using 2,092 offenders who attended a VIP was conducted in three counties in Oregon, and Orange County, California between 1988 and 1989. This study looked at driving records of both the VIP attendees and comparison group (matched on age and sex) two years post panel. When comparing those who attended the VIP with those who were not ordered to attend, Shinar and Compton (1995) found significant results (30.1% recidivism rate versus 35.0%). A second control group was added, consisting of those who were ordered to attend the VIP but did not show up. When the data were ran with the second group included, no statistical difference was found. This statistical difference indicates the reduced recidivism rate among VIP attendees cannot be attributed to the VIP alone. Looking at these results further, it was found VIP had the longest lasting effect on those 35 years and older (reducing recidivism by 39%), but even those effects diminished after two years (Shinar & Compton, 1995). Shinar and Compton suggested a reason for the ineffectiveness of the VIP over time was due to denial of relevance, attributed to the delay in

attendance of the VIP prior to the actual arrest. Solutions suggested by this study are to make attendance at a VIP a recurring experience (recurring counter – conditioning to break the drinking and driving habit), and selectively target the audience. Using their data, they found the prime audience to be first time male offenders over the age of 35 (Shinar & Compton, 1995).

Crew and Johnson (2011) conducted an outcome evaluation consisting of 657 VIP participants, and 876 non VIP participants as a comparison group. This intervention was aimed at second time offenders (248 participants), but first time offenders were also present (369 participants) throughout both groups. It was found that participation in VIP does not consistently reduce offending. None of the first time offenders, regardless if they were in the treatment or comparison group, reoffended (Crew & Johnson, 2011). Those who had two or more prior convictions for DUI who attended a VIP were more likely to reoffend (43.9 %) than those who did not attend the VIP (33.1%) (Crew & Johnson, 2011). This led to the conclusion that VIP may be most effective with first time offenders.

Victim Impact Panels aim to change an offender's future behavior by eliciting emotions from them through sharing of the victim's stories. VIPs aim to increase offenders' feeling of empathy and change their attitudes towards drinking and driving by putting a face on the negative consequences of their actions. Consequently, some studies focus on attitude changes after an offender attends a VIP, specifically focusing on whether offenders intend to change their drinking and driving habits, and whether they perceive how and why drunk driving is a crime.

Sprang (1990) administered a pre and post attitude test to 94 offenders attending a victim impact panel. Pre-test results showed that 87 percent of the offenders in this study indicated that they *would* drink and drive again. Post-test results showed that 90 percent *would not* drink and drive again (Sprang, 1990). However, these findings do not look at the enduring effects of these

intentions. Further, this study lacked a comparison group. In a later study, Sprang (1997) examined attitudes towards DUI laws, as well as changes in the offenders own behavior. Attitude changes were monitored over a one month follow-up period for the treatment group and six month follow-up post-conviction for the comparison group. This study utilized a comparison group to measure recidivism over a one year time frame. A pre-test was mailed to VIP attendees prior to their participation at the panel. A posttest was mailed one month after. The results from the study showed a nine percent difference in recidivism rates between the two groups (9.3% versus 18.7% in the comparison group). Further, the experimental group revealed great changes in attitudes. The areas of focus on attitudes were intentions to drink and drive, consideration of consequences, whether DUI should be considered a crime, and recidivism. There were no significant differences in attitudes towards fairness of DUI laws, accidental nature of DUI, or advisability of DUI education as an alternative sanction (Sprang, 1997).

Polacsek et al. (2001) completed a randomized control trial utilizing participants in a DWI School in Bernalillo, New Mexico, to determine if participation in a MADD Victim Impact Panel would influence the offender's movement through the stages of change and recidivism. The DWI school is informative in nature, and requires the offender to participate in 24 hours of training, in the hopes of permanently changing the offender's attitudes towards drunk driving laws and likelihood of recidivating. Stages of change refer to the participant's refusal to drink and drive. Stage one is the pre-contemplation stage: participant is not considering refusing to drink and drive. Stage two is contemplation: participant is considering refusing to drink and drive in the next month. Stage three is action: participant has begun to refuse to drink and drive. Stage four is maintenance: participant has consistently refused to drink and drive for the past six months or more. The study specifically asked the questions 1) Does participation in MADD VIP have an effect in moving first

time DWI offenders further through stages of change beyond DWI school? And 2) Is the DWI offender's initial stage of change related to Drunk Driving recidivism? The treatment group attended a one hour MADD VIP in addition to this training. Polacsek studied the effect of the VIP on the rate in which participants moved through the "stages of change." Eighty percent of VIP participants reported they would never drink and drive again immediately following the panel. Polacsek believes these responses were given based off the emotional content of the panel, as they did not stand against time over the two year follow up. There were no differences in progress through the stages of change between the treatment or control group, nor were there any differences in recidivism measured by from post-test through the two year follow-up (Polacsek et al., 2001).

Badovinac (1994) examined a group of chronic male offenders who attended victim impact panels. His study showed significant attitude shifts in offenders regarding impaired driving, and offenders reported positive changes in their intentions to decrease their own drinking and driving behavior. This study also measured changes in empathy, but did not find significant changes in empathy among offenders (Badovinac, 1994).

Schaaf (2008) conducted two studies with one examining a victim impact panel's effect on empathy. In the first study she administered questionnaires to the attendees of a victim impact panel which was made up of 16% first time DUI offenders, with the rest having two to four DUI's. The participants were given a questionnaire directly before and after the VIP, and then eight weeks later. The questionnaires assessed the attendee's views on their own crime, their future drinking / driving behavior, and their empathy. Empathy was measured using the Basic Empathy Scale. The results showed a significant increase in attendee's empathy directly after the VIP, but these differences failed to hold up through the eight week follow-up period (Schaaf, 2008). Directly after the VIP, participants were also more likely to agree that their punishments were appropriate for their crime.

Her recommendations suggested that because DUI offenders are most likely to recidivate in the first 12 months, participants should attend a refresher course every five weeks to sustain their level of empathy. Schaaf cautions that her results may be driven by the environment the questionnaires were administered in – most attendees were mandated by the courts to be present. This may have led to attendees being hesitant to answer honestly, but after being removed from the VIP environment (eight weeks later) they were less hesitant to answer truthfully.

Schaaf (2008) then gave the questionnaire to a group of undergraduate students at the University of Wisconsin La Crosse. Some of the students participants had DUI charges in their past, but this survey was not associated with their case or punishment in any way. Participants were given transcripts with a portion one of a VIP presenter's testimony. Information including the victim's age, sex, and severity of their injury were included with the transcript. Students then responded to the questionnaire. Her findings showed the older the victim presenter was, the greater the amount of empathy elicited from the participants. Male participants had significantly decreased levels of empathy regardless of victim characteristics, and students with previous DUI experience agreed less strongly with the statement "I think drunk driving is a crime." Again, Schaaf found that empathy plays an important role in the VIP process, but it is fleeting, and may only be effective for a short time.

Finally, a study done through the Missouri Department of Corrections attempted to determine if victim impact training was having the desired emotional impact on offenders (Jackson, 2009). There were two course tracts – one was a 4 week, one was a 10 week, each meeting for two hours a week, with all participants being court ordered to participate. The study found there was no difference between the two courses in the development of guilt, shame or empathy, suggesting that development of empathy is finite (Jackson, 2009).

Several VIP studies have failed to reveal positive effects. A study in Bernalillo County, New Mexico (C'de Baca et al., 2000) looked at the referral patterns by judges among first time DUI offenders, and compared them to the five year recidivism rates. The participants (5,238) were referred and required to complete a screening and a personal interview with a counselor between April 1989 and October 1995. The study investigators found that female judges were more likely to refer offenders to victim impact panels. Judges were also less likely to refer offenders with less than twelve years education and an unknown blood alcohol content at time of arrest. Judges were also less likely to refer males of Hispanic or Mexican decent, and unmarried offenders. The study revealed that VIP only marginally lowered re-arrest rates (C'de Baca, et al., 2000).

In a follow-up study, researchers looked at a 2.5-8 year follow-up among 1,464 repeat DUI offenders. Researchers looked at the covariates known to affect recidivism (age, marital status, education, prior treatment history, arrest blood alcohol content, ethnic membership, and whether or not there was a crash involved.) They found a 25 percent recidivism rate with their sample population. The only group to show a statistically significant change in recidivism were male first time offenders involved in a crash when arrested (C'de Baca, et al., 2001). Male first time offenders who were younger, Hispanic or Native American, who had a decreased education, who had obtained previous substance treatment, refused or had an unknown BAC at time of arrest, and had a new referral to treatment had a higher probability of re-arrest after attending a VIP. Male repeat offenders who were younger, Hispanic or Native American, and referred to treatment were at increased risk of recidivism, but VIP not associated with the recidivism (C'de Baca, et al., 2001). Female first time offenders who were unmarried or Native American were at increased risk for re-arrest, but risk was not associated with attendance of a VIP. However, for female repeat offenders, being younger, Native American, and having had previous substance treatment, referral to attend a

VIP increased recidivism (C'de Baca, et al., 2001). In conclusion, this study found VIP to have no effects on recidivism, except for repeat female offenders who were at an increased risk of recidivating if they did attend a VIP.

Wheeler, Rogers, Tonigan, and Woodall (2004) examined the impact of a VIP in a rural county in North West New Mexico. In that jurisdiction, a VIP was incorporated into a 28 day detention/treatment program for first time DUI offenders. At intake, offenders were randomly assigned to a treatment and control group. Both groups participated in the standard program curriculum, but the treatment group incorporated a victim impact panel. A pretest at intake, post-test just prior to release, and a two month follow-up test, which included a \$50 incentive, were administered. The posttest had a low response rate, and was eliminated from the analysis by the investigators. The study found no significant differences on alcohol consumption, or drinking and driving behavior when attendees of the VIP were compared to the group who did not attend. Recidivism was also insignificantly affected in the two year follow-up period (Wheeler et al., 2004). Due to the rural area of this facility, a weakness of the study is that the VIP participants and panel are often known to each other. This differs from typical MADD VIP in that the presenters are often strangers to the participants. Audience size was also affected by the rural area. Typical panels in the study consisted of about 35 audience members, where MADD VIP have up to one hundred present in the audience.

Nathanson and O'Rourke (1996) looked at the effect a VIP had on a group of 385 males, comprised of both first time and chronic offenders. The participants attended a VIP, and their recidivism was tracked for a four year follow-up period. They found seven and a half percent were rearrested for impaired driving, with younger, chronic offenders aged 17-25 being more likely to repeat driving while intoxicated after attending a VIP (Nathanson & O'Rourke, 1996).

The earlier discussed Crew and Johnson (2011) study found positive results with first time offenders. However, when they looked at repeat offenders (two or more DUIs) who participated in a victim impact panel, they found they were more likely to recidivate after having participated in a VIP. They completed an outcome evaluation study, but did make a few observations they found important to note. Participants they observed appeared disengaged during the panel, and they appeared to rationalize the lack of injury to some panelists as a way to minimize the consequences of drinking and driving (Crew & Johnson, 2011).

2.1. Literature Summary

According to existing literature, Victim Impact Panels do appear to have a slight impact on DUI recidivism rates (Satterfield-McLeod, 1989; O’Laughlin, 1990; Fors & Rojek, 1999; Rojek, Coverdill, & Fors, 2003; Crew & Johnson, 2011). Specifically, victim impact panels appear to be most beneficial for first time DUI offenders (Crew & Johnson, 2011; Polacsek, 2001; Wheeler et al., 2004).VIP’s in particular appear to elicit empathy from offenders, and assist them in making better choices in the future (Sprang, 1990; Sprang, 1997; Badovinac, 1994). However, empathy seems to be rather short lived (Polacsek et al., 2001; Schaaf, 2008; Jackson, 2009; C’de Baca et al., 2000; C’de Baca et al., 2001; Wheeler et al., 2004; Crew & Johnson, 2011).The following study will attempt to expound on the current research by looking at some of the same topics such as recidivism rates, repeat offender success, and age. The current study will add to the current research by looking at the effect of time between occurrence and attendance at VIP, as well as VIP influence on overall criminal recidivism.

CHAPTER 3. METHODOLOGY

3.1. Data

Demographic data for this study were gathered as a result of a request from a Cass County Public Health administrator. In 2014, the thesis advisor was approached by this administrator to explore whether the Victim Impact Panels she and others had been conducting had any effect in reducing recidivism. In the course of this conversation, she raised the spectre of a comparison group that could be used as a result of one of the Cass County judges disinterest in sentencing DUI offenders to a Victim Impact Panel. This particular judge did not feel that the Victim Impact Panels would be an effective vehicle for educating or sanctioning DUI offenders. Thus, during this period of time, he simply sentenced DUI offenders to probation and fined them. Offenders sentenced in his courtroom would appear to function as an ideal group for testing the effect of the Victim Impact Panel as offenders sentenced in his court would not appear to be different in any meaningful way from those sentenced to the VIP by other Cass County judges. Criminal and civil cases are rotated on the docket so there would be no basis for assuming that the two groups would vary significantly.

In 2014, a list of VIP attendees was provided by the Cass County Public Health administrator. Complaint dates (arrest dates) for this group ranged from April 2006 to September 2014. VIP attendance dates ranged from January 2009 to April 2015. Virtually everyone in the VIP treatment group met criteria as a DUI offender. A total of 1,739 offenders appeared on the Cass County Public Health register as having attended a VIP group during this period of time. Because of the large number of attendees, a decision was made to employ systematic sampling to whittle down this list and more closely approximate the number of offenders in the comparison group. The Public Health lists were organized chronologically. Consequently, a decision was made to select every fourth case from this list. This sampling method resulted in a total of 410 VIP cases.

The comparison group consisted of DUI offenders from Cass County who were not sentenced to attend a Victim Impact Panel. Using data from the same county during the same time frame also allows for the control of environmental factors, specifically the legislative changes that occurred during the time frame of this study. During the time in which most of the treatment and comparison group offenders were sentenced, the North Dakota Legislature toughened their DUI laws. Lawmakers in 2013 gave approval to a bill that increased jail time for driving drunk. The toughest sentences were aimed at repeat offenders with a doubling of jail time and in some cases, a tripling of fines for repeat offenders.

The list of comparison group offenders was also provided by Cass County Public Health. This list consisted of 373 cases. Comparison group offender's complaint dates ranged from April 2004 through January 2014. Thus, a total of 783 offenders were available for analytical purposes. From the information provided to the researchers, in combination with the public records searches, information was gathered on offenders' age, gender, and prior and current criminal history. Of the 783 offenders, 191 (24.4%) were female, leaving 591 (75.5%) male. The mean age of all participants was 39.5 years old. Five hundred and forty three offenders had a prior criminal conviction (69.3%). Three hundred and twenty-nine offenders (42.0%) had a prior DUI conviction.

The next task was to determine whether there were significant differences between the groups. Table 1 displays the percentages and means for each of these groups for variables that might be associated with recidivism. There were roughly equal percentages of males and females in each group ($\chi^2 = 2.84$, $df = 1$, $prob. = .09$). On average, the comparison group was slightly older by roughly 2 ½ years. This difference was significant at the alpha .05 level ($t = -3.2$, $df = 780$, $prob. < .001$) and would bias the recidivism estimates against the VIP group at a younger age level. The comparison group recorded a slightly higher prevalence of having been convicted of a prior crime by

10 percent ($\chi^2 = 10.0$, $df = 1$, $prob. = .002$). The same group also recorded a higher prevalence level of prior DUI's by 13 percent ($\chi^2 = 13.4$, $df = 1$, $prob. < .001$). For current conviction level, comparison group members were convicted approximately 10 percent more for Class A misdemeanors ($\chi^2 = 18.2$, $df = 1$, $prob. < .001$). Consequently, while they are slightly older, the comparison group could have biased estimates upwards of recidivism based on their prior criminal history. As a result, prior criminal history will be controlled in the logistic regression analysis.

Table 1

Descriptive Statistics

	VIP Treatment Group	Comparison Group	X ² (df)
Gender	N=409	N=373	
Male	299 (73.1)	81 (21.7)	2.85 (1)
Female	110 (26.9)	292 (78.3)	
Prior DUI ***	N=410	N=373	
Yes	147 (35.9)	182 (48.8)	13.45 (1)
No	263 (64.1)	191 (51.2)	
Prior Crime ***	N=410	N=373	
Yes	146 (35.6)	94(25.2)	10.02 (1)
No	264 (64.4)	279 (74.8)	
Conviction Level ***	N=407	N=372	
B Misdemeanor	378 (92.9)	309 (83.1)	18.23 (1)
A Misdemeanor	29 (7.1)	63 (16.9)	
Probation	N=392	N=318	
Yes	376 (95.9)	295 (92.8)	10.02 (1)
No	16 (4.1)	23 (7.2)	
Mean Age ***	38.25	40.80	

*p<.05. ** p<.01. ***p<.001.

3.2. Recidivism Measure

Recidivism was defined as a new conviction following initial sentencing for either a DUI or any other crime. Separate measures were employed to distinguish a DUI conviction from other

criminal convictions (e.g., theft, drug paraphernalia). All criminal records for this study are publicly available online. Thus, Institutional Review Board approval was not needed due to the data being obtained through public records. Online public records searches were conducted using both North Dakota (<http://publicsearch.ndcourts.gov/default.aspx>) and Minnesota (<http://pa.courts.state.mn.us/Search.aspx?ID=100>) data bases. The public records search provided sentencing dispositions and dates, which included information on jail time imposed / suspended, probation (supervised or unsupervised), fines and fees imposed /outstanding, and chemical dependency evaluations ordered. From these records, information was gathered and input on previous as well as current criminal history. Data collection ceased on May 15, 2015.

3.3. Research Questions

Once all the data were collected, it was entered into the Statistical Package for the Social Sciences (SPSS). The following research questions were posed based on previous literature:

- 1) Does the Victim Impact Panel have any effect toward reducing DUI recidivism?
- 2) Does the Victim Impact Panel have any effect toward reducing overall criminal recidivism?
- 3) Does having attended a previous Victim Impact Panel have any effect toward reducing either DUI recidivism or overall criminal recidivism?
- 4) Are there any differences in recidivism associated with attending a Victim Impact Panel by gender, current age, having a prior DUI, or conviction level?
- 5) Does the timing between arrest and attending VIP have any effect on DUI or criminal recidivism?

CHAPTER 4. RESULTS

We begin with the bivariate recidivism results. Table 2 displays the associations between group assignment and DUI recidivism followed by the associations for group assignment and criminal recidivism. Fifteen percent of VIP participants recidivated with another DUI arrest compared with 27 percent for the comparison group. These results were significant at the alpha .001 level. Overall criminal recidivism included conviction for any new crime at the Class B misdemeanor level or higher. Thirty eight percent of VIP participants recidivated with a new crime compared to 51 percent for the comparison group. These differences were again non-random with a probability less than .001.

Table 2

Bivariate Analysis

	VIP N=410	Comparison Group N=373	X ² (df)
DUI Recidivism	15.4%	26.8%	15.6 (1)
Criminal Recidivism	38.5%	50.9%	12.2 (1)

P<.001

Due to the possibility that comparison group members might have been exposed to recidivism opportunities longer than VIP participants, a decision was made to censor recidivism at six and twelve months, for the comparison group and VIP group. For the comparison group, the six and twelve month time frame started following the date of their arrest (complaint date). For the VIP group, the six and twelve month time frame started following the date of their VIP attendance.

Table 3 displays the bivariate results at six and twelve months for each group. The bivariate results show the VIP group had a recidivism rate of 1.7 percent at six months, and the comparison group had a recidivism rate of 4.6 percent ($x^2 = 5.4$, $df = 1$, $prob < .001$). At twelve months, the VIP group

had a recidivism rate of 3.9 percent, and the comparison group had a recidivism rate of 9.7 percent ($\chi^2 = 10.6$, $df = 1$, $prob < .001$).

Table 3

Bivariate Time at Risk Table

	VIP N = 410	Comparison Group N = 373	X ² (df)
6 Month Recidivism	1.7% (7)	4.6% (17)	5.4 (1)
12 Month Recidivism	3.9% (16)	9.7 % (36)	10.6 (1)

P<.001

Logistic regression equations were run to estimate the log odds of DUI and criminal recidivism (separately). These equations were done using stepwise procedures. In the first step, gender and the age of the offender were entered. In step 2, prior criminal history was entered along with the current level of conviction (Class A and B misdemeanor). In step 3, the group variable was entered. Separate regression equations were run for prior DUI and prior criminal history due to multi-collinearity. Multi-collinearity tests were run to determine the lack of discriminative validity between prior DUI and prior criminal history. The two variables proved to be highly correlated, with only 0.3 percent of those with a prior criminal charge not having a prior DUI.

Table 4 displays the results with the log odds of DUI recidivism being employed as the outcome variable. In step one, neither gender nor age were statistically significant, although the gender coefficient ($b = .425$, $SE = .23$) was approaching significance at the .061 level. Adding the offender's current conviction level and prior DUI history at step two significantly improved upon the model fit ($\chi\text{-square} = 25.7 - 5.4 = 20.3$, $2\ df$, $p < .001$). In step two, both conviction level and prior DUI significantly predicted the log odds of the DUI outcome. Having a conviction at the Class A misdemeanor level increased the DUI recidivism odds by 79 percent ($\text{Exp}(B) = 1.79$). Having a prior DUI increased the log odds of a future DUI by 86 percent ($\text{Exp}(B) = 1.86$). In step three, the group

variable was entered. Entering this variable improved upon the model fit ($\chi^2 = 31.2 - 25.7 = 5.5$, $df = 1$, $prob. < .05$.) The group variable was significant at the alpha .05 level ($b = .45$, $SE = .19$, Odds ratio = 1.57). The positive coefficient indicates that the comparison group had higher log odds of recidivism after controls for demographics and prior criminal history. According to this data, the comparison group was roughly 57 percent more likely to have another DUI following this conviction. With this equation, only the group variable and prior DUI were significant at the alpha .05 level.

Table 4

Ordered Logistic Regression of DUI Recidivism

	Step 1			Step 2			Step 3		
	B	SE	Odds Ratio	B	SE	Odds Ratio	B	SE	Odds Ratio
Gender									
Female ^a	0.42	0.23	1.53	0.32	0.23	1.38	0.31	0.23	1.36
Age	0.01	0.008	1.01	0	0.008	1.01	0	0.009	1.00
Conviction Level									
B misdemeanor ^a				.58*	0.26	1.79	0.49	0.27	1.64
Prior DUI									
No ^a				.62**	0.19	1.86	.56*	0.20	1.75
Group									
VIP ^a							.45*	0.19	1.57
Model chi-square		5.36			25.7			31.2	
Degrees of Freedom		2			4			5	

^a Reference category; * $p < .05$; ** $p < .01$; *** $p < .001$

The comparison group had 56 cases in which the offender's complaint date was earlier than those of the VIP offenders, meaning they were arrested earlier, creating a larger time frame for the study. These cases were eliminated from the comparison group, and the logistic regressions were re-

ran to assess the time to recidivate difference. This showed that there were no differences from the previous results for DUI recidivism (group assignment $b = .45$, $SE = .19$, $p = .021$).

Table 5 repeats Table 4 with the exception of estimating the log odds of criminal recidivism. Criminal recidivism could include a conviction for DUI, drug violation, violent crime or property crime. Again, stepwise procedure was employed with gender and age entered in step one. For criminal recidivism, only age was significant at the alpha .05 level ($b = -.02$, $SE = .007$). The negative coefficient indicates that younger offenders had higher log odds of recidivating than older offenders. Entering conviction level and prior DUI conviction at step two significantly improved upon the model fit ($\chi^2 = 41.8 - 7.6 = 34.2$, $df = 2$, $prob < .001$). In step two, both conviction level and prior DUI significantly predicted the log odds of the criminal conviction outcome. Having a conviction at the Class A misdemeanor level increased the criminal recidivism odds by 103 percent ($Exp(B) = 2.30$.) Having a prior DUI increased the log odds of a future criminal conviction by 87 percent ($Exp(B) = 1.87$). In step three, the group variable was entered. Entering this variable improved upon the model fit ($\chi^2 = 48.6 - 41.8 = 6.8$, $df = 1$, $prob < .05$). The group variable was significant at the alpha .05 level ($b = .41$, $SE = .16$, $Odds\ ratio = 1.51$). The positive coefficient indicates that the comparison group again had higher log odds of criminal recidivism after controls for demographics and prior DUI history. According to this data, the comparison group was roughly 51 percent more likely to have another criminal conviction following this conviction. With this equation, age, misdemeanor level, prior DUI and the group variable were significant at the alpha .05 level.

Table 5

Ordered Logistic Regression of Criminal Recidivism

	Step 1			Step 2			Step 3		
	B	SE	Odds Ratio	B	SE	Odds Ratio	B	SE	Odds Ratio
Gender									
Female ^a	0.22	0.18	1.24	0.12	0.18	1.12	0.11	0.18	1.11
Age	*-0.02	0.007	0.98	***-0.03	0.007	0.97	***-.03	0.007	0.97
Conviction Level									
B misdemeanor ^a				.83**	0.26	2.3	.75**	0.26	2.13
Prior DUI									
No ^a				.63***	0.17	1.87	.57**	0.17	1.77
Group									
VIP ^a							.41**	0.16	1.51
Model chi-square		7.64			41.8			48.6	
Degrees of Freedom		2			4			5	

^a Reference category; *p<.05; **p<.01; ***p<.001

Table 6 repeats this procedure by estimating the log odds of DUI recidivism with controls for prior crime. To be brief, each step in the procedure improved upon the model fit. At step three, only prior criminal conviction and the group variable were significant at the alpha .05 level. Having a prior criminal conviction was associated with an increase in DUI recidivism by 190 percent ($\text{Exp}(B) = 2.90$). Not attending the VIP group was also associated with increased DUI recidivism odds by 72 percent ($b = .54$, $SE = .19$, $\text{Exp}(B) = 1.72$).

Table 6

Ordered Logistic Regression of DUI Recidivism

	Step 1			Step 2			Step 3		
	B	SE	Odds Ratio	B	SE	Odds Ratio	B	SE	Odds Ratio
Gender									
Female ^a	.48*	0.22	1.61	0.31	0.23	1.37	0.29	0.23	1.33
Age	0.009	0.008	1	0.007	0.008	1	0.004	0.008	1
Conviction Level									
B misdemeanor ^a				.53*	0.25	1.69	0.43	0.25	1.54
Prior Criminal Conviction									
No ^a				1.10***	0.25	3	1.07***	0.25	2.9
Group									
VIP ^a							.54**	0.19	1.72
Model chi-square		6.27			38.1			46.6	
		2			4			5	

Reference category; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 7 employs criminal recidivism as the outcome variable and controls for prior criminal conviction. Again, each step in the procedure was identified with an improvement in the fit of the model. At step three, age, conviction level, prior crime and the group variable were all significantly associated with criminal conviction. Not attending the VIP group was associated with an increase in criminal conviction by 55 percent ($b = .43$, $SE = .15$, $\text{Exp}(B) = 1.55$). Thus, despite evidence that the comparison group had recorded a slightly more serious criminal history, controls for these variables sustained the value of attending a VIP group by being associated with lower odds of a future DUI and criminal conviction.

Table 7

Ordered Logistic Regression of Criminal Recidivism

	Step 1			Step 2			Step 3		
	B	SE	Odds Ratio	B	SE	Odds Ratio	B	SE	Odds Ratio
Gender									
Female ^a	0.29	0.17	1.33	0.11	0.18	1.11	0.09	0.18	1.10
Age	*-.02	0.007	0.98	**-.02	0.007	0.98	**-.02	0.007	0.98
Conviction Level									
B misdemeanor ^a				.71**	0.24	2.04	0.63	0.24	1.88
Prior Criminal Conviction									
No ^a				1.06***	0.18	2.9	1.04***	0.18	2.83
Group									
VIP ^a							.43***	0.15	1.55
Model chi-square		9.13			65.6			73.6	
Degrees of Freedom		2			4			5	

Reference category; *p<.05; **p<.01; ***p<.001

To be sure, each case in which an offender had a prior DUI was selected out and the logistic regressions were re-run for only those cases in which an offender did not record a previous DUI.

Four hundred and fifty four cases qualified for this analysis. After entering gender, age, and conviction level, the group variable coefficient was approaching significance at the alpha .05 level (b = .49, SE = .26, Exp(B) = 1.63). With the reduction in cases, one could possibly make the argument that attending the VIP group reduced the odds of DUI recidivism at the alpha .10 level for those who had not had a prior DUI.

Again, these differences could be attributable to slightly longer recidivism opportunities for the comparison group. As a result, the logistic regression equations were re-run by time censoring

the recidivism odds at six months and then one year. The logistic regression equation included controls for age, gender, conviction level, prior DUI conviction, and group assignment. Criminal history was not included here as the interest lay in determining the log odds of DUI recidivism, controlling only for prior recidivism. In the first regression equation, only group assignment was significant at the six month recidivism level ($b=1.03$, $SE = 4.62$, probability = .026). The exponent of B indicated that the comparison group was 2.8 times more likely to recidivate at six months than the VIP group. This was the only variable in the equation that was significant at the alpha .05 level. At one year, only group assignment was significant ($b=.96$, $SE = .31$, probability = .002) at the .05 level. Here again, the log odds of one year recidivism were roughly 2.6 times higher for the comparison group than the VIP group. Thus, even with time censoring, the VIP group recorded lower odds of recidivism than the comparison group.

Researchers looked at the treatment group, and the effect of time between the complaint date and when offenders attended the VIP and its effect on DUI recidivism. We learned that this time gap does matter (Spearman's Rho: .11, prob = .023). The mean time difference for those offenders from this group who did not recidivate was .46, or about five months. The mean time difference for those who did recidivate by getting another DUI conviction was .59, or just over six months. This difference was significant at the .01 alpha level ($t=-.26$, sig.=.009 with 408 degrees of freedom).

CHAPTER 5. DISCUSSION

The results of this study show Victim Impact Panels reduce future DUI and other criminal convictions by at least fifty percent. Due to the positive effects, both Cass County Public Health and other VIP like it should continue to devote time and effort into their programs. Gender and age did not play a role in the effectiveness of the VIP on recidivism. However, those who had a previous DUI conviction and previously attended a VIP were less likely to recidivate than those with a prior conviction who did not attend a VIP.

5.1. Implications

Offenders who had a previous DUI conviction and previously attended a VIP were less likely to recidivate than those with a prior conviction who did not attend a VIP. The positive results of the offenders who have attended VIP in the past shows some support to the suggestion of Shinar & Compton (1995), who suggested making VIP attendance a recurring event. This study does not look into this area in depth, but the results that were gained suggest a multi-session approach may be beneficial and deserves further research.

Researchers looked at the impact VIP had not only on DUI recidivism, but also at criminal recidivism (which included drug violations, violent crimes, and property crime). It was found that the comparison group was about 51 percent more likely to have another criminal conviction after their DUI charge, in addition to their 72 percent increase odds of DUI recidivism. This suggests that researchers, judges, and policy makers should investigate the use of VIP not only for DUI recidivism, but possibly for criminal recidivism in general. This is an area in need of further research.

This study looked at the effect of time from the date of occurrence (complaint date), to the time of attendance at the VIP. The results showed a significant difference between those who recidivated and those who did not. Results of this study indicate VIP are most effective when

attendance occurs within five months of the date of occurrence. This is consistent with prior research indicating offenders lose touch with what brought them to the VIP, decreasing empathy. It is suggested judges impose a VIP sanction as soon as possible, to include as part of a pre-trial release.

With the positive results, VIP should not replace other sanctions imposed on offenders, such as DUI courts, ignition interlocks, and staggered sentencing. It does, however, provide a cost effective sanction to aide in deterring offenders from recidivating. This study did not look at the cost effectiveness aspect of the program, however researchers feel confident saying the 1 ½ - 2 hour program put on once a month that can hold up to 100 offenders would be cost effective. Future studies could look at the overhead costs needed to put on a VIP, in addition to the cost savings on society and the criminal justice system saved by reducing DUI offenders.

5.2. Limitations

The data utilized in this study was presented to the researchers by Cass County Public Health, therefore it was fixed. It was not possible for researchers to add to already recorded data to gather more information. Researchers were not able to control for socioeconomic status, marital status, or education level. Statistical controls were utilized in the analysis process to control for significant differences in each group. Researchers do feel confident the likelihood of a judge basing DUI sentencing on these characteristics to be extremely low.

A major topic of discussion throughout the VIP body of research is the effect of empathy on the success of VIP programs. Again, due to the data utilized in this study, researchers were not able to encompass this aspect of the program. This is an area future studies should include. It should be noted that recently Cass County Public Health has been conducting before and after evaluations of the VIP program, which includes data on empathy.

Researchers do acknowledge the possibility that the offenders utilized in this study had received a DUI (either prior or post study) in other areas of the country, which would not be accounted for in this data. However, given the use of public data, and not having contact with each individual case, it was not feasible to check public records for each state, for every offender. Researchers believe, given the area Cass County encompasses, and the makeup of the population, that it did adequately cover pre and post complaint convictions for the cases used by using public data for both North Dakota and Minnesota.

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