Efficacy of Sexual Assault Nurse Examiner Evidence Collection: A Northern Michigan Study

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Efficacy of Sexual Assault Nurse Examiner Evidence Collection: A Northern Michigan Study

By

Camille J. Griswold

A Thesis

Submitted to Grand Valley State University in partial fulfillment of the requirements for the degree of

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ABSTRACT

EFFICACY OF SEXUAL ASSAULT NURSE EXAMINER EVIDENCE COLLECTION: A NORTHERN MICHIGAN STUDY

By

Camille J. Griswold

King's Theory of Goal Attainment provided the basis for this descriptive, two group comparison study design to determine if sexual assault evidence kits prepared by sexual assault nurse examiners (SANE) would be more complete than evidence kits prepared by non-sexual assault nurse examiners. A convenience sample of 100 evidence kits (41 SANE and 59 non-SANE) were analyzed using the Evidence Kit Audit Tool consisting of 18 questions that reflect the standards for submission of evidence.

The kits submitted by SANEs were significantly \((t=5.6, \text{df}=71, p<.001)\) more complete (mean=93%) than those completed by non-SANEs (mean=77%). Corrected Chi-square comparisons of the two groups on whether or not individual items of evidence were complete indicated significant differences in 11 out of 18 items. A higher percentage of SANEs completed each item. Therefore, the hypothesis of sexual assault evidence kits prepared by a SANE will be more complete than sexual assault kits prepared by a non-SANE was supported.
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CHAPTER 1  
INTRODUCTION

Violence, such as sexual assault, has a significant impact on the physical and psychological health of millions of Americans every year. Sexual assault statistics released in the Federal Bureau of Investigation Uniform Crime Report (1997) via the Internet indicated that one forcible sexual assault occurs every five minutes. Reported sexual assaults that occurred in 1997 totaled 96,122 or 36.3 sexual assaults per 100,000 inhabitants nationwide.

The State of Michigan reported the occurrence of 4,493 sexual assaults, and subsequently 1,714 sexual assault perpetrator arrests in 1997 (Michigan State Police, 1999). "In Michigan, no crime carries a perfect record of intervention, deterrence, medical response, victim services provision and societal understanding, but the response given to sexual assault is strikingly inferior to that of other crimes" (Keefe, 1999, p. 1).

Even though sexual assaults have likely occurred for as long as mankind has existed, there has only been a concerted effort to provide sexual assault nurse examiner (SANE) specialized nursing care to sexual assault survivors since the late 1970s (Ledray & Arndt, 1994; Lenehan, 1991). The certified sexual assault nurse examiner is a registered nurse who has completed a comprehensive training program and has demonstrated competence in conducting a evidential exam while caring for the sexual assault survivor (Ledray & Arndt, 1994).

Prior to the inception of utilizing a SANE in caring for a survivor of sexual
assault, the care received was often limited to minimal collection of evidence by a nurse and a physician who jointly completed the evidentiary exam (Lenehan, 1991). Collection of evidence is often perceived by medical personnel as onerous and an inappropriate use of medical expertise (Moynihan & Duncan, 1981). This exam usually was delayed due to the acuity of other patients in the emergency room taking priority over the assault case. After completion of the exam, the survivor was then discharged from hospital care without further follow-up (Campbell & Bybee, 1997; Ledray, 1992b; Patchett, 1995).

The nursing profession witnessed this fragmented delivery of care multiple times and implemented a holistic approach to meet the needs of the sexual assault survivor (Cornell, 1998; Moynihan & Duncan, 1981; Patchett, 1995). Through tedious, pioneering efforts, nurses in Memphis, Minneapolis, and Texas developed the role of a sexual assault nurse examiner in the late 1970s.

Past research (Ledray, 1992b) indicated that the primary obstacles to SANE implementation included hesitation by emergency room physicians in giving the examination role to nurses, challenges to courtroom credibility as expert witnesses, and funding. Perseverance in addressing and resolving these issues has led to the initiation of 80 SANE programs with the continued growth of these programs nationwide (Ledray & Simmelink, 1997).

Authors Antognoli-Toland (1985) and Ledray and Arndt (1994) depict the role of a sexual assault nurse examiner as multidimensional. The sexual assault nurse examiner completes a nursing assessment, collects medicolegal evidence, documents injuries, and treats potential sexually transmitted diseases related to the assault. Referrals to police agencies, professional rape counselors, safe shelters, and pregnancy counselors are
offered to the survivors. The sexual assault nurse examiner also serves as an expert court witness, follows individual cases through the court system, and works closely with law enforcement officers and prosecutors to ensure the successful prosecution of those guilty of sexual assault.

There are many aspects of the role of the SANE to be studied. This study will focus on the evidentiary outcome of the SANE in the role of collector of medicolegal evidence in a sexual assault case. Zybel (1998) a Prosecuting Attorney in the State of Michigan reported that approximately one-half of all rape kits submitted to Michigan State Police labs are either incomplete or improperly prepared. Sexual assault nurse examiners are involved in filling the void where the health care system intersects with the legal system.

There is no single test that proves a sexual assault occurred. It is the aggregation of collected and documented physical evidence that establishes, corroborates, and/or disputes the occurrence of a sexual assault (Cabaniss, Scott, & Copeland, 1985; Ledray & Netzel, 1997; Poma & Park, 1992; Stone & Stone, 1978). Ledray (1992a) discussed the importance of evidence in proving the use of force or coercion against the sexual assault survivor. Evidence collected can also potentially indicate the identity of the perpetrator and corroborate the stated history that sexual contact occurred within the stated defined time frame (p. 224).

Jezierski (1992) stated, “A major factor in development of nurse examiner programs was the assurance that legally admissible evidence would be collected and that the person collecting it could provide credible testimony on the witness stand” (p. 178). Increased utilization of SANEs in caring for sexual assault survivors, challenges the
nursing profession to examine the efficacy of the evidence collection process in the delivery of this specialized nursing service.

Problem Identified

Medicolegal evidence collected incompletely or improperly during a sexual assault exam can lead to the potential inadmissibility of the case in court and result in freedom of the perpetrator (Poma & Park, 1982). Cabaniss, Scott, and Copeland (1985) stated, “Such indirect or circumstantial evidence will in more than 90% of rape cases make the difference. When it is lacking, the trial becomes simply a swearing match between the victim and defendant” (p. 160).

The sexual assault nurse examiner realizes that the outcome of a post-sexual assault exam is pivotal on efficient completion of the medicolegal evidence collection process. Due to the importance of the outcome of this skill, efficacy of the completeness of evidence collected by a SANE versus a non-SANE will be the focus of this research. Ledray and Arndt (1994) found that “improper documentation and handling of evidence of sexual assault is typically the greatest problem that occurs in institutions without nurse examiners” (p. 19).

There is a void in quantitative research comparing the completeness of the evidence collection process supporting the efficacy of a SANE versus a non-SANE (health care providers). Burgess and Fawcett (1996) noted the lack of quantitative data regarding sexual assault care providers and developed the Comprehensive Sexual Assault Assessment Tool (CSAAT) to provide a systematic guide for victim assessment, evidence documentation and initial treatment. This tool would prompt a more complete recording of the sexual assault by the care provider. Research to test this tool has yet to
be published.

In the current era of evidence-based practice, sexual assault nurse examiners attempting to promote the efficacy of their role need both qualitative and quantitative data to support the proposition that a SANE will make a difference in the medicolegal evidence collection process. Barton (1995) summarized the importance of compiling complete sexual assault evidence when she stated, "Misinterpretation or failure to properly obtain evidence may result in a miscarriage of justice. Helping victims obtain validation of their injustice is crucial to their healing process and may be of critical importance in the effort to avoid further victimization" (p. 3).

Significance to Nursing

The profession of nursing knows now, more than ever, the need to document nurses' roles in the delivery of health care in response to the scrupulous societal demand for evidence-based practice. Sexual assault nurse examiners have been challenged to share responsibility with the medicolegal system to augment the resources available to patients of sexual assault. Resources such as collection and documentation of evidence are crucial in this era of evidence-based practice. Sexual assault nurse examiners attempting to promote the efficacy of their role need qualitative and quantitative data to improve and expand the delivery of nursing services to sexual assault victims.

Purpose

The purpose of this study is to compare the completeness of the medicolegal evidence collected from a sexual assault survivor by a sexual assault nurse examiner, as compared to the completeness of evidence collected by a non-sexual assault examiner.
CHAPTER 2
CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

**Conceptual Framework**

Imogene King’s Theory of Goal Attainment (1981) will provide the theoretical basis for this study. A systems approach is used in the development of the theory of goal attainment. King’s depiction of the systems approach utilizes the environment as the rim of an open system in which the continuum of personal, interpersonal, and social systems are encompassed (Ackermann, et al., 1989).

The systems approach suggests that each person is at the center of the environment in his or her personal system. The process of interacting with other people promotes extension into the interpersonal system. This interaction with larger groups of people in society permeates into the social system. Life and health of the individual will be influenced by how he or she interacts within the personal, interpersonal, and social systems. The patient and nurse are each a personal system encompassed within interpersonal and social systems. The focus for nursing is to assist the patient in the context of his or her environment to attain, maintain, and restore health in order to function in his or her socially defined roles (King, 1981).

This dynamic, interacting, systems approach provided the groundwork for King’s (1981) Theory of Goal Attainment. The theory of goal attainment describes an interaction-transaction nursing process that occurs when a nurse and the patient meet in a situation, such as a post sexual assault exam. Utilizing the concepts of King’s theory,
goal attainment occurs between the nurse and the patient when a certain type or level of interaction occurs. The major concepts in the theory of goal attainment are interaction, perception, communication, and transaction.

**Theoretical Concepts Defined**

King (1981) defines the concept of interaction as, "a process of perception and communication between person and environment and between person and person, represented by verbal and nonverbal behaviors that are goal directed" (p. 145). Through the process of interacting, thoughts and ideas are shared between the nurse and the patient while simultaneously perceiving one another and the details of the sexual assault. The concept of perception defined by King is, "each person's representation of reality" (p. 146). The nurse and patient subjectively perceive the world and utilize the process of communication to share their experiences.

The concept of communication defined by King is, "the exchange of verbal and non-verbal signs and behaviors that are goal directed" (p. 147). The concept of transaction defined by King is "purposeful interactions that lead to goal attainment" (p. 147). Communication through the process of educated interviewing maximizes the achievement of congruent perceptions. King suggests that when interaction achieves congruent perceptions between the patient and nurse, a level of communication can be established through which mutual goals can be set. When transactions occur, they increase the likelihood of goal attainment.

These concepts are not sequential and some occur simultaneously. Chinn and Kramer (1995) state:

Nurse and patient perceive one another, act and react, interact and
transact. In this process, presenting conditions are recognized, goal-related decisions are made, and motivation to exert control over events to achieve goals occurs. Transactions are basic to goal attainment and include social exchange, bargaining and negotiating, and sharing a frame of reference toward mutual goal setting. Transactions require perceptual accuracy in nurse-client interactions and congruence between role performance and role expectation for nurse and client. Transactions lead to goal attainment, satisfaction, effective care, and enhanced growth and development. The goal of nursing process interaction is transaction, which leads to attainment of goals in relation to health promotion, maintenance, and recovery from illness. (p. 181)

Use of Concepts in this Study

Utilizing the concepts of King's (1981) Theory of Goal Attainment, the mutual goal between the sexual assault survivor and sexual assault nurse examiner of amassing a complete kit is attained. The sexual assault survivor presents to a health care organization to be evaluated after the sexual assault by a sexual assault nurse examiner. Introductions are exchanged between the survivor and the nurse. It is at this point that goal-related decisions are made between the survivor and sexual assault nurse examiner to treat the survivor's injuries and concurrently obtain incriminating medicolegal evidence through the process of a sexual assault exam. This evidence can then be used to implicate the perpetrator. Recognition and commitment to the common goal of collecting all the evidence, leads to a higher possibility that the goal will be attained.

The history of the assault is verbalized (communication) and details (perception)
elicited with exchange of information (interaction). Achievement is congruent perception during these early stages of interaction which facilitates setting of mutual goals and the transaction that will enable their attainment. Goals may relate to the accuracy of data, evidence collection, as well as to the treatment of physical injury and development of a plan for emotional support. The sexual assault kit is efficiently completed and injuries are treated (goal attainment) through the united efforts of the sexual assault survivor and sexual assault nurse examiner, promoting the process of healing. The completion of the sexual assault evidence kit, compiling all the collected evidence, epitomizes goal attainment.

Literature Review

The review of the literature will initially focus on a nursing study reflecting the supposition that there is a lack of care for survivors of sexual assault. This will be followed by a review of sexual assault nurse examiner studies concerning the evidence collection process completed by a SANE compared to a non-SANE.

Campbell and Bybee (1997) conducted a study examining the adequacy of emergency room assistance given to a survivor of sexual assault. In this study 147 sexual assault victim advocates were interviewed by phone regarding four domains of service offered to the sexual assault victim who sought treatment in an emergency room.

These domains of services included (a) physical care including the rape exam, (b) sexually transmitted disease issues, (c) pregnancy issues, (d) after-effects issues regarding physical health and psychological effects. The advocates were asked if these services were available to the sexual assault victims who requested them and if the services were provided. The hospitals that had a Sexual Assault Response Team (SART)
providing these services trended higher in three domains of care with statistical
significance (p<.01) than those hospitals without a SART. The SART statistical
significant results were in the delivery domains of physical care, sexually transmitted
disease issues, and after-effects issues (Campbell & Bybee, 1997).

Several methodological limitations suggested and addressed by Campbell and
Bybee (1997) included the reliability and validity of collection of data from rape victim
advocates influenced by the advocates' ability to recall the details of the assault and
system response, lack of a comparison group of sexual assault victims who did not work
with advocates, and the sample size being small for the multivariate analysis performed
(p. 98).

Overall, results indicated that there was inconsistency in the services sexual
assault victims receive. Characteristics of the hospitals and their policies/programs have
an impact on the delivery of care to victims of sexual assault. Hospitals with health care
professionals working as members of the Sexual Assault Response Team helped to
ensure individualized delivery of care to sexual assault survivors.

Ledray and Simmelink (1997) conducted a study to evaluate the efficacy of
SANE evidence collection in the state of Minnesota in 1996. A convenience sample of
97 sexual assault kits were audited for completeness as the kits were submitted
to the Minnesota Bureau of Criminal Apprehension. The tool (Appendix A) used to
audit the kit was designed by the Minnesota Bureau of Criminal Apprehension,
Hennepin County Medical Center, and Linda Ledray to evaluate each kit for
completeness. This panel of experts confirmed content validity for the data collection
tool, medical report audit form, and scoring mechanism. The tool consisted of 14
central questions and four additional sexual assault history form clarification questions to
total 18 questions and answers (yes or no).

Ledray and Simmelink's (1997) study design involved a two-group comparison of
sexual assault nurse examiners and non-sexual assault nurse examiners evidence kits
submitted to the Minnesota Bureau of Criminal Apprehension. The independent variable
was the category of sexual assault examiner: SANE or non-SANE. The dependent
variable was the completeness of the sexual assault kit. It was either complete or
incomplete. Each item was evaluated as complete or not complete, then the percent of
the completed items was calculated and compared across the two groups. These authors
findings revealed that the SANE kits were significantly more complete and better
documented than the non-SANE kits submitted.

The SANE group kits (n=24) were more complete with higher percentage scores
obtained on all 18 evidence kit items submitted than the evidence kit items submitted by
the non-SANEs (n=73). The evidence kit item completed least (71%) by the SANE
group was the synopsis and recording of assault. The SANE group (n=24) completed the
following evidence kit items 100% on all 24 kits submitted in this study: (a) Hospital
personnel kit box top section completed, (b) evidence seals affixed to outside of kit, (c)
sexual assault history form completed and placed in kit, (d) orifices involved recorded,
(e) clothing collected and properly prepared, (f) source identified for miscellaneous or
skin swabs, (g) serology tube collected, and (h) the blood stain card was properly
prepared.

Ledray and Simmelink (1997) concluded the following regarding SANE evidence
collected, “They maintained the proper chain of evidence more consistently than kits
completed by other nurses or physicians. In addition, the errors made by SANEs were in no instance major errors that would threaten the integrity of the evidence collected” (p. 34).

The least complete evidence kit item reported for the non-SANE group (15%) was collection of an extra blood tube for drug/alcohol screening. The evidence kit item that was most complete by the non-SANE group was the placement of proper police evidence seals (97%) on the outside of the evidence kit. Ledray and Simmelink (1997) concluded, “Unfortunately, 13 kits (18%) collected by non-SANEs would not be admissible in court. This supports the expectation that SANEs will collect better evidence as a result of their experience and training” (p. 34).

Ledray and Simmelink (1997) surmise that documentation of the results of evidence collected will overall effectively document the efficacy of the SANE model. The limitation of this research include the lack of generalization to the population at large.

Poulterer (1987) conducted a study examining sexual assault nurse examiners and other health care providers for collection of evidence in cases of sexual assault. Two research questions were addressed in this study. The first research question was, “What is the useability of sexual assault evidence collected by the Sexual Assault Nurse Examiner and other health care providers?” The second research question was, “What is the difference in the useability of sexual assault evidence collected by Sexual Assault Nurse Examiners and other health care providers?” (p. 7).

Poulterer’s (1987) study consisted of a convenience sample of 123 sexual assault evidence kits and the accompanying medical report. Fifty-three kits were collected by
SANEs, and 70 were collected by other care providers. The sexual assault evidence kits and medical reports were evaluated by laboratory personnel/data collectors using a structured observation tool to evaluate the qualitative and quantitative functions of useability of sexual assault evidence. The medical report was audited by the researcher. The data analyzed used measures of central tendency, the independent t-test, and discriminant analysis.

The sexual assault evidence data collection tool was used to record presence or absence of the 24 separate evidence items in the 123 kits submitted. Interrater reliability of the laboratory personnel/data collectors was addressed and found reliable by Poulterer (1987) in a pilot study utilizing ten sexual assault evidence kits. Test-retest reliability of the medical report audit form was also addressed by the researcher and was reported as reliable. Content validity for the data collection tool, medical report audit form, and scoring mechanism was examined and determined valid by a consensus of a panel of experts in both the medical and forensic fields (Poulterer, 1987, p. 25).

The 24 evidence items for Poulterer's (1987) study were collapsed into three categories: external, internal, and other. The external evidence category consisted of pubic and head hair, fingernail scrapings, and loose evidence. The internal evidence category consisted of nasal, blood, vaginal, oral, and anal swabs/smears. The other evidence consisted of the medical report, clothing, labels, and the affidavit (p. 34).

Frequencies of collection (nonapplicability was computed as if collected or addressed) of external, internal and other evidence by SANE revealed a total of 96.3% as compared to the other health care providers at 91%. Independent t-tests revealed a significant difference in the total mean evidence collection scores ($t=3.05; \ df=99$;
Discriminant analysis classification results revealed SANEs were accurately classified in 41 (78.8%) cases, and other health care providers were classified in 28 (62.2%) of cases. Eleven (21.2%) of actual SANE cases, and 17 (37.8%) of other providers were inaccurately classified. Classification accuracy of 21 percent better than chance indicates that the discriminant function analysis may be useful in developing group profiles (Poulterer, 1987, p. 52).

Poulterer (1987) concluded that both groups, SANEs and other health care providers, provide a high level of useable evidence in quality and quantity. However, the SANE group collected more evidence items, met criteria more frequently, and had scores higher in all evidence collection categories: total, external, internal, and other. The area of evidence collection where SANEs and other health care providers differed most was internal evidence collection (p = <.001). The SANE group collected more internal evidence with fewer unmet criteria. The medical report audit findings revealed that 65% of medical reports completed by SANEs and only 45% of the medical reports completed by other health care providers were analyzed as complete (p. 63).

Limitations of this study addressed by Poulterer (1987) were the use of a convenience sample which restricted generalization only to the study sample, difficulty of obtaining data on the time interval between time of assault and examination, evaluation of only one aspect of the SANE program, and the overall findings relied on documentation (p. 74).
Implications for Study

The limited findings after an exhaustive review of SANE quantitative literature suggest a gap between verbal reports of sexual assault nursing efficacy and quantitative documentation of efficacy. Anecdotal and testimonial evidence alone is no longer sufficient in the suspicious health care arena demanding concrete results (Buppert, 1995). Although qualitative studies prompt and lend rhetorical support to studies such as this one, SANE nurses attempting to promote the efficacy of sexual assault nurse examiners need facts and quantitative evidence to support their efforts.

Research Question

What differences are there in the completeness of the sexual assault evidence kit when prepared by a sexual assault nurse examiner as compared to a non-sexual assault nurse examiner?

Research Hypothesis

Sexual assault evidence kits prepared by a sexual assault nurse examiner will be more complete than sexual assault evidence kits prepared by a non-sexual assault nurse examiner.

Definitions

Sexual assault nurse examiner (SANE) - is defined as a registered nurse who has completed a comprehensive forensic training program and has demonstrated competence in conducting a evidential exam while caring for the sexual assault survivor.

A non-sexual assault nurse examiner (non-SANE) - is defined for the purpose of this study as (a) registered nurse who has not received additional training in forensics and is not certified as a sexual assault nurse examiner, (b) physician, or (c) physician
assistant.

**Medicolegal** is defined by Taber's Cyclopedic Medical Dictionary (1996) as "relating to medical jurisprudence or forensic medicine" (p. 1176). A treatment situation with legal implication.

A **complete** sexual assault kit for the purpose of this study is defined as having attained 18 out of 18 sexual assault kit evidence collected items.
CHAPTER 3
METHODOLOGY

Research Design

The study used a descriptive two group comparison design. Sexual assault nurse
examiners (SANE) were compared with non-sexual assault nurse examiners (non-SANE)
with respect to the completeness of their sexual assault evidence kits submitted to the
Grayling Crime Lab. This study replicated the research of Ledray and Simmelink (1997)
who investigated the efficacy of SANE evidence collection in the state of Minnesota in
1996.

Sample

The sample for this study was comprised of sexual assault evidence kits
completed by SANE or non-SANE health professionals who provided care to victims of
sexual assaults that occurred in one of 39 counties in northern Michigan. These assaults
will have occurred in the time frame of September 1997 through December 1998. Sexual
assault victims will have presented themselves at a facility within the targeted geographic
area and requested a post sexual assault examination.

A convenience quota sample was used. A minimum of 100 sexual assault kits
submitted to the Grayling Crime Lab by December 1998 from the surrounding 39
counties were the focus of the study. The sexual assault kits were completed by a
SANE or non-SANE after a sexual assault occurred in one of 39 counties in northern
Michigan.
Instrument

The sexual assault kit is a standardized packaged kit supplied to all health clinic settings by the Michigan State Police. The sexual assault kits completed by a SANE or non-SANE submitted to the Grayling Crime Lab, were evaluated for completeness utilizing the Evidence Kit Audit tool (EKA) developed by the Sexual Assault Resource Service, Minnesota Bureau of Criminal Apprehension, and Linda Ledray (Appendix B). Three lab technicians at the Grayling Crime Lab completed the analysis of the sexual assault kits using the Evidence Kit Audit as sexual assault kits were submitted. The analysis of the evidence kit items submitted using the EKA tool is very objective and not particularly open to interpretation, therefore enhancing inter-rater reliability. The reliability of Ledray and Simmelink’s (1997) EKA tool utilized in their original research and in the present study is also increased. The content validity of the Evidence Kit Audit instrument was based on judgment of experts.

The EKA includes 14 central questions plus four additional sexual assault medical record form clarification questions that reflect the standards for submission of evidence and ask if a particular procedure was completed consistent with the standard (yes or no). Additionally, the category of the professional completing the kit is noted (physician/physician assistant, registered nurse or other). Whether or not the registered nurse is a SANE is further specified.

These 18 EKA items included (a) kit box top section “For Hospital Personnel” filled in completely, (b) kit box top section “For Police Personnel” filled in completely, (c) red police evidence seals were affixed to outside of kit, (d) sexual assault history form was completed and placed inside kit, (e) last consensual coitus was recorded, (f) orifices
involved were recorded, (g) synopsis of assault, including location recorded, (f) orifices involved were recorded, (g) synopsis of assault, including location recorded, (h) number of assailants involved recorded, (i) clothing obtained as evidence placed in separate paper bags, sealed, and initialed, (j) all evidence envelopes used sealed, and information on outside of envelopes filled in or appropriately labeled, (k) correct swabs collected to match recorded penetration, (l) sufficient number of swabs collected from each site, (m) source identified for miscellaneous or skin swabs, (n) purple top tube used for collection for blood type, (o) extra blood tube drawn for drugs/alcohol, (p) expiration date not passed on blood tube prior to collection, (q) blood stain card (if in kit) was properly prepared, and (r) pubic and/or head hairs were not unnecessarily pulled.

Procedure

Health-care professionals have an obligation to provide care to all patients seeking medical assistance including victims of sexual assault. If a medical professional feels that sufficient care or evidence collection can not be provided, an appropriate referral must be made so that the case is not jeopardized. The SANE or non-SANE completes a sexual assault kit that delineates the evidence to be collected.

The kit is then submitted to the Grayling Crime Lab and processed by the lab technicians. Three forensic lab technicians (Appendix C) evaluated the completeness of the kits using the Evidence Kit Audit. The category of the professional completing the kit was noted. Completed audits were submitted to the researcher for analysis. Sampling continued until 59 non-SANE and 41 SANE kits were audited.

Human Subjects

A SANE or non-SANE who submitted a poorly completed sexual assault kit to
the Grayling Crime Lab would have been given verbal reproof and informed of the potential inadmissability of the case in court. No further risk to the individual completing the sexual assault kit occurred as the result of this study. Names of the professionals completing the evidence kits were not included nor were the names of the victims. This ensured that individual identities would not be linked to the information that was provided nor publicly divulged. The evidence kit data collection forms were shredded and destroyed after the data analysis was completed. The study was approved by Grand Valley State University Human Subject Review Committee (Appendix D).
CHAPTER 4
DATA ANALYSIS

The purpose of this study was to compare the completeness of the medicolegal evidence from a sexual assault survivor collected by a sexual assault nurse examiner versus a non-sexual assault nurse examiner. A two group comparative design was used for this descriptive study.

The independent variable was the category of sexual assault examiner: SANE or non-SANE. The dependent variable was the completeness of the sexual assault kit (expressed as a percent) based on an assessment using the Evidence Kit Audit Form. The percent of the completed items were compared across the two groups utilizing the t-test for independent groups. The chi-square test was used to compare SANE and non-SANE groups on whether an individual item was complete or incomplete. All analyses were computed using the Statistical Package for the Social Sciences (SPSS) software. The level of significance was set at p < .05 for all statistical procedures.

The sample for this study was comprised of 100 sexual assault evidence kits completed by SANE or non-SANE health professionals who provided care to victims of sexual assaults that occurred in one of 39 counties in northern Michigan. The SANEs submitted 41 sexual assault evidence kits (n=41) and the non-SANEs submitted 59 sexual assault kits (n=59). The sexual assault kits were completed for sexual assaults that occurred in the time frame of September 1997 through December 1998.

The health care professionals who completed the sexual assault evidence kits on
sexual assault survivors were collapsed into two categories: SANE and non-SANE. The SANE is a registered nurse who has received additional training in forensics and is certified as a sexual assault nurse examiner. The non-SANE is (a) registered nurse who has not received additional training in forensics and is not certified as a sexual assault nurse examiner, (b) physician, or (c) physician assistant.

Three lab technicians at the Grayling Crime Lab analyzed the sexual assault kits submitted using the Evidence Kit Audit. The audit instrument included 14 central questions and four additional clarification questions to total 18 questions. The 18 questions reflected the standards for submission of evidence and asked if a particular procedure was completed consistent with the standard (yes or no).

This study sought to answer the question: What differences are there in the completeness of the sexual assault evidence kit when prepared by a sexual assault nurse examiner as compared to a non-sexual assault nurse examiner? Initially, the SANE and non-SANE groups were compared descriptively in relation to the percent of each group who had completed each item of evidence. The total number of complete kits submitted by a group for an item were divided by the number in the group. The most frequent items collected improperly or incompletely by both groups included submission of blood collected in expired blood tubes, insufficient amount of swabs collected per site, and lack of an extra blood tube submitted for drug and alcohol testing.

In addition to these findings, the non-SANE group submitted a higher number of incomplete sexual assault history forms (80%) on the sexual assault victims, whereas, SANEs submitted complete sexual assault history forms (100%). Standardized packaging of clothes were more complete when performed by SANEs (93%) than the
packaging of clothes completed by the non-SANE group (73%). The complete findings are illustrated in Table 1.

Table 1

Comparison of the Percent of SANEs and non-SANEs Completing Each Evidence Item

<table>
<thead>
<tr>
<th>*Evidence Kit Items</th>
<th>SANE</th>
<th>non-SANE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=41 kits)</td>
<td></td>
<td>(n=59 kits)</td>
</tr>
<tr>
<td>1. Kit box top section “For Hospital Personnel” completed</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>2. Kit box top section “For Police Personnel” completed</td>
<td>100</td>
<td>81</td>
</tr>
<tr>
<td>3. Red police evidence seals affixed to outside of kit</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>4. Sexual assault history form completed and placed in kit</td>
<td>100</td>
<td>80</td>
</tr>
<tr>
<td>4a. Last consensual coitus recorded</td>
<td>98</td>
<td>80</td>
</tr>
<tr>
<td>4b. Orifices involved recorded</td>
<td>100</td>
<td>76</td>
</tr>
<tr>
<td>4c. Synopsis of assault, including location recorded</td>
<td>100</td>
<td>76</td>
</tr>
<tr>
<td>4d. Number of assailants involved recorded</td>
<td>100</td>
<td>76</td>
</tr>
<tr>
<td>5. Clothing obtained as evidence placed in separate paper bags, sealed and initialed</td>
<td>93</td>
<td>73</td>
</tr>
<tr>
<td>6. All evidence envelopes used sealed, and information on outside of envelopes filled in or appropriately labeled</td>
<td>100</td>
<td>92</td>
</tr>
<tr>
<td>7. The correct swabs collected matched recorded penetration</td>
<td>88</td>
<td>73</td>
</tr>
<tr>
<td>8. Sufficient number of swabs collected from each site</td>
<td>78</td>
<td>58</td>
</tr>
<tr>
<td>9. Source is identified for miscellaneous or skin swabs</td>
<td>98</td>
<td>71</td>
</tr>
<tr>
<td>10. A purple top tube was used for collection for blood type</td>
<td>95</td>
<td>78</td>
</tr>
<tr>
<td>11. An extra blood tube was drawn for drugs/alcohol</td>
<td>78</td>
<td>58</td>
</tr>
<tr>
<td>12. The expiration date had not passed on blood tube prior to collection</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>13. The blood stain card (if in kit) was properly prepared</td>
<td>100</td>
<td>98</td>
</tr>
<tr>
<td>14. Pubic and/or head hairs were not unnecessarily pulled</td>
<td>95</td>
<td>92</td>
</tr>
</tbody>
</table>

*Nonapplicable evidence kit items per case were computed as if collected or addressed.

The total completeness of each kit was determined by dividing the number of complete items for each kit by 18. Overall, the SANE group completed a greater number
of evidence items per case with fewer omissions, than the non-SANE group. The SANE group (n=41 kits) ranged from a 78% (14 items) to 100% complete. The non-SANE group (n=59 kits) ranged from 11% (2 items) to 100% complete.

Twenty-seven kits submitted by SANEs (n=41) and 16 kits submitted by non-SANEs (n=59) were 94% to 100% complete, having collected 17 or 18 evidence kit items out of 18 possible. Twenty-one non-SANE kits audited had fewer than 14 out of 18 completed evidence kit items, whereas the SANE group did not have any audited kits with fewer than 14 completed evidence kit items.

Research Hypothesis

The research hypothesis of this study is: Sexual assault evidence kits prepared by a sexual assault nurse examiner will be more complete than sexual assault evidence kits prepared by a non-sexual assault nurse examiner.

The percent of the completed items were calculated for each kit and the mean percent was compared across the two groups utilizing the t-test. The SANE kits were significantly more complete (t = 5.6, df = 71, p<.001) as summarized in Table 2. Therefore, the hypothesis of sexual assault evidence kits prepared by a SANE will be more complete than sexual assault evidence kits prepared by a non-SANE was supported.
Table 2

**T-tests for Independent Samples: SANE and non-SANE Group**

<table>
<thead>
<tr>
<th></th>
<th>Number of Cases</th>
<th>Mean</th>
<th>SD</th>
<th>t*</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SANE</td>
<td>41</td>
<td>*93</td>
<td>5.75</td>
<td>5.6</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Non-SANE</td>
<td>59</td>
<td>*77</td>
<td>19.91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Due to the significant amount of variance a separate formula was used to calculate the t-test.

The Chi-Square with Yates continuity correction was used to compare the SANE and non-SANE groups with respect to whether or not an individual item was complete.

The results of these comparisons are included in Table 3.
Table 3

Comparison of Completion of Individual Items by SANE and non-SANE Groups

<table>
<thead>
<tr>
<th>Evidence Kit Items Audited for Completeness</th>
<th>X</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Kit box top section “For Hospital Personnel” completed</td>
<td>2.88</td>
<td>1</td>
<td>.08</td>
</tr>
<tr>
<td>2. Kit box top section “For Police Personnel” completed</td>
<td>6.79</td>
<td>1</td>
<td>.00</td>
</tr>
<tr>
<td>3. Red police evidence seals affixed to outside of kit</td>
<td>0.75</td>
<td>1</td>
<td>.38</td>
</tr>
<tr>
<td>4. Sexual assault history form completed and placed in kit</td>
<td>7.64</td>
<td>1</td>
<td>.00</td>
</tr>
<tr>
<td>4a. Last consensual coitus recorded</td>
<td>5.36</td>
<td>1</td>
<td>.02</td>
</tr>
<tr>
<td>4b. Orifices involved recorded</td>
<td>9.42</td>
<td>1</td>
<td>.00</td>
</tr>
<tr>
<td>4c. Synopsis of assault, including location recorded</td>
<td>9.42</td>
<td>1</td>
<td>.00</td>
</tr>
<tr>
<td>4d. Number of assailants involved recorded</td>
<td>9.42</td>
<td>1</td>
<td>.00</td>
</tr>
<tr>
<td>5. Clothing obtained as evidence placed in separate paper bags, sealed and initialed</td>
<td>4.94</td>
<td>1</td>
<td>.02</td>
</tr>
<tr>
<td>6. All evidence envelopes used sealed, and information on outside of envelopes filled in or appropriately labeled</td>
<td>2.09</td>
<td>1</td>
<td>.14</td>
</tr>
<tr>
<td>7. The correct swabs collected matched recorded penetration</td>
<td>2.41</td>
<td>1</td>
<td>.12</td>
</tr>
<tr>
<td>8. Sufficient number of swabs collected from each site</td>
<td>3.63</td>
<td>1</td>
<td>.05</td>
</tr>
<tr>
<td>9. Source is identified for miscellaneous or skin swabs</td>
<td>9.68</td>
<td>1</td>
<td>.00</td>
</tr>
<tr>
<td>10. A purple top tube was used for collection for blood type</td>
<td>4.31</td>
<td>1</td>
<td>.03</td>
</tr>
<tr>
<td>11. An extra blood tube was drawn for drugs/alcohol testing</td>
<td>3.63</td>
<td>1</td>
<td>.05</td>
</tr>
<tr>
<td>12. The expiration date had passed on blood tube prior to collection</td>
<td>0.00</td>
<td>1</td>
<td>1.00</td>
</tr>
<tr>
<td>13. The blood stain card (if in kit) was properly prepared</td>
<td>0.00</td>
<td>1</td>
<td>1.00</td>
</tr>
<tr>
<td>14. Pubic and/or head hairs were not unnecessarily pulled</td>
<td>0.86</td>
<td>1</td>
<td>.76</td>
</tr>
</tbody>
</table>

*Yates continuity correction used*

The obtained Chi-square with Yates continuity correction value was substantially larger in 11 of 18 evidence kit items audited than would be expected by chance, concluding that a larger portion of sexual assault evidence kit items completed by SANEs were more complete than non-SANEs.
CHAPTER 5
DISCUSSION AND IMPLICATIONS

The results of this study supported the hypothesis that sexual assault evidence kits prepared by sexual assault nurse examiners will be more complete than sexual assault evidence kits prepared by non-sexual assault nurse examiners. Quality of evidence is important in obtaining a conviction in cases of sexual assault. The completeness of the evidence collection by SANEs or non-SANES will, therefore, play a critical role in the case that is established against the accused perpetrator. Medicolegal evidence collected incompletely or improperly during a sexual assault exam can lead to the potential inadmissability of the case in court and result in subsequent freedom of the perpetrator.

The expanded role of the Registered Nurse in the delivery of specialized nursing care to survivors of sexual assault challenges the nursing profession to provide quantitative evidence supporting the efficacy of this autonomous role. Although there are many aspects of the SANE role to be qualitatively and quantitatively studied, the focus of this quantitative study is on the evidentiary outcome of the SANE in the role as collector of medicolegal evidence in a sexual assault case.

This study provided quantifiable evidence supporting the SANE as a more complete collector of medicolegal evidence than other professionals who often assume the roles of evidence collectors. The research question was, “What differences are there in the completeness of the sexual assault evidence kit when prepared by a sexual assault nurse examiner as compared to a non-sexual assault nurse examiner?” A significantly
higher percentage of SANEs completed 11 out of 18 evidence kit items than their non-SANE counterparts (corrected Chi-squares = 3.63 - 6.79, p =< .05 - < .01).

The SANE forensic training helped to develop the skills needed for evidentiary collection as reflected in the outcome of this study (t=5; df=71; p<.001). The SANE group performed a more complete job (a) preparing the kit box top with police personnel information, (b) detailing the sexual assault form, (c) procuring clothing, (d) collecting a sufficient number of swabs, (e) identifying the source of miscellaneous or skin swabs, and (f) collecting serology tubes for blood type, drugs and/or alcohol testing.

Even though the evidence kits prepared by SANEs are significantly more complete than non-SANEs there is still room for improvement in a couple of areas. Problematic areas identified as lack of complete evidence collected by both the SANE and non-SANE group in the present study included (a) insufficient number of swabs collected from each site, (b) lack of an extra blood tube drawn for drug/alcohol testing, (c) and use of a expired serology tube. Each of these evidence kit items are needed for the evaluation of specific evidence.

Lack of collection of a sufficient number of swabs could be attributed to unfamiliarity with the evidence collection process in a sexual assault due to infrequent case exposure and time constraints due to a busy patient load in the emergency room. The swabs are prepackaged in groups of two. This may be interpreted by the collector to use only one swab per area and the second swab as back-up if unavoidably contaminated.

Failure to collect an extra serology tube for drug/alcohol testing could be attributed to the SANE or non-SANE sending one serology tube to the hospital facility lab for immediate testing and therefore submitting only one serology tube for DNA.
analysis to the specified Crime Lab. If an extra serology tube is sent to the hospital lab, this should be documented on the evidence collection sheet to advise the crime lab technicians that the serology tube for drug/alcohol was indeed collected.

Using expired serology tubes could jeopardize a case if blood collected were not useable. The expiration date is printed in small print on the serology tube label and is easily overlooked. Perhaps changing the size or color of the preprinted expiration date would be helpful. A bright sticker reminding the data collector to check the expiration date prior to using the serology tube might be helpful too.

**Relationship of Findings to Previous Research**

Campbell and Bybee (1997) studied emergency medical services for rape victims by interviewing 147 rape victim advocates in order to detect the cracks in service delivery. The results, overall, indicated that there was inconsistency in the services sexual assault victims received, except for hospitals that had a Sexual Assault Response Team (SART). Hospitals with a SART program provided consistent physical care during the rape exam, addressed sexually transmitted disease and pregnancy issues, and discussed after-effects issues regarding physical health and psychological effects. It was not possible to make similar comparisons in the present study since a different sample and tool were used.

The present study replicated the research of Ledray and Simmelink (1997) and supported these authors’ findings regarding the efficacy of the SANE in evidentiary collection and documentation. The study design, sample size, evidence kit audit instrument, and results were analogous. In both studies the evidence submitted by SANEs were significantly more complete with a higher percent of complete scores on all
18 evidence kit items submitted, than the evidence kits submitted by non-SANEs.

Poulterer's (1987) study also supported the findings of the present study. This author addressed two research questions: (a) what is the useability of sexual assault evidence collected by the SANE and other health care providers, and (b) what is the difference surrounding the useability and difference in useability of sexual assault evidence collected by a SANE and other health care providers? The study design, sample size, evidence kit audit tool, and results were similar to the study conducted by Ledray and Simmelink (1997) and the present study.

The evidence kit items were collapsed into three categories: external, internal, and other. These evidence kit items were comparable to the evidence kit items collected in both Ledray and Simmelink's (1997) study and the present study. Frequencies of collection of external, internal and other evidence by SANEs, revealed a higher percentage and frequency of completed or collected items. Independent t-tests revealed significant differences (p=<.05) in the total mean evidence collection scores between the SANE group and other health care provider group.

The t-test results of Poulterer's (1987) study and the t-test results of the present study support the SANE as a more complete collector of sexual assault evidence. Poulterer concluded that even though both groups in her study provided a high level of useable evidence, the SANE group collected more evidence items, met the criteria more frequently and had scores higher in all evidence collection categories: total, external, internal, and other.

Even though the evidence kits prepared by SANEs are significantly more complete than non-SANEs there is still room for improvement in a couple of areas.
The results of these aforementioned studies and future SANE program studies will help to highlight the efficient and/or problematic areas of this specialized nursing service in the area of collection of evidence. Studies can suggest areas where education can be reinforced and expose problematic areas that need to be resolved.

**Relationship of Findings to the Conceptual Framework**

Utilizing the concepts of King’s (1981) theory of goal attainment, the mutual goals between the sexual assault survivor and sexual assault nurse examiner of amassing a complete kit are attained. Findings in the present study suggest that goal-related decisions are made between the survivor and sexual assault nurse examiner to treat the survivor’s injuries and concurrently obtain incriminating medicolegal evidence through the process of a sexual assault examination.

Recognition of and commitment to the common goal of collecting all the evidence, led to a higher percentage of goal attainment as demonstrated in the present study. Conclusions drawn reflect the assumption that the special education of the SANE will increase the likelihood of mutual goal setting and higher goal attainment of the goal of obtaining incriminating perpetrator evidence. The fact that SANEs had a higher level of goal achievement helps to give credence to that assumption.

When communication reaches the level of transaction during a sexual assault exam, the likelihood of attaining the mutual goal of collecting incriminating perpetrator evidence is increased. Although this study did not directly evaluate the quality of communication between the survivor and examiner, King’s theory seems to support the differences of these findings between examiner groups. The theory also provides an area of focus for improving outcomes. Helping sexual assault survivors seek justice through
the evidentiary collection goal attainment process is a crucial step in beginning their healing process.

**Application to Practice/Administration/Education**

The findings of this present study conclude SANEs do a more complete evidentiary examation than non-SANEs. This finding has several implications for promotion of this specialized nursing service. Past studies (Burgess, 1991; Campbell & Bybee; 1997; DiNitto, et al. 1986; Ledray & Ardnt, 1994; MacFarlane & Hawley, 1993; Tjaden & Thoennes, 1998) have indicated that consistent care for survivors of sexual assault is lacking. The SANE program or model was developed to help meet the needs of survivors in a more consistent, holistic approach. One aspect that is consistent is the aspect of the completeness of the evidentiary collection process. The sexual assault survivor who presents to be evaluated by a SANE after a sexual assault can be assured that the mutual goal of obtaining a complete collection of perpetrator evidence, will be attained.

In the administrative arena, quantifiable SANE evidence-based practice is necessary to justify incorporating or maintaining a budget for a SANE program (Buppert, 1995). One could conclude that the holistic care provided by a SANE to a sexual assault survivor would help promote a quick road to recovery. This could reflect in health care cost savings as the survivor is able to return as a contributing member of society after healing physically and emotionally. The healing process begins when the SANE assists a sexual assault survivor in the validation of her or his injustice by obtaining incriminating perpetrator evidence through the process of a more complete sexual assault exam. Incriminating perpetrator evidence could lead to subsequent conviction and incarceration.
of the perpetrator.

Education provided through a Sexual Assault Nurse Examiner certification program provides a firm foundation for Registered Nurses to sharpen or gain forensic skills. Forensic examination techniques covered in SANE training highlight the importance of specific evidence items to be collected in order to ensure successful prosecution of the perpetrator secondary to these evidentiary findings.

Continuing education promotes functioning at a higher level of practice. Existing SANE programs are improved and new evidence collection techniques evolve because of continued education. Nursing and forensic skills combined create a interfacing perspective prompting a multitude of professional opportunities (Pozzi, 1996).

Limitations

The findings of this research study are from a convenience sample restricting generalization to the study sample. Inter-rater reliability was not specifically addressed. The assessment of the evidence kit items is very objective and not particularly open to interpretation. This fact would be expected to enhance inter-rater reliability. Another limitation of this study was that only one dimension of the SANE multidimensional role was studied. As stated, the SANE in the role as collector of evidence is only one of the many dimensions which could be quantified in this study. Although the outcome of the evidentiary exam is crucial, other dimensions of the SANE role need to be quantitatively studied and subsequent results published.

Internal and external influences on the SANE or non-SANE were not addressed. Levels of experience, nursing education, and knowledge gained through continuing education...
education can create differences in communication between examiner and survivor and in the way evidence is collected and documented apart from special training in examination.

Incongruence in the perception of goal attainment between the sexual assault examiner and the sexual assault survivor could influence the way evidence is collected or documented. The sexual assault survivor would like the evidence collected for the judicial system process in order to prosecute the perpetrator, while the SANE or non-SANE might be collecting the evidence out of routine, not caring about the outcome. The gender of the SANE or non-SANE performing the sexual assault exam should have been included in this study to see if there was a difference in the completeness of evidence collected secondary to the gender of the examiner.

Suggestions for Further Research/Modifications

Recommendations for future research would include replication of this study using a larger sample and the measurement of the gender of the SANE or non-SANE completing the evidentiary exam. It would be useful to conduct a study to determine the factors which discriminate the levels of performance within the non-SANE and SANE group in evidence collection.

A study to identify and reduce SANE role stressors, such as the stress of being subpoenaed for court, in this specialized nursing role would be beneficial as this role is evolving. Future research could be to conduct an experimental study to assess the currently functioning SANEs level of competence, before and after SANE training.

Final research suggestions would be to conduct quantitative studies of the Sexual Assault Nurse Examiner program to include sexual assault survivor satisfaction with
services provided and the support received. Other studies could include outcome analyses regarding pregnancy prevention, sexually transmitted disease prevention, and ratio of successful perpetrator conviction per SANE case submitted. A cost effectiveness study of the SANE provider in the tentative prevention of long-term post sexual assault sequelae as compared to the cost of an evidentiary exam completed by a non-SANE provider would be interesting to evaluate in this current era of cost-containment.

In summary, sexual assault results in a disruption of the physical, emotional, and social equilibrium of the survivor. This disruption of equilibrium can be balanced with provision of uniform SANE nursing care. Uniform SANE nursing care provided to the sexual assault survivor simultaneously as the evidentiary exam is completed, facilitates the navigation on the road to recovery. Quantitative studies provide a foundation towards identifying strengths, weaknesses, and barriers of specialized nursing services such as SANE, and prompt strategies to enhance strengths and/or remedy identified barriers.
APPENDIX A
APPENDIX A
Evidence Kit Audit

Case Audit # ____________________________ Date: __________________

Kit completed by:

Is this person a physician/physician assistant? Yes No Other

Is this person a registered nurse? Yes No Other

Is this person a sexual assault nurse examiner? Yes No Other

If you checked other, please define ___________________________________

Agency or hospital submitting kit: SANE ____________ Other: ______________

1. Is the kit box top section “For Hospital Personnel” filled in completely? Yes No

2. Is the kit box top section “For Police Personnel” filled in completely? Yes No

3. Are red police evidence seals affixed to outside of kit? Yes No

4. Is the Sexual Assault History form completed and placed inside kit? Yes No

   4a. Last consensual coitus recorded? Yes No
   4b. Orifices involved recorded? Yes No
   4c. Synopsis of assault, including location recorded? Yes No
   4d. Number of assailants involved recorded? Yes No

5. Was the clothing obtained as evidence placed in separate paper bags, sealed and initialed? Yes No

6. Are all evidence envelopes used sealed, and information on outside of envelopes filled in or appropriately labeled? Yes No

7. Were the correct swabs collected to match recorded penetration? Yes No

8. Are there a sufficient number of swabs collected from each site? Yes No

9. Is the source identified for miscellaneous or skin swabs? Yes No

10. Was a purple top tube used for collection for blood type? Yes No

11. Was an extra blood tube drawn for drugs/alcohol? Yes No

12. Had the expiration date passed on blood tubes prior to collection? Yes No

13. If a blood stain card is in the kit, was it prepared properly? Yes No

   Card not in kit

14. Were pubic and/or head hairs unnecessarily pulled? Yes No

Developers: Minnesota Bureau of Criminal Apprehension, Hennepin County Medical Examiner, and Linda Ledray, RN, PhD, FAAN.
APPENDIX B
August 1, 1997

Camille Griswold
P.O. Box 2
6855 Ojibway Trail
Mesick, MI 49668

Dear Camille:

You have my permission to use the sexual assault evidence kit audit tool developed by Linda Ledray at the Sexual Assault Resource Service.

Sincerely,

Linda É. Ledray, RN, PhD, FAAN
Director
August 8, 1997

Human Research Review Committee
Research and Development Center
201 Lake Michigan Hall
Allendale, MI 49401

Dear Human Research Review Committee:

We, Connie Swander - Forensic Scientist, Fran D'Angela - Lab Technician, and Jennifer Stites - Serologist, at the Grayling Michigan State Police Crime Lab have agreed to analyze the sexual assault kits as they are submitted from all over Northern Michigan, for completeness, by addressing the 14 question evidence collection sheet audit supplied by Camille Griswold as her research tool.

This will involve anonymously numbering the evidence collection sheet as 1, 2, 3,...etc, without jeopardizing the anonymity of the sexual assault victim or the forensic case.

Sincerely,

Connie Swander, Forensic Scientist

Fran D'Angela, Lab Technician

Jennifer Stites, Serologist
APPENDIX D
January 27, 1999

Camille Griswold
PO Box 2
Mesick, MI 49668

Dear Camille:

Your proposed project entitled "Efficacy of Sexual Assault Nurse Examiner Evidence Collection: A Northern Michigan Study" has been reviewed. It has been approved as a study which is exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981.

Sincerely,

Paul Huizenga, Chair
Human Research Review Committee
LIST OF REFERENCES


