

AN ABSTRACT OF THE THESIS OF

Wanda Beal for the Master of Science

in Clinical Psychology presented on _____

Title: VARIABLES ASSOCIATED WITH NOCTURNAL ORGASM IN SELECTED FEMALES

AT A SMALL MIDWESTERN UNIVERSITY

Abstract approved: _____

Purpose

There is need for the female to have information concerning her sexual self without the implication of moral value and social custom. If females have orgasms naturally and autonomically during sleep, as males do, it would follow that orgasmic inhibition is a learned dysfunction. This study was undertaken to determine if females were aware of sex dreams, nocturnal orgasms, and variables which might be associated with the phenomenon.

Procedure

Data were collected from two hundred six subjects, on a seventy-six item questionnaire, with respect to age, alternate sexual activity and sexual attitudes. Additionally, the study was to inform subjects of cultural attitudes contributory to withholding accurate physiological information for them; and ultimately, to reflect what the women were thinking and doing in relationship to their sexuality. A verbal introduction was given prior to filling in the questionnaire.

When invited, the examiner returned to discuss results of the survey. Ten questions were designed for written responses in order not to totally lead the respondents with preconceived answers. The chi-square was used to evaluate statistical significance of key questions in relationship to nocturnal orgasm.

Subjects

The subjects were: graduate and undergraduate females; single, married or divorced; divided into younger, middle and upper age levels; sexually inexperienced and experienced; and enrolled in Emporia State University the Fall Semester of 1979.

Findings

Relationships were established between nocturnal orgasm; and age, orgasm during sexual intercourse, vaginal perception and pre-menstrual sexual arousal, as well as a relationship between coitus and oral-genital sex. Twenty-three percent of the sample abstain from pre-marital coitus. Seventy-seven percent engage in coitus. Twenty percent who do not engage in coitus, do engage in oral-genital sex.

Conclusions

Women do experience sex dreams and nocturnal orgasm. The great majority of females no longer cling tenaciously or uncom-promisingly to traditional sexual mores.

VARIABLES ASSOCIATED WITH NOCTURNAL ORGASM IN SELECTED
FEMALES AT A SMALL MIDWESTERN UNIVERSITY

A Thesis
Presented to
the Department of Psychology
Emporia State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Wanda Beal
December 1979

S. F. Law
Approved for the Major Department

Harold E. Durr
Approved for the Graduate Council

410308

DATA PROCESSING

APP # 1 '60

ACKNOWLEDGMENTS

The writer is indebted to:

Dr. David Dungan
Dr. Christopher Joseph
Dr. Ray Heath
Dr. Ronald Karst

For invaluable assistance, encouragement, and support in conducting the research, editing the manuscript, and serving on the writer's committee.

Dr. Dal Cass

Who was ever available and ever helpful in shaping my professional concepts.

To the two hundred six anonymous participants

Who shared very personal information toward the recording and enlightenment of female sexuality.

To Jim

Who skied patiently, quietly, confidently, expertly behind me down the mountain, gently repeating in my ear. . .
"Don't sit down, Wanda."
Thereafter, the words became indicative of graduate school.

CONTENTS

	Page
LIST OF TABLES	vi
Chapter	
1. INTRODUCTION	1
Theoretical Formulation	2
The Problem	3
Statements of the Problem	4
Statements of the Hypothesis	5
Assumptions of the Study	6
Purpose of the Study	7
Significance of the Study	7
Definition of Terms	8
Coitus	8
Masturbation	8
Manipulated Orgasm	9
Male and Female Orgasm	9
Nocturnal Orgasm	9
Sexually Active	9
Sexually Inactive.	9
Sexual Intercourse	9
Survey Sheet and Questionnaire	9
Vaginal Lubrication	10
Limitations of the Study	10
2. REVIEW OF LITERATURE	11
History.	11

	Page
Male Nocturnal Orgasm	12
Female Nocturnal Orgasm	14
Male and Female Orgasm.	18
Attitudes Toward Female Sexuality	25
Self-Report Questionnaires.	29
3. METHODS AND PROCEDURES	31
Population and Sampling	31
Instrumentation	31
Design of the Study	34
Data Collection	34
Data Analysis	35
4. ANALYSIS OF DATA	37
Response Analysis	37
Respondents According to Age Grouping	38
Respondents According to Grade Point Average.	38
Statistical Analysis	39
Ever Sex Dreams/Age	40
Current Nocturnal Orgasm/Age	41
First Sex Dream According to Age and Six Variables Concerning Feelings	44
Current Nocturnal Orgasms/Manipulated Orgasms	45
Percentages of Orgasm Reached in Sexual Intercourse	47
Current Nocturnal Orgasm/Oral-Genital	49
Current Nocturnal Orgasm/Sexual Intercourse	50
Current Nocturnal Orgasm/Masturbation	51
Current Sex Dreams/Perceived Breast Size	53

	Page
Current Sex Dreams/Vaginal Image	54
Current Nocturnal Orgasm/Initiating Sexual Activity.	56
Current Nocturnal Orgasm/Pre-menstrual Sexual Arousal.	58
Current Nocturnal Orgasm/Incest or Family Friend . .	60
Oral-Genital Sex/Coitus	61
Discussion of Results.	63
5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	64
Summary.	64
Conclusions.	65
Recommendations	70
BIBLIOGRAPHY	72
APPENDIXES	76
A. QUESTIONNAIRE.	77
B. VERBAL COMMENTS GIVEN PRIOR TO QUESTIONNAIRE ADMINISTRATION	87

LIST OF TABLES

Table	Page
1. Respondents According to Age Grouping.	38
2. Respondents According to Grade Point Average	38
3. Chi-Square Analysis of 206 Respondents Comparing Responses of Ever Having Sex Dreams With Age	40
4. Chi-Square Analysis of 183 Respondents Comparing Responses of Current Nocturnal Orgasms With Age.	42
5. First Sex Dream According to Age and Six Variables Concerning Feelings.	44
6. Chi-Square Analysis of 138 Respondents Comparing Responses of Current Nocturnal Orgasms With Manipulated Orgasms.	46
7. Percentages of Orgasm Reached in Sexual Intercourse	47
8. Chi-Square Analysis of 161 Respondents Comparing Current Nocturnal Orgasm With Oral-Genital Stimulation.	49
9. Chi-Square Analysis of 183 Respondents Comparing Current Nocturnal Orgasm With Sexual Intercourse With A Partner	51
10. Chi-Square Analysis of 181 Respondents Comparing Current Nocturnal Orgasm With Masturbation	52
11. Chi-Square Analysis of 202 Respondents Comparing Current Sex Dreams With Perceived Breast Size	54
12. Chi-Square Analysis of 203 Respondents Comparing Current Sex Dreams With Vaginal Image.	55
13. Chi-Square Analysis of 157 Respondents Comparing Current Nocturnal Orgasm With Initiating Sexual Activity	57
14. Chi-Square Analysis of 181 Respondents Comparing Current Nocturnal Orgasm With Pre-menstrual Sexual Arousal.	58
15. Chi-Square Analysis of 181 Respondents Comparing Current Nocturnal Orgasm With Incest or Family Friend.	60

Table

Page

16. Chi-Square Analysis of 151 Respondents Comparing
Oral-Genital Sex With Coitus 62

Chapter 1

INTRODUCTION

Young women may be having sexual intercourse more than previously, but frequency does not guarantee pleasure. Old myths and attitudes wrap sexuality in layers of misunderstanding and apprehension. Women have not known they are naturally orgasmic. One problem is with a set of social and educational attitudes that withhold from women information about their own sexuality (Barach, 1976:7).

Nocturnal emissions or "wet dreams" are a common occurrence in the male during sleeping hours, but it is not generally understood that similar orgasms are common in the female. There is an unwillingness of society to acknowledge sex as a basic human expression in the female, enabling her to accept responsibility for her own sexual pleasure and to find reasonable satisfaction in living, enjoying and accepting the pleasures of her body. The oversacramentalization of sex also inhibits open discussion by not allowing people, especially females, to treat sex as a natural experience. The boundaries of human sexuality need to be expanded. There are still astonishing unnecessary limitations.

The specific statement of the problem, the null hypotheses, the assumptions, the purpose, the significance of this study along with the limitations and the definitions of terms are provided in this chapter.

Theoretical Formulation

Recent surveys and laboratory studies (Hite, 1976; Masters and Johnson, 1970; McCarthy, 1977) have provided definitive answers about human sexual functioning and behavior that for years were matters of conjecture following the long cover-up of the Victorian age. Although sexuality is a natural, physiological function, our sexual attitudes and behavior are learned. "Human sexual behavior is the product of experiential and biologic forces" (Kaplan, 1974:34). Whether sex has a positive or negative effect on lives depends at least in part on whether sexual attitudes are based on ignorance and misinformation or on fact. Obtaining accurate information about sex is the first step in making a good sexual adjustment. In the absence of accurate information, old and damaging sex myths are perpetuated ad infinitum.

Studies have shown conclusively that the female capacity for sexual pleasure is at least as great as the male's, and there is no possible justification for denying women the opportunity to fulfill this capacity (McCarthy, 1977:171).

It should be restated that fear of inadequacy is the greatest known deterrent to effective sexual functioning, simply because it so completely distracts the fearful individual from his or her natural responsivity by blocking reception of sexual stimuli either created by or reflected from the sexual partner (Masters and Johnson, 1970:12).

Masters and Johnson (1970:225, 297) have stated there are many women who specifically resist the experience of orgasmic response. "Often these women were exposed during their formative years to such timeworn concepts as 'sex is dirty,' 'nice girls don't involve themselves,' and so forth." Traditionally, the nonorgasmic woman has been led to believe that sexual responsivity was not really her privilege. Sexual pleasure has been considered an unnatural physical response for

women, and any indication to the contrary was unseemly to say the least. Orgasmic dysfunction may be the end result of a long process of repression and misinformation.

As sexual enlightenment continues, Kinsey et al. (1953) has noted the remarkable similarity of male and female sexual responses. In a study of sex differences by Vance (1976) the findings suggest that the experience of orgasm for males and females is essentially the same. Yet, a literature search in the Psychological Abstracts with 159 references to orgasm, only thirty-eight remotely discussed the female orgasm. Only two referred to female nocturnal orgasms despite Masters and Johnson (1970:297) reporting orgasmic incidence in the developing human female at ages that correspond with ages reported of the onset of male masturbation and nocturnal emission.

Females clearly have not been given permission by society to be sexual. It would follow that many sexual problems and much coital unhappiness could be eliminated by knowledgeable information.

The Problem

In one recent sex counseling manual (Schiller, 1977), the glossary defines nocturnal emission as an involuntary male orgasm and ejaculation of semen during sleep; a "wet dream." Despite research on vaginal responses during rapid eye movement (REM) sleep, the phenomenon that young women also awake from erotic dreams well lubricated and feeling vaginal congestion is not addressed. Three recent research articles suggest perineal engorgement does occur in females during REM sleep (Abel, 1979:5; Geer, 1976:403; Masters and Johnson, 1966). Kinsey's research on nocturnal orgasm in women indicated a total of more than

seventy percent of his female sample had sex dreams during their lives with thirty-seven percent of these dreaming to orgasm (1953).

Thus, the present study is an attempt to determine if females are cognizant of nocturnal orgasms being natural and autonomic in their experience. Factors investigated include the possibility of a correlation between nocturnal orgasm and alternate sexual activity and the possibility of variance in nocturnal orgasm according to age. The study presumes the essential wholesomeness of the human body and all of its functions, emphasizing the potentialities and values of human existence.

Statements of the Problem

The numerals indicate the dependent variables selected for comparison with the stated independent variables.

Is there a significant difference in:

1. Subjects reporting nocturnal sexual dreams ,
2. Subjects reporting nocturnal sexual dreams to orgasm, from

a population of females, age seventeen and above, with respect to their age classification (seventeen through nineteen, twenty through twenty-two, twenty-three and above)?

Is there a significant difference in subjects reporting nocturnal orgasms from a population of females with respect to:

1. Manipulated orgasms.
2. Type of manipulated orgasm (oral-genital, coitus, masturbation).

Is there a significant difference in subjects reporting nocturnal orgasms from a population of females with respect to their attitudes toward sexuality including:

1. Attitude toward breasts,
2. Attitude toward genitals,
3. Initiating sexual activity,
4. Pre-menstrual sexual arousal.

Is there a significant difference between females having nocturnal orgasms with respect to being taken sexual advantage of at an early age by a relative or family friend?

Is there a significant difference in subjects reporting sexual activity from a population of females with respect to those engaged in oral-genital stimulation?

Statements of the Hypotheses

(Null Form)

Hypothesis 1. There is no significant difference in:

1. Subjects reporting nocturnal sexual dreams,
 2. Subjects reporting nocturnal sexual dreams to orgasm,
- from a population of females, age seventeen and above, with respect to their age classification (seventeen through nineteen, twenty through twenty-two, twenty-three and above).

Symbolically, $H_0 1: \mu_1 = \mu_2 = \mu_3$

Hypothesis 2. There is no significant difference in subjects reporting nocturnal orgasms from a population of females with respect to:

1. Manipulated orgasms.
2. Type of manipulated orgasms (oral-genital, coitus, masturbation).

Symbolically, $H_0 2: \mu_1 = \mu_2$

Hypothesis 3. There is no significant difference in subjects reporting nocturnal orgasms from a population of females with respect to their attitudes toward sexuality including:

1. Attitude toward breasts,
2. Attitude toward genitals,
3. Initiating sexual activity,
4. Pre-menstrual sexual arousal.

Symbolically, H_0 3: $\mu_1 = \mu_2$

Hypothesis 4. There is no significant difference between females having nocturnal orgasms with respect to being taken sexual advantage of at an early age by a relative or family friend.

Symbolically, H_0 4: $\mu_1 = \mu_2$

Hypothesis 5. There is no significant difference in subjects reporting sexual activity from a population of females with respect to those engaged in oral-genital stimulation.

Symbolically, H_0 5: $\mu_1 = \mu_2$

Assumptions of the Study

The study was designed to investigate and collect data on the nocturnal orgasms of females with relationship to frequency, age and alternate sexual activity. It was implicitly assumed the study's population sample would serve as a true representation of female university students in the Midwest. This assumption was necessitated for purposes of treating and analyzing data as discussed in chapters three and four.

Another assumption regards conclusions that may be obtained. It is assumed the humans studied possess sufficient neurological and

physiological capacity to reach orgasm. It is further assumed the environment, questionnaire and explanatory remarks have lent themselves to the honesty and accuracy of the respondents.

Purpose of the Study

The purpose of the investigation was to explore the potential autonomic nocturnal sexual response of the female. Tangible evidence of ejaculation is more observable in the male but vaginal secretions and analogous vascular engorgement bear similar testimony to the female's arousal and/or orgasm during sleep. As Kinsey (1953:193) has pointed out, some of the best statistical studies of sexual behavior to date have failed to recognize the existence of nocturnal dreams and nocturnal dreams to orgasm in the female. If females have orgasms naturally and autonomically during sleep, it would follow that orgasmic inhibition is a learned dysfunction. By identifying the normalcy and autonomic nature of nocturnal orgasm, sexual frustration and self-doubt as related to sexual adequacy could be greatly reduced.

Significance of the Study

The major significance to be derived from the study is that nocturnal sex dreams to the point of orgasm is one activity which provides the best measure of a female's intrinsic sexuality (Kinsey, 1963:207). Besides masturbation, other types of sexual activity involve a partner and some sort of compromise of the desires of the two or more persons participating. However, other persons have minimum effect upon the incidences and frequencies of nocturnal sex

dreams; this latter outlet provides a good measure of the basic interests and sexual capacities of the female.

Much psychosexual development in the female is socially controlled, often to her disadvantage. There is need for the female to have information concerning her sexual self without the implication of moral value and social custom. The giving of information gives permission to discover the total quality of her own body; to enrich the good opinion of herself; to contribute to a more informed public and, therefore, a potentially healthier community.

The present investigation has been prepared to contribute toward bringing human interactions and social groups in tune with the current environment. There is anticipation of more extensive work to follow slanted toward erasing the grey monotone area of female sexuality.

Definitions of Terms

The topic of sexuality denotes a variety of meanings and connotations to different people. Clarity and unambiguous meaning assigned to certain terms is a necessity for accurate communication among researchers. In order to satisfy this basic requirement, the following crucial terms used in the study are specifically defined.

Coitus

The union of male and female genitalia (Kinsey, 1953:101).

Masturbation

Genital self-excitation, usually by manipulation by hand or against an object.

Manipulated Orgasm

Orgasm triggered by masturbation, coitus or oral-genital stimulation.

Male and Female Orgasm

Orgasm is the climax of sexual excitement. Orgasm is expressed by the involuntary contraction of muscles responding at .8-second intervals, and characterized by genital vasocongestion and contraction of analogous perineal muscles in both sexes (Kaplan, 1974: 20).

Nocturnal Orgasm

Orgasm occurring autonomically during sleep.

Sexually Active

Individuals engaged in sexual intercourse.

Sexually Inactive

Individuals not engaged in sexual intercourse.

Sexual Intercourse

Includes any sexual activity, i.e., mutual masturbation, coitus, oral-genital, and so forth.

Survey Sheet and Questionnaire

The survey sheet and questionnaire are the same instrument. References made to the instrument are either the survey sheet or the questionnaire (Copy in Appendix A).

Vaginal Lubrication

A transudate or oozing which lubricates the vaginal barrel of the female and facilitates insertion of the penis.

Limitations of the Study

The study was limited in that the population selected was a group of females who were, on the average, young, fairly well educated and from a middle class socioeconomic status. This study may be applicable to women from other socioeconomic and ethnic origins, but additional data are necessary to establish this possibility.

In addition, the sample size selected was representative and did meet the basic size requirement for the different age groups utilized in the study. The students were undergraduate or graduate females enrolled in a small Midwestern university during the Fall Semester of 1979. Ages in the sample included females seventeen and above who were single, married, and divorced. The study encompassed females with no sexual intercourse experience, and females with sexual intercourse experience.

Chapter 2

REVIEW OF LITERATURE

For the purpose of investigating the variables associated with nocturnal orgasm in females, the review of literature covers four pertinent areas. Literature related specifically to female nocturnal orgasm is scant. Therefore, literature was examined in the related areas of male nocturnal emission, male and female orgasm and attitudes regarding female sexuality. The final part of the chapter comments on the reliability of self-report questionnaires.

History

The idea that nocturnal emissions are a malady and therefore deserving of some sort of treatment can be traced back to Hellenic physicians, Fifth Century A. D. In a book by Caelius Aurelianus, On Acute and Chronic Disease, nocturnal emission was classified along with such varied afflictions as lethargy, stupor, epilepsy, apoplexy and homosexuality. Patients were to be kept quiet and away from people who would excite them (Ullmann, Krasner, 1975:123). As with dreams in general, there has been the same difference of opinion as to whether erotic dreams, accompanied by orgasm or not, are a normal and natural occurrence. Early medical authorities put nocturnal seminal emissions on the same level as emission of urine or vomiting. In parts of the world, this manifestation is attributed to the excitation of demons. "The Roman Catholic Church has attributed serious importance to the impurity of what is termed pollutio, while

Luther also seems to have regarded erotic dreams as a kind of disease demanding at once the medicine of marriage" (Ellis, 1964:113). Judeo-Christian codes condemn activities which bring erotic arousal and satisfaction without having procreation as the ultimate objective. The Catholic viewpoint allows acceptance of nocturnal orgasm only if they are not induced by thought or deed, and they are not consciously welcomed and enjoyed. Freud believed that nocturnal dreams, as well as dreams in general, were often wish-fulfillment. Freud thought these dreams represented unsatisfied conscious desires and that "the satisfaction in a pollution-dream can be real" (Kinsey, 1953:207, 214).

Male Nocturnal Orgasm

The existence of sex dreams can be found as far back as Ovid in the First Century B. C. The nocturnal emissions of males have long been the subject of extensive literature, pornography and religious opinions, but only recently the object of scientific research. There have been many theories throughout history completely without scientific evidence to uphold them. Pseudo-authorities were inclined to regard the nocturnal emissions as a build-up of pressure from the abstinence of sexual relations. These writers then began to be concerned as to the frequency, so-called normalcy running from once or twice a week to once every three months. At various times, intellectual activity, anxiety, worry, position in bed or a full bladder were thought responsible for the emissions. Ellis, an early sex researcher, refuted the full bladder theory and declared repletion of the seminal vesicles as the main factor (Ellis, 1964:116). By 1948, Kinsey refuted the popular opinion that testes become swollen with accumulated secretions

between the times of sexual activity, and must therefore be relieved of the pressure by ejaculation (Kinsey, 1953:612). The anatomy and physiology of this explanation is quite incorrect (Masters and Johnson, 1966:207; Kaplan, 1974:18-21). Evidence to the contrary, myths abound even today and boys are told "It's because you masturbate," "They make you weak," "Your manliness flows out," "They make you nervous" (Fulton, 1976:294).

Schiller talks about nocturnal orgasm in the male but not the female:

Nocturnal emissions are worrisome to many young boys. They feel ashamed when they wake and find their sheets spotted. Rushing to the bathroom to wash the spot out or covering it up with a towel still leaves the situation confusing and the boy often guilt-ridden, especially when the dream that night was erotic and culturally forbidden. Many a young man needs a helpful father, older brother or friend to discuss the normalcy of nocturnal emissions ("wet dreams"). How much easier to face the knowledge that one is growing and changing and that growing pains need not be agonizing ones (Schiller, 1977:69).

Textbooks on sexual awareness, show concern that males be informed "wet dreams" are normal; a common phenomenon, expected and accepted by parents and nothing to be anxious about (Fulton, 1976:294; Schiller, 1977:69). Recent research has focused on nocturnal sex dreams in relation to the treatment of impotence.

Major advances have been made in the physiological measurement of vascular blood flow in the male's penis during rapid eye movement (REM) sleep. Nocturnal penile tumescence (NPT) occurs every ninety to one-hundred minutes during sleep and lasts an average of twenty to forty minutes. These nocturnal erection measures during REM sleep are useful in differentiating psychogenic impotence from organic impotence. This method of measuring tumescence provides a direct

means of separating the two diagnostic categories, and is not distorted by the patient's self-report (Abel, 1979:5; LoPiccolo, 1978:138).

Although NPT and dreams often occur at the same time, there is no evidence that NPT is consistently related to sexual dreams. Both REM sleep and NPT are more prominent in the later than in the earlier portion of a normal night of sleep. Men may notice erections on awakening in the morning because they have awakened from REM related NPT, not because bladder pressure stimulates erection. The working assumptions in the use of NPT for differential diagnosis are that in a man who complains of impotence but who has normal NPT for his age, impotence is psychogenic, whereas in a man who complains of impotence and who has abnormal NPT for his age (reduced total amount and especially reduced amount of full NPT), impotence is organogenic (LoPiccolo, 1978:238).

Treatment can be realistically based on whether a man is physically or psychologically impotent. Nearly all males have nocturnal sex dreams erotically stimulating enough to bring them to orgasm at least ten times a year in younger age groups (up to age thirty), and five times a year in the older age groups (Weinberg, 1976:90; Kinsey, 1948:242). Nocturnal emissions in reference to men are thoroughly dealt with physiologically and psychologically in literature.

Female Nocturnal Orgasm

According to Ellis, the existence of sex dreams in the female was recognized by Aristotle and Galen. Kinsey refers to Kisch in 1907, as being the earliest medical authority to discuss sex dreams in women. At various points in the literature the opinion has been expressed that sex dreams in the female are an expression of some neurotic disturbance, which again perpetuated the myth that a normal female would not dream to the point of, or to orgasm. Nocturnal orgasm has historically been associated with the hysterical woman, in whom this manifestation has chiefly been studied. The connection

between pathology and nocturnal orgasm would be logical since normal women have not usually been the objects of research (Ellis, 1964:115; Kinsey, 1953:191).

Females have long been offered a conception of their sexuality which has not followed its underlying physiology. Ellis said that the phenomena of auto-erotism during sleep seemed to be irregular, varied and diffused in the female. He thought it was the exception for adolescent girls to experience definite erotic sex dreams.

While it is the rule in a chaste youth for the orgasm thus to manifest itself (Hamilton found it to begin in 51 per cent between 12 and 15) it is the exception to a chaste girl. As pointed out when dealing with early manifestation of sex, it is not until the orgasm has been definitely produced in the waking state—under whatever conditions it may have been produced—that in women it begins to occur during sleep, and even in a strongly sexual woman living a repressed life it is often infrequent or absent (in 60 per cent according to Hamilton) (Ellis, 1964:118).

Today's research scientists do not agree. Masters and Johnson report orgasmic incidence recorded in the developing female at ages which correspond with ages of the onset of male masturbation and nocturnal emission (Masters and Johnson, 1970:297). The very fact that females, without testes, do have nocturnal orgasms provides good evidence that glandular pressure probably has little to do with nocturnal orgasm. To refute Ellis further, Kinsey found five per cent of the females in his sample experience nocturnal orgasm before they have ever experienced orgasm while awake, either from masturbation or with a partner. Kinsey pointed out that a characteristic aspect of nocturnal sex dreams is the "speed with which they carry the individual to orgasm." Kinsey continues, "As with the male, the female is often awakened by the muscular spasms or convulsions which follow her orgasms" (Kinsey, 1953:192).

Kinsey estimated that seventy percent of females of all ages have nocturnal sex dreams, whether with or without orgasm. He found thirty-seven percent of his sample dream to orgasm. He found that the number of females dreaming to orgasm increased with advancing age, to peak around ages forty to fifty. A lower proportion of single women, a higher proportion of married women and an even higher proportion of previously married females have sex dreams to orgasm. Kinsey contrasted these findings with the male peak in nocturnal dreams reached in the late teens or up to the age of thirty. He found that one third of the male sample had nocturnal emissions up to age fifty whether they were married or not married. There seems to be no correlation between age and frequency of orgasm for the female, but the frequency is lower than for the male. "This is the only instance of a sexual outlet in which the range of individual variation is more limited among females than it is among males" (Kinsey, 1953:199). In sexual responses which rely on physical stimulation, females may surpass the males, but in dreaming to orgasm, depending on psychologic stimuli, it would seem the male surpasses the female. Also there seems to be no correlation indicating nocturnal orgasm dwindles with the advent of alternate sexual activity. In fact, the opposite is on record as female nocturnal sex dreams increase for the married and older woman. Nocturnal orgasms in the female are not a compensation for abstinence from alternative sexual activity. Also, both males and females report their sex dreams end just short of producing orgasm (Kinsey, 1953:196-201).

All parts of the nervous system, especially the autonomic nervous system are affected. Muscles respond with a rhythmic,

involuntary flow of movement, and with localized or general spasms or convulsions. Sexual response and orgasm reached during sleep are physiologically analogous to those reached while awake. However, psychological factors or learned controls may inhibit or slow up orgasm while awake (Kinsey, 1953:192-193; Kaplan, 1974:18; Masters and Johnson, 1970:220-221; 1966:282-283).

Until recently, physiological measurements of sexual arousal in females have been almost nonexistent. "A vaginal photoplethysmograph system has now been developed that provides a reliable, valid measure of female sexual arousal" (Abel, 1979:5). In Abel's study, subjects' who said they were orgasmic, were instructed to insert the probe as they would a tampon into the outer third of the vagina where vascularization is greatest during sexual arousal. The study showed vascular changes in the vagina during rapid eye movement (REM) sleep, similar to the phasic shifts of blood flow in the male's penis during REM sleep.

As with males, the practical application of the physiological information is useful to differentiate psychogenic sexual dysfunction problems from organically caused problems in the female (Abel, 1979: 5-15). Masters and Johnson report clinically obvious tumescence of the clitoral glans, labia engorgement and vaginal barrel expansion being identical in nocturnal and manipulated orgasm (1966:45-55; 282-283).

Over three dozen marriage and sex education manuals from the past two decades were examined for information on female nocturnal orgasm. Clearly reported by Kinsey in 1953 as a female phenomenon, the

information is still being excluded in 1977 manuals, i.e., Schiller (1977:69). Despite research to the contrary, the extent of female sexuality is still largely dismissed or ignored in literature.

Male and Female Orgasm

Kinsey said there were relatively few differences, essential to sexual response, between the male and female anatomic structures. In fact there were no data to support any difference in the development of sexual response and orgasm in the male and female. Recent research is even more supportive of analogous sexuality and orgasm (Kinsey, 1953:593; Vance, 1976:87-99; Kaplan, 1974:33; Masters and Johnson, 1966:6).

Freud made many contributions toward understanding human behavior. However, his Victorian theoretical scheme, Three Essays on the Theory of Sexuality, published in 1905, and earning him approximately fifty-three dollars in royalties over a ten-year period, played havoc with female sexuality completely out of proportion to their scientific value, over the next seventy-five years (Katchadourian, 1972:47-48). Female sexuality and orgasm has been a male creation with Freud probably doing the most damage to Western female sexuality. Sisley and Harris point out, "Sigmund Freud's experience with women, and with what women want, was almost as limited as God's" (1977:12). Psychoanalytic theory makes a specious and now discredited distinction between "clitoral" and "vaginal" orgasm (LoPiccolo, 1978:148; Masters and Johnson, 1966:66; Sherfey, 1966:30; Kinsey, 1953:574).

It has taken more than half a century to dissipate Freud's assumption that there were two kinds of orgasm for the female; a clitoral orgasm, not requiring the insertion of a penis, which he considered as immature, and a vaginal orgasm, as the mature and acceptable one. The physiological facts were always present and always ignored. The vagina doesn't have the requisite sensory receptors, the nerve endings, to affect an orgasm (Masters and Johnson, 1966:66). Sisley and Harris continue, "One imagines quite a few of these women practically anesthetizing their clitorises and grinding away on some exhausted penises for hours hoping for the Viennese Papa's approval" (1977:104). Women were labeled "frigid" if they could not accomplish the vaginal orgasm. Frigidity connotes coldness, incapacity or an unwillingness to respond sexually or to achieve orgasm.

Certainly that was Freud's assumption when, in differentiating between two kinds of orgasm in females, he declared that clitoral orgasm (which does not require a penis) is "immature" and vaginal orgasm (which he rather unimaginatively assumed is always brought about by the insertion of a real live penis) is "mature" (Sisley and Harris, 1977:165).

Sisley and Harris contend that frigidity is a condition simply unheard of among lesbians. They say, barring preoccupation, illness or inebriation, there are no frigid lesbians.

LoPiccolo uses the term frigid, (not used by Masters and Johnson nor Kaplan) but does say the term unfortunately is usually used in a pejorative manner.

But surely, those women who enjoy coitus by obtaining sensual pleasure, emotional closeness, and physical excitement, and who feel satisfied despite the lack of a true orgasm, should not be called frigid (LoPiccolo, 1978:21).

Here again, Kinsey provided the seeds of suspect if not irrefutable evidence against a vaginal orgasm, and prepared the fertile ground for scientific research (1953:574-576). "Research has now made it clear that all orgasms are physiologically identical and derive (in the case of the female) from clitoral stimulation" (Masters and Johnson, 1966:12). While few authorities now doubt that clitoral stimulation is the sine qua non of an intense orgasm, women still desire the sensation of fullness in the vagina as a special dimension to lovemaking. Vaginal fullness plays a major part, if only psychologically, in coitus. For this reason, dildos, objects serving as a penis substitute, are available to lesbians for vaginal insertion (Kinsey, 1953:371-376; Sisley and Harris, 1977:165).

Early references to orgasm featured it as "the little death" in English lyrics, or "la petite mort" in French poetry, in which case, there might have been momentary unconsciousness. And indeed, Masters and Johnson describe involuntary spasm, and increment of myotonic tension throughout the entire body including carpopedal spasm (Sisley and Harris, 1977:136; Masters and Johnson, 1966:129; Comfort, 1972:34).

Masters and Johnson say:

The fundamental physiology of orgasmic response remains the same whether the mode of stimulation is heterosexual or artificial coition or mechanical or automanipulative stimulation of the clitoral area, the breast, or any other selected erogenous zone. The ability of women to fantasy to orgasm has been reported by other investigators (Masters and Johnson, 1966:133).

LoPiccolo furthers the discussion when he says that inhibited women often have a history of negative parental or religious indoctrination about sex. These women need heavy exposure to information, education and attitude change procedures.

These cases have often been exposed to mass media demands to be multiorgasmic and supersexual if they are "real" women. Alternatively, the partners of such women often have profound doubts about their own masculinity and abilities as lovers, and put their wives under extreme pressure to have orgasms to reassure themselves on this issue. Such cases need more emphasis on the principles of eliminating performance anxiety and increasing communication and effectiveness of sexual techniques. It can be argued that if a woman can produce orgasm for herself through masturbation but cannot have orgasm with her husband, he is the dysfunctional one. This relates to the old maxim that "there are no frigid women, only clumsy men." In many cases, this is true: The woman's sexual responsiveness is entirely normal, but her husband is quite inept as a lover. The principle of mutual responsibility, however, points out that such a woman has failed to train her husband to be an effective lover for her. This suggests a revision of the old maxim: "There are both frigid women and clumsy men, and they are usually married to each other" (LoPiccolo, 1978:12, 13).

For the woman who has never experienced an orgasm, a program of directed masturbation is recommended (LoPiccolo, 1978:13; Masters and Johnson, 1970:302). The rationale for the use of masturbation is that it is the sexual technique most likely to produce an orgasm. "The probabilities of orgasm are .95 for masturbation and .74 for coitus" (Kinsey, 1953:148). Kinsey indicated sixty-two percent of all females in his sample had at some time masturbated, with fifty-eight percent reaching orgasm. He found that only forty-seven percent of the survey's married females reached orgasm during every sexual encounter, even after twenty years of marriage (1953:142, 384).

Weinberg emphasized the importance of pre-coital orgasm in the female as contributing to her coital success with orgasm. The techniques of masturbation are more specifically calculated, because of direct or close proximity of the clitoris, to affect an orgasm than coitus. Having first learned how it feels to abandon inhibitions and give herself to the spontaneous physical reaction of orgasm, the female may then be more capable of responding the same way in coitus

(1976:83). Weinberg also says researchers have found that the percentages of sexually active females who are responding to the point of orgasm has risen rather steadily in the past four decades.

Masturbation and nocturnal sex dreams are usually solitary activities. In relation to socio-sexual activities, Kinsey defines petting, i.e., courting, bundling, spooning, larking, sparking, as mutual masturbation to orgasm and discusses some of the techniques and attitudes:

Deep kissing, mouth-breast, and mouth-genital contacts were the most taboo of the petting techniques among older generations. Such taboos were sometimes rationalized on hygienic bases. The younger generation, ignoring the theoretic hygiene, more often accepts oral techniques--without any dire effects on their health (Kinsey, 1953:253).

Kinsey points out that most mammals, when sexually aroused, explore with their noses, mouths, and tongues. For the uninitiated Kinsey felt the real perversion to be the inhibition of a naturally biological response (1953:229-231).

It has been said that the climax is a necessity for males, while for females reaching a climax is a luxury. While this may be true in terms of fertility, chronic failure to reach orgasm can have harmful consequences for a woman. Women who rarely (or never) climax often report that they experience tension and irritation after intercourse (Kaplan, 1974:32).

Kaplan says man has seldom been made to realize the frustration level of the female being highly aroused and not satisfied. The Hite Report demonstrated this frustration when women described their personal orgasmic failure in the form of:

. . . abdominal cramps, bitchiness, irritability, nervousness, depression, pessimism, lack of energy to accomplish anything . . . feel frustrated, inadequate and greatly disappointed . . . for being too slow or perhaps incompetent (Hite, 1976:149).

Women are full of self blame. Kaplan states that some gynecologists attribute the chronic pelvic congestion syndrome to the frequency with which women experience arousal without orgasmic relief and resolution. In addition, arousal without orgasmic relief gives rise to psychological reactions in both the male and female, which can have a destructive effect on the relationship (Kaplan, 1974: 32).

Reuben said the word "frigidity" is misleading and was probably coined by a man. He continued that there are few tortures more agonizing than being brought to the brink of sexual fulfillment and having orgasm snatched away at the last moment (Ruben, 1970:107).

Kaplan concurs:

Frigidity is presently used to refer to all forms of inhibition of the female sexual response, ranging from total lack of responsivity and erotic feelings to minor degrees of orgasmic inhibition. The numerous designations of frigidity . . . which are found in the current literature do not enhance the understanding of the female sexual dysfunctions; on the contrary, they serve to heighten the confusion (Kaplan, 1974:339).

Implications of the multi-orgasmic nature of women reported by Kinsey were largely ignored in the sex and marriage manual which followed (1953:337). "The human female is sexually insatiable in the presence of the highest degrees of sexual satiation" (Sherfey, 1966: 99). But still the myth persisted that sex was a necessity and privilege for the male but an unfortunate procreative necessity for the female. Sisley and Harris have this to say:

Since it (the clitoris) is the only part of the human anatomy male or female, that serves no other function than to produce sexual pleasure and orgasm, it is possible that women have reached sexual perfection on the evolutionary scale? Is it possible that all religious, medical, and psychoanalytic dogma aimed at persuading women that her natural and sacred purpose on earth is to

give sexual pleasure to man and produce his children, is one grand conspiracy to keep the clitoris out of sight, mind and touch (Sisley and Harris, 1977:68).

Unlike men, women are not limited in their orgasmic potential by a refractory period and can be stimulated to orgasm repeatedly if they so desire. The female retains this capacity for multiple orgasm all her life (Kaplan, 1978:31). "Women's capacity to make love for seemingly endless stretches of time, coming and then coming again (and again), has always been a source of wonderment and envy to men" (Sisley and Harris, 1977:160).

LoPiccolo quotes Paul H. Gebhard from the Institute for Sex Research, Indiana University:

From the Victorian middle-and upper-class unconcern with female orgasm, we have, through the emancipation of women and the emergence of sex as a discussable subject, reached a point of intense concern with orgasm. It has become to no small degree a symbol of woman's being accepted as a human of equal stature and with her own sexual needs. Orgasm in marital coitus has become not only her goal but her due, and inability to achieve it frequently engenders feelings of personal inadequacy and failure in both the husband and wife. The pendulum, has swung from unconcern to overconcern in less than a century (LoPiccolo, 1978:167).

The right to orgasm has become a political question for some women when they ask, "If we make it easy and pleasurable for men to have an orgasm, and don't have one ourselves, aren't we just servicing men?" (Hite, 1976:137). Feminists maintain this sense of martyrdom and self-sacrifice encourages a passivity which crescendos, giving women no sense of strength or autonomy needs or pleasures. The Hite Report further recommends that women must bring their own orgasms, e.g., the stimulation and body positions necessary to have those orgasms, out of hiding, and feel free to make orgasm a natural, comfortable part of sexual relations.

Unique to human beings, sexual activity is potentially possible for both females and males at all times. However, cyclic patterns have been noted. In a recent study by Urdy and Morris (1968) cited by Martin, the sexual behavior of two groups of women showed an increase in orgasm around the fourteenth day of the menstrual cycle, the time when ovulation was most likely to occur (1975:117). Also, many women claim to feel at their sexiest early in the morning (Sisley and Harris, 1977:207). Kinsey reported that females who masturbate only once a month do so just before or immediately after menstruation, or close to their sterile period rather than the time of ovulation. This report departs from what is true of most mammals when ovulation and the heat period are coordinated, one supposes for the propagation of the species. Data indicate the time of maximum erotic responsiveness and maximum mucous secretions are usually the same (Kinsey, 1953: 609, 610).

While it is difficult to generalize about time spent in sexual activities, because of a widespread sense of privacy, the normal range evidently varies greatly.

Societies reported to have low frequencies of intercourse include the Keraki of New Guinea and Americans of the United States. The Keraki reportedly copulate on the average of once a week, whereas Americans average between once and four times a week, depending significantly on the husband's age (Ford and Beach, 1951:78). In contrast, in other societies for which some information is available, adults engage in intercourse on the average of once a day when they are permitted to do so by social conditions (Martin, 1975:118, 119).

Attitudes Toward Female Sexuality

The ability of culture to mold our conception of what is natural or normal behavior for females is especially immense. Parents

and other socializing agencies have blunted natural curiosity and perpetuated negative learning of females toward their bodies, i.e., genitals are something to be hidden, of which to be ashamed. These early attitudes often carry over into adult interpersonal relationships where a woman's sexual problem may be labeled dysfunction, i.e., again something is wrong with her. Women need to change the preformed concepts they learn as children and accept sexual pleasure as their natural, human right. Females have seldom been chosen as the object of rigorous, comprehensive study in the social sciences. These disciplines have typically treated females and their activities as peripheral to the mainstream of cultural systems and cultural evolution. This consistent cultural bias in a science purporting to be free of it, has resulted in serious distortions in the understanding of human behavior (Martin, 1975:12; Seaman, 1972:19).

Negative attitudes about their own sexuality seem to be more common in women than in men; possibly because of the Western nation's adherence to the double-standard type of morality. Or another possibility is that women are more apt than men to seek sex therapy. The women's liberation movement now stresses that a "decent" woman can also be aroused, assertive, sexually interested, and orgasmic and moral. However, this impact has been mostly on the liberal, urban and educated woman. The liberation movement has not yet changed an overall incidence of negative attitudes toward female sexuality (LoPiccolo, 1978:4). Kinsey pointed out that females seldom discuss their sexual experience in the open way that males do (1953:138). A study by Walsh and Leonard argues that females have an impoverished vocabulary in sexual language despite their superior verbal fluency (1974:373-376).

Man has had societal permission to develop his sexual value system in an appropriate, naturally occurring context, but woman has not. Much of the female's developing functional sexuality is in response to society's requirements for the "good girl" facade. The female cannot develop a realistic sexual value system as she must repress her natural inclinations under the implication that they are bad or dirty.

Residual societal patterns of female sexual repression continue to affect many young women today. Women are acutely aware of repercussions from valued adults, parents, religious camps and other women as they grope for new roles of sexual functioning. The nature of female sexual response has been interpreted innumerable times and interestingly, more than 95 percent of these interpretive efforts have been initiated by men . . . (Masters and Johnson, 1970:214-216).

Kinsey pleaded his case for more realistic sexual attitudes over two decades ago:

It takes two sexes to carry on the business of our human social organization; but men will never learn to get along better with women, or women with men, until each understands the other as they are and not as they hope or imagine them to be. We cannot believe that social relations between the sexes, and sexual relations in particular, can ever be improved if we continue to be deluded by the longstanding fictions about the similarities, identities, and differences which are supposed to exist between men and women (Kinsey, 1953:567-568).

A traditional bias also pervades incest literature according to Herman and Hirschman, who invoke a feminist perspective to investigate:

Why does the incest victim find so little attention or compassion in the literature, while she finds so many authorities who are willing to assert either that the incest did not happen, that it did not harm her, or that she was to blame for it? (Herman and Hirschman, 1977: 739).

Kinsey's findings pointed out that six percent of the eight thousand sample, reported sexual contact with an adult relative during childhood. The Children's Division of the American Humane Association estimates that a minimum of one-hundred thousand children are sexually molested yearly, with the offender being well known to the child and in about twenty-five percent of the time, a relative.

The National Center on Child Abuse estimates that in 1976, twelve percent of the over one million reported child abuse cases were of sexual abuse, these cases were mostly girls abused by members of their own family; fathers and stepfathers (Armstrong, 1978:8). These figures are based on the files of disorganized families who are exposed to various agencies or lack resources to preserve secrecy. There is reason to believe that most incest occurs in intact families and entirely escapes the attention of social agencies. Herman and Hirschman postulate:

Major theorists in the disciplines of both psychology and anthropology explain the importance of the incest taboo by placing it at the center of an agreement to control warfare among men. It represents the first and most basic peace treaty. An essential element of the agreement is the concept that women are the possessions of men; the incest taboo represents an agreement as to how women shall be shared. Since virtually all known societies are dominated by men, all versions of the incest taboo are agreements among men regarding sexual access to women.

Since men create rules governing the exchange of women, these rules are more easily broken by men. There is no punishing father to avenge father-daughter incest (herman and Hirschman, 1977:739-740).

Incidence of mother-son incest appears rare. Kinsey did not report exact figures but only related a small number of the twelve-thousand men surveyed reported contact with a female adult. Winberg's study of two-hundred cases in the Chicago area reported 164 cases of father-daughter incest compared with two cases of mother-son incest.

Women are thought to be the more nurturing parent. Women and children both have been historically dependent on the father for protection, care and livelihood (Herman and Hirschman, 1977:736).

Self-Report Questionnaires

LoPiccolo addressed the question on whether individuals would supply true information on a self-report questionnaire, and concluded, "by reinterviewing a number of individuals after an interim of years, we have demonstrated that the reliability of such reported data is high." LoPiccolo also points out a study of reluctant interviewees which demonstrated that persons resist being interviewed for a great diversity of reasons. Therefore, it was concluded they do not constitute a sexually homogeneous unit. Refusal rate may have little bias effect (LoPiccolo, 1978:168, 172).

Kinsey anticipated a higher level of unreliability in a sex study than would be found true of reports dealing with much less personal and emotional material. He did not find this to be true. Kinsey made the first and most extensive tests on reliability and validity that had been made in any study of human sexual behavior to date. To check reliability, subjects were requestioned before the end of an interview to ascertain consistency of data. He tested reliability further by securing retakes of the sexual histories given originally by subjects. Retakes covered a time period of eighteen months to ten years. To test validity, Kinsey compared replies given independently by the two participants in the same activity. He also compared replies to questions from one group with another group, i.e., coital rates reported by males with rates reported by females. Kinsey found remarkable agreement between frequencies of marital coitus

reported between the males and females. The number of identical replies ranged from thirty-nine percent on one question to ninety-nine percent on other questions (Kinsey, 1953:66-79).

Walsh also studied the problem of self-report, concluding that biographical data showed evidence of validity under varied conditions. Walsh's second study showed that the socially undersirable incentive to distort was not associated with the accuracy of the self-report (Walsh, 1968:180-186; 1969:569-574).

Masters and Johnson have added another dimension:

Since the integrity of human observation for specific detail varies significantly, regardless of the observer's training and considered objectivity, reliability of reporting has been supported by many of the accepted techniques of physiologic measurement and the frequent use of color cinematographic recording in all phases of the sexual response cycle (Masters and Johnson, 1966:4).

Chapter 3

METHODS AND PROCEDURES

A description of the methods and procedures used to investigate the variables of nocturnal orgasm in the female is discussed in this chapter. The population involved, as well as the sampling procedures used, is described. In addition, a discussion on the questionnaire and its development, the design of the study, the collection of data, and a general description on the methods used for statistical analysis of the data are included.

Population and Sampling

The sample used to conduct this study was drawn from the 1979 Fall Semester undergraduate and graduate population of Emporia State University. These females were enrolled in courses in art, business, counseling, rehabilitation, education, English, speech, theater arts, health, psychology, sociology and library science. The total number of females participating in the study was two hundred and six respondents by classification of ages as follows: seventeen through nineteen, seventy-eight; twenty through twenty-two, sixty-nine; twenty-three and above, fifty-nine.

Instrumentation

In order to obtain data considered relevant to this descriptive study, a questionnaire was developed (Appendix A). The cover sheet

was designed to give historical, educational and attitudinal information on female sexuality, define terms and set the mood for serious involvement with the questionnaire. Space was provided for the subjects to comment on their feelings about the questionnaire since female attitudes toward sexuality was one of the variables being researched.

The first few items of the survey were related to personal status information. The seventy-six questions were designed to fit into four sequences of interest for tabulating: sexual activity, self-esteem attitudes, sexual attitudes, parental-home atmosphere and sexual history.

The seventy-six questions generally asked for three categories of answers. Some questions were answered by a yes or no, others answered by multiple choice and the third style by written responses. The response items were designed because the researcher felt strongly against totally leading the respondent with preconceived answers. A consistent preclusion of telling rather than asking could have resulted in serious distortions in understanding female sexuality. Response items might also yield feedback that could be used as guidelines or recommendations for further research. These items are sporadically included in the response analysis following chi-square analysis where pertinent to the question being tested.

The purposes of the questionnaire was as follows:

1. To seek answers to questions as defined in the statement of the problem and hypotheses.
2. To gather concomitant data with future research on female sexuality in mind.

3. To minimize selective bias of the subject, dummy questions were included along with target questions.

4. To elongate thoughts on sexuality and encompass a seriousness toward the task.

5. To keep a continuity and depth on sexuality flowing for the purpose of a comprehensive account of the individual's overt sexual behavior, reactions and attitudes from childhood to the present time.

6. To educate and inform participants by exposure to the information gained by them during the assessment and revelation periods.

The investigator, when invited, returned to the various classes to discuss the results of the survey.

The questionnaire was first suggested from a study done at Southern University by Comradge Henton, "Nocturnal Orgasm in College Women: Its Relation to Dreams and Anxiety Associated with Sexual Factors." Black female undergraduates were administered a structured questionnaire and an anxiety scale. The study indicated that women do experience nocturnal orgasms during sleep. Henton's original instrument seemed rather brief and lacked completion in its coverage. Henton's original questions were modified, revised and expanded by using questions similar to assessments suggested by Masters and Johnson, Kaplan and Hite and indicative of nocturnal orgasm. This seventy-six item questionnaire, then, is the only one of its kind. The scoring was for Yes/No, multiple choice, and the open-ended questions as discussed in the response analysis. The time required for the administration of the questionnaire was approximately thirty minutes. No relationship to anxiety was considered.

A pilot study was administrated in three introductory psychology classes to forty-three females and twenty-two males. A thirty-five item sexual assessment questionnaire was originally designed to be answered by both male and female. Questions included Yes/No, multiple choice and open-ended answers. The pilot study determined that nocturnal orgasm was analogous to females and males and suggested further research in the case of females, since literature concerning female nocturnal orgasm is scant.

Design of the Study

The study was primarily designed to investigate the variables associated with nocturnal orgasm in a female university population. The two independent variables were: Three categories of age classification (seventeen through nineteen, twenty through twenty-two and twenty-three and above) and three classifications of sexual activity (masturbation, coitus, and oral-genital stimulation), and nocturnal orgasm.

The classificatory or dependent variables were measured according to the way in which the participants responded to items on the questionnaire. Some items were designed for response analysis; others were amenable to statistical analysis, as previously discussed under statements of the problem.

Data Collection

To initiate the study, instructors from a cross section of courses (see population and sampling, Chapter 3) were contacted in person to elicit their support. The criteria involved required a

receptive attitude on the part of instructors and subjects, dismissal of males from classes and approximately thirty minutes to complete the questionnaire. Instructors announced the procedure during the class meeting previous to the actual data collection. Completing the questionnaire was voluntary. Due to the intimate and sensitive nature of the questionnaire, extensive precautions were taken to maintain confidentiality, minimize notoriety and expedite the information. An introduction and instruction sheet to be read by the investigator was developed to accompany the survey (see Appendix B). The introduction and manner of delivery was designed to reassure the subjects that their sexual curiosity was natural and normal and to pique their interest and cooperation for the task. Participants were seated apart for privacy and were instructed not to put their names on the questionnaires. Data were gathered within a two week span. The questionnaire was ultimately to act as a vehicle toward learning what women were thinking about their bodies and sexuality (see response analysis, Chapter 5).

Data Analysis

The data collected in the study were based on the responses to items on the questionnaire. For analysis of these data the chi-square statistical tool, as described below, was utilized.

Chi-Square (χ^2)

The chi-square test is one of the more powerful nonparametric statistical tools that is used to analyze data. The value of chi-square is determined on the basis of the number of responses (observed frequencies) as compared to the number of expected responses (expected

frequencies). Thus, chi-square is used to determine if there is a significant difference in the sexual activity (independent variable) and the manner in which subjects responded (dependent variable) to each item on the questionnaire. In addition, a second independent variable, age, was investigated.

The formula used for calculating the value of chi-square is (Linton and Galla, 1975:65).

$$\chi^2 = \sum \frac{(O_f - E_f)^2}{E_f}$$

where, Σ = summation operator,

O_f = observed frequencies, and,

E_f = expected frequencies.

The observed frequencies (O_f) are simply based on the total number of respondents in each category. The expected frequencies (E_f) for each cell are calculated on the basis of the row sums times the column sums divided by the total number of respondents (N), or $E_f = (\text{row sum}) (\text{column sum}) / N$.

In testing the null hypothesis, the value obtained for chi-square is tested against a chi-square table. The degrees of freedom are considered and are calculated by taking the number of rows minus one times the number of columns minus one, or, $df = (r-1) (c-1)$.

For this study the .05 level of significance was selected to test the null hypotheses. This may be interpreted as dependent on whether the statistic (sample fact) fell within the established critical region or not. In general, if the obtained value of chi-square was greater than or equal to the table value of chi-square at the .05 level of significance, chances were that ninety-five times out of one hundred the obtained value of chi-square was not just due to sampling error.

Chapter 4

ANALYSIS OF DATA

The plan of this chapter is to describe the accumulated research in statistical terms, as well as response analysis. The response analysis highlights potentially useful information about the responses given, while the statistical analysis provides a summarization of key data in terms of its relationship to a priori hypotheses. Sixteen tables summarizing the statistical results of each relationship are provided. The statistical chi-square (χ^2) was used to compare the groups, as well as numbers and percentages of subjects answering each variable. The square root of the contingency coefficient, C was used as a strength-of-association measure. Response analyses are interlaced throughout the chapter pertinent to the statistical tables. The study investigates variables associated with sex dreams and nocturnal orgasm in the female.

Response Analysis

There was a total of two hundred six questionnaires administered to subjects eventually divided into three age groups. Seventy-eight subjects fell into the lower age group, sixty-nine into the median age group and fifty-nine in the upper age level surveyed. Table 1 indicates the number and percent of responses according to age groups.

Table 1
Respondents According to Age Grouping

Age Groups	Number of Respondents	Percent of Respondents
17-19	78	37%
20-22	69	33%
23 and up	59	28%
Total	206	100.0%

Thirty-seven percent of the sample were seventeen to nineteen years of age, thirty-three percent was twenty to twenty-two years of age. The remaining twenty-eight percent was twenty-three and above.

Table 2 indicates the number and percent of respondents according to grade point average.

Table 2
Respondents According to Grade Point Average

GPA	Number of Respondents	Percent of Respondents	Cumulative Percent
2.0-2.4	6	2.9%	2.9%
2.5-2.9	63	30.6%	33.5%
3.0-3.4	75	36.4%	69.9%
3.5-4.0	62	30.1%	100.0%

Grade point averages (GPA) of the 206 respondents ran from 2.0 to 4.0. Thirty percent of the sample had 3.5 and above. Thirty-six

percent of the sample had above 3.0 and thirty percent was rated above 2.5.

Twenty-seven percent of the sample were graduate students leaving seventy-two percent as undergraduates. Of the undergraduates, forty-eight were freshmen, twenty-nine were sophomores, forty were juniors, and thirty-three were seniors.

Subjects represented a cross-section of majors. These courses included art, business, counseling, rehabilitation, education, English, speech, theater arts, health, physical education, home economics, mathematics, science, nursing, psychology, sociology, and library science.

Concerning marital status, 159 or seventy-seven percent reported they were single. Twenty percent or forty-one were married. Six subjects were divorced.

Response characteristics are discussed in numbers and percentages responding. The subject's written responses concerning feelings, attitudes and variables associated with sex dreams, nocturnal orgasms and sexuality are summarized.

Statistical Analysis

The chi-square, described in Chapter 3 under the heading Data Analysis, was the statistical technique used to test the null hypotheses that there was no significant relationship between the dependent and independent variables. Percentages of subjects answering each variable are also included in the tables.

Ever Sex Dreams/Age

Table 3 chi-square analysis, a test for independence, compared Question #26, "Have you ever dreamed of anything that had a connection with sexual excitement?" with the three age categories. Sixty-eight in the seventeen to nineteen age group, sixty-three in the twenty to twenty-two age group and fifty-four in the twenty-three and up age group,

Table 3

Chi-Square Analysis of 206 Respondents Comparing Responses
of Ever Having Sex Dreams With Age

Ever Sex Dreams	Age						# and % Responses
	<u>17-19</u>		<u>20-22</u>		<u>23 up</u>		
	O _f	E _f	O _f	E _f	O _f	E _f	
Yes	68	(70.0)	63	(62.0)	54	(53.0)	185
% of Yes	36.8%		34.1%		29.2%		89.8%
% of Age	87.2%		91.3%		91.5%		
% of Total	33.0%		30.6%		26.2%		
No	10	(8.0)	6	(7.0)	5	(6.0)	21
% of No	47.6%		28.6%		23.8%		10.2%
% of Age	12.8%		8.7%		8.5%		
% of Total	4.9%		2.9%		2.4%		
# of Responses	78		69		59		206
% of Responses	37.9%		33.5%		28.6%		100.0%

Not significant

$$\chi^2=0.947$$

$$d.f.=2$$

$$C=0.067$$

for a total of 185 (89.8%) responded yes to the question. Ten in the first age group, six in the second age group and five in the third age group, for a total of twenty-one (10.2%) answered no to the question.

Table 3 summarizes the chi-square evaluation indicating the dependent and two independent variables (Age versus Ever Sex Dreams), observed frequencies, expected frequencies (in parentheses), percentage of responses according to yes, no and age and the percentage of total number of responses and the obtained chi-square value.

A tabled value of $\chi^2 \geq 5.991$, with two degrees of freedom ($df = 2$), was needed to reject the null hypotheses at the .05 level of significance. The obtained χ^2 value of 0.947 did not warrant rejection of the null hypothesis. It was concluded there was no significant difference among the three age groups of females answering the question. Discrepancies between the observed and expected frequencies were negligible. All three groups were analogous in reporting sex dreams.

A majority of the subjects, 146 (70.9%) indicated their dreams were about the opposite sex. Dreaming about the same sex or movie heroes were both reported by only three percent of the sample.

Current Nocturnal Orgasm/Age

A second chi-square analysis was made comparing the dependent and two independent variables (Age versus Current Nocturnal Orgasm). Question #11 asked, "Do you currently experience nocturnal sexual dreams? Are these dreams accompanied by orgasm?" Out of 183 respondents, sixty-four (31.1%) indicated they did currently have nocturnal orgasms, while 119 (57.8%) stated they did not. Sixty-nine (37.9%) of those reporting were in the seventeen to nineteen age group, sixty-three (33.5%) were in the twenty to twenty-two age group and fifty-one (28.6%) were in the twenty-three and up age group.

Table 4 summarizes the chi-square evaluation indicating the independent and two dependent variables (Current Nocturnal Orgasm versus Age), observed frequencies, expected frequencies (in parentheses), percentage of responses according to yes, no, age and percentage of total number of responses and the obtained chi-square value.

Table 4

Chi-Square Analysis of 183 Respondents Comparing Responses of Current Nocturnal Orgasms With Age

Current Nocturnal Orgasm	Age						# and % Responses
	17-19		20-22		23 up		
	O _f	E _f	O _f	E _f	O _f	E _f	
Yes	19	(24.1)	19	(22.0)	54	(17.8)	64
% of Yes	29.6%		29.6%		40.6%		31.1%
% of Age	27.5%		30.1%		50.3%		
% of Total	10.3%		10.3%		14.2%		
No	50	(44.9)	44	(41.0)	25	(33.2)	119
% of No	42.0%		36.9%		21.0%		57.8%
% of Age	72.4%		63.8%		49.0%		
% of Total	27.3%		24.0%		13.6%		
# of Responses	69		63		51		183
% of Responses	37.9%		33.5%		28.6%		100.0%

Significant at .05

$\chi^2=8.066$
d.f.=2
C=.214

A tabled value of $\chi^2 \geq 5.991$, with two degrees of freedom (df=2), was needed to reject the null hypotheses at the .05 level of significance. The obtained χ^2 value of 8.066 was significant at the .01 level (≥ 6.634), and warranted rejection of the null hypothesis.

It was concluded there was a significant difference among the respondents by age. Discrepancies between observed and expected frequencies were greater than would be expected to conclude that no significant relationship existed. The obtained frequency of nineteen in the seventeen to nineteen age group was five points from the expected (24.1), while the obtained frequency of nineteen in the twenty to twenty-two age group was only three points from the expected (22.0). However, the obtained frequency of twenty-six in the twenty-three and up age group was nine points from the expected (17.8).

Clearly, the older age group experienced more nocturnal orgasms than the younger age group. Respondents in the younger age group represented over twenty-nine percent (29.6%) of those answering yes, while respondents in the upper age level represented over forty percent (40.6%) of those answering yes to the question. The accumulative number answering yes to having nocturnal orgasm was sixty-four or over thirty-one (31.1%) percent. A comparison of Table 3 (page 40) and Table 4 (page 42) shows a discrepancy in that an excess of eighty-nine (89.8%) percent (185 out of 206) of females reported experiencing sex dreams while only thirty-one (31.1%) percent (64 out of 183) reported having sex dreams to orgasm.

To Question #37, "Have you ever awakened from a dream of sexual activity just prior to or on the verge of an orgasm?" seventy-one answered yes. Thirty-four indicated they were frustrated, eighteen said they masturbated to completion.

Approximately one-fourth of the subjects, fifty-two, reported they had experienced nocturnal orgasmic dreams earlier in their lives (Question #41). Eighty-six indicated (Question #70) they had

awakened aware of vaginal lubrication or a pleasurable feeling but unaware of any sexual dream. Of the 188 subjects reporting on their first sex dream (Questions #28 and #56), the majority, ninety (48.0%) indicated their initial dream occurred between ages sixteen and eighteen. Twelve (6.3%) subjects reported their first dream between the ages of five and ten, sixty-two (33.0%) indicated their first dream between the ages of eleven and fifteen, eighteen (9.5%) answered first between the ages of nineteen and twenty-one and six (3.1%) indicated their primary sex dream occurred between the ages of twenty-two and twenty-five.

Table 5 indicates number and percent of respondents to first sex dreams according to age and six variables concerning feelings.

Table 5

First Sex Dream According to Age and Six
Variables Concerning Feelings

Age Groups and Variables	Number of Respondents	Percent of Respondents
5-10 years	12	6.3%
11-15 years	62	33.0%
16-18 years	90	48.0%
19-21 years	18	9.5%
22-25 years	6	3.1%
Total	188	100.0%
# Sexually aroused	141	75.0%
# Experiencing orgasm	38	20.2%
# Feeling genital pleasure	124	65.9%
# Indicating genitals lubricated	108	57.4%
# Frightened	39	21.0%
# Pleased	70	37.2%

Subjects also responded to variables concerning their primary sex dream. One hundred forty-one were sexually aroused with thirty-eight of these experiencing orgasm, 124 reported feelings of genital pleasure, 108 indicated their genitals were well lubricated. Thirty-nine of the subjects were frightened but seventy acknowledged being pleased with their feelings. Responding to Question #29 concerning how often the subject experiences sex-related dreams, there were twenty-eight (13.5%) who had these dreams more than once a week, twenty-five (12.1%) at least once a week, thirty (16.0%) more than once a month and fifty-nine (29.0%) at least once a month. The remaining sixty-four (31.0%) indicated they dreamed about sexual situations less than once a month or not at all. In response to Question #36, "When you dream at night, do you actually believe that you are in the position of having sexual intercourse?" seventy-nine (38.3%) answered in the affirmative while seventy-five (36.4%) answered they simply experienced the feelings which would accompany sexual intercourse.

Current Nocturnal Orgasms/Manipulated Orgasms

A third chi-square analysis was made comparing responses to current nocturnal orgasm with manipulated orgasm. Again Question #11, "Do you currently experience nocturnal sexual dreams? Are these dreams accompanied by orgasm?" was compared with Question #52, "How often do you reach orgasm in sexual intercourse?" Of the 138 respondents, fifty-two (37.6%) said they did currently experience nocturnal orgasms, eighty-six (63.3%) responded they did not. Those responding yes to orgasm in sexual intercourse numbered 118 (85.5%) with only twenty (14.4%) answering in the negative. Table 6, summarizes

the chi-square evaluation indicating the variables, observed frequencies, expected frequencies (in parentheses), percentage of responses according to each variable, percentage of total number of responses and the obtained chi-square value.

Table 6

Chi-Square Analysis of 138 Respondents Comparing Responses of Current Nocturnal Orgasms With Manipulated Orgasms

Current Nocturnal Orgasm	Manipulated Orgasm (MO)				# and % Responses
	Yes		No		
	O _f	E _f	O _f	E _f	
Yes	50	(44.5)	2	(7.5)	52
% of Yes	96.1%		3.8%		37.6%
% of MO	42.3%		1.0%		
% of Total	36.2%		1.4%		
No	68	(73.5)	18	(12.5)	86
% of No	79.0%		21.0%		62.3%
% of MO	57.6%		3.0%		
% of Total	49.2%		13.0%		
# of Responses	118		20		138
% of Responses	85.5%		14.4%		100.0%

Significant at .05

$$\chi^2 = 7.632$$

$$d.f. = 1$$

$$C = 0.228$$

A tabled value of $\chi^2 \geq 3.841$, with one degree of freedom (df=1), was needed to reject the null hypothesis at the .05 level of significance. The obtained χ^2 value of 7.632 was significant at the .01 level (> 6.634) and warranted rejection of the null hypothesis. It was concluded there was a significant difference between subjects reporting

nocturnal orgasm and subjects reporting manipulated orgasm. Discrepancies between observed and expected frequencies were greater than would be expected for concluding that no significant relationship existed between the two variables.

Fifty subjects answered yes to both nocturnal and manipulated orgasm (expected frequency of 44.5) adding up to over ninety-six (96.1%) percent who reported yes. Sixty-eight (expected frequency of 73.5) answered in the negative to having nocturnal orgasm, but affirmative to having manipulated orgasm for a total of seventy-nine (79.0%) percent in this group. Only two (expected frequency 7.5) answered yes to nocturnal orgasm and no to manipulated orgasm. Eighteen (expected frequency 12.5) answered no to both questions, which was twenty-one (21.0%) percent of the sample. The majority of subjects (96.1%) related having both nocturnal and manipulated orgasm. A lesser amount (79.0%) reported only manipulated orgasm while twenty-one (21.0%) percent reported neither nocturnal nor manipulated orgasm. Table 7 shows how often the 206 respondents reached orgasm in sexual intercourse.

Table 7

Percentages of Orgasm Reached in Sexual Intercourse

Orgasm	Number of Respondents	Percent of Respondents
Several times per session	20	9.7%
Almost every time	47	22.8%
About three-fourths of the time	16	7.8%
About half the time	44	21.4%
Almost never or never	22	10.4%
Not applicable	57	27.7%
Total	206	100.0%

A majority of the subjects, 127 (85.2%) indicated they reach orgasm half or more of the time. Only twenty-two (10.4%) indicated they almost never or never reach orgasm while fifty-seven (27.7%) indicated the question was not applicable to them.

Among the present sample, 104 indicated they were comfortable talking to their partners during lovemaking, fifty-two reported they occasionally talked and only sixteen reported they were not comfortable talking (Question #13). "Can you tell your partner what feels good to your body and what you'd like him/her to do?" (Question #15) was answered in the affirmative by 102 subjects. Only thirty-two answered no, and forty-nine said they could mention only selective things.

The overwhelming majority of respondents, 125 (72.0%) indicated they had adequate lubrication during sexual intercourse (Question #16) with only nine (5.1%) saying no, and forty (23.0%) saying only sometimes. Seventy-one (71.0%) percent indicated their lubrication depended on the amount of foreplay. Those having orgasms naturally and easily (Question #18) numbered 105 (58.3%) while eighty-four (48.2%) said no. "Do you ever find it necessary to masturbate to achieve orgasm after making love?" (Question #19) received 127 (74.2%) no's as opposed to 44 (26.0%) yes's. Statistics were varied on faking orgasm. "Do you feel you must have a climax to 'perform' for your partner, otherwise they may think you're not a real woman?", received an overwhelming 161 (88.0%) no's. Only 22 (12.0%) were inclined to fake orgasm to preserve their image as a real woman.

However, a response (Question #71) asking why the subject would fake an orgasm brought a total of 47 (24.0%) who indicated they would fake orgasm for the benefit of their partner's ego.

Current Nocturnal Orgasm/Oral-Genital

This chi-square analysis compared current nocturnal orgasm with oral-genital stimulation. Of the total 161 answering Questions #11 and #53, fifty-nine (36.6%) answered yes to current nocturnal orgasm while 102 (63.3%) answered no. Subjects indicating they engaged in oral-genital stimulation numbered 139 (86.3%), as compared to 22 (13.6%) who did not. Table 8 summarizes the chi-square evaluation

Table 8

Chi-Square Analysis of 161 Respondents Comparing Current Nocturnal Orgasm With Oral-Genital Stimulation

Current Nocturnal Orgasm	Oral-Genital Stimulation (O-G)				# and % Responses
	Yes		No		
	O _f	E _f	O _f	E _f	
Yes	53	(51.0)	6	(8.0)	59
% of Yes	89.8%		1.0%		36.6%
% of O-G	38.1%		27.2%		
% of Total	33.0%		3.7%		
No	86	(88.0)	16	(14.0)	102
% of No	84.3%		15.6%		63.3%
% of O-G	61.8%		72.7%		
% of Total	53.4%		10.0%		
# of Responses	139		22		161
% of Responses	86.3%		13.6%		100.0%

Not Significant

$\chi^2=0.964$
d.f.=1
C-.077

indicating the two variables, observed frequencies, expected frequencies (in parentheses), percentage of responses according to each question, percentage of total number of responses and the obtained chi-square value.

A tabled value of $\chi^2 \geq 3.841$, with one degree of freedom (df=1), was needed to reject the null hypothesis at the .05 level of significance. The obtained χ^2 value of 0.964 did not warrant rejection. It was concluded that there was no significant relationship between the two variables of current nocturnal orgasm and oral-genital stimulation. Discrepancies between the observed and expected frequencies were negligible.

Current Nocturnal Orgasm/Sexual Intercourse

This chi-square analysis compared current nocturnal orgasm with having sexual intercourse with a partner. It involved Questions #11 concerning nocturnal orgasm and #58, "Are you now having or have you ever had sexual intercourse with a partner?" Of the 183 respondents, sixty-four (31.1%) answered yes, 119 (57.8%) answered no to having current nocturnal orgasm. Those responding yes to intercourse with a partner numbered 143 (78.1%), while those answering no numbered forty (21.8%). Table 9 summarizes the chi-square evaluation indicating the two independent variables, observed frequencies, expected frequencies (in parentheses), percentage of responses according to each question, percentage of total number of responses and the obtained chi-square value.

Table 9

Chi-Square Analysis of 183 Respondents Comparing
Current Nocturnal Orgasm With Sexual
Intercourse With A Partner

Current Nocturnal Orgasm	Intercourse With Partner (SI)				# and % Responses
	Yes		No		
	O _f	E _f	O _f	E _f	
Yes	51	(51.0)	13	(14.0)	64
% of Yes	79.7%		20.3%		31.1%
% of SI	35.6%		32.5%		
% of Total	27.8%		7.0%		
No	92	(93.0)	27	(26.0)	119
% of No	77.3%		22.7%		57.8%
% of SI	64.3%		67.5%		
% of Total	50.2%		14.7%		
# of Responses	143		40		183
% of Responses	78.1%		21.8%		100.0%

Not Significant

$$\chi^2=0.137$$

$$d.f.=1$$

$$C=0.027$$

A tabled value of $\chi^2 \geq 3.841$, with one degree of freedom (df=1), was needed to reject the null hypothesis at the .05 level of significance. The obtained χ^2 value of 0.137 did not warrant rejection. It was concluded there was no significant difference between the respondents to nocturnal orgasm and sexual intercourse. Discrepancies between observed and expected frequencies were negligible.

Current Nocturnal Orgasm/Masturbation

This chi-square analysis compared current nocturnal orgasm with masturbation, and involved Questions #11 and #63. Of the 181

respondents, sixty-four (35.3%) responded yes to nocturnal orgasm, and 117 (64.6%) responded no. Only eighteen (9.9%) replied no to masturbation, while 163 (90.0%) replied yes. Table 10 summarizes the chi-square evaluation indicating the two variables, observed frequencies, expected frequencies (in parentheses), percentage of responses according to each question, percentage of total number of responses and the obtained chi-square value.

Table 10

Chi-Square Analysis of 181 Respondents Comparing
Current Nocturnal Orgasm With Masturbation

Current Nocturnal Orgasm	Masturbation				# and % Responses
	Yes	No			
	O _f	E _f	O _f	E _f	
Yes	59	(58.0)	5	(6.4)	64
% of Yes	92.1%		7.8%		35.3%
% of Masturbation	36.1%		27.7%		
% of Total	32.5%		2.7%		
No	104	(105.3)	13	(11.6)	117
% of No	88.1%		11.1%		
% of Masturbation	63.8%		72.2%		
% of Total	57.4%		7.1%		
# of Responses	163		18		
% of Responses	90.0%		9.9%		100.0%

Not Significant

$$\chi^2=0.502$$

$$d.f.=1$$

$$C=0.052$$

A tabled value of $\chi^2 \geq 3.841$, with one degree of freedom (df=1), was needed to reject the null hypothesis at the .05 level of signifi-

cance. The obtained χ^2 value of 0.502 did not warrant rejection of the null hypothesis. It was concluded that there was no significant difference between the respondents to nocturnal orgasm and masturbation. Discrepancies between observed and expected frequencies were negligible. The sample answering both questions were analogous and not considered to be independent of each other.

Current Sex Dreams/Perceived Breast Size

This chi-square analysis compared current sex dreams with perceived breast size as each subject was asked to rate her breasts in Question #43. Of the 202 respondents, 122 (60.4%) responded yes to sex dreams, and 80 (39.6%) responded no to having sex dreams. Fifty-eight (28.7%) of these rated their breasts as too small, fifteen (7.4%) rated their breasts as too large and an overwhelming 129 (63.8%) thought their breasts were just right. Table 11 summarizes the chi-square evaluation indicating the two variables, observed frequencies, expected frequencies (in parentheses), percentage of responses according to each question, percentage of total number of responses and the obtained chi-square value.

A tabled value of $\chi^2 \geq 5.991$, with two degrees of freedom (df=2), was needed to reject the null hypothesis at the .05 level of significance. The obtained χ^2 value of 1.049 did not warrant rejection. It was concluded there was no significant relationship between the respondents to current sex dreams and perceived breast size. Discrepancies between observed and expected frequencies were negligible.

Table 11

Chi-Square Analysis of 202 Respondents Comparing
Current Sex Dreams With Perceived Breast Size

Current Sex Dreams	Perceived Breast Size						# and % Responses
	Too Small		Too Large		Just Right		
	O _f	E _f	O _f	E _f	O _f	E _f	
Yes	.32	(35.0)	10	(9.0)	80	(78.0)	122
% of Yes	26.2%		8.2%		65.6%		60.4%
% of Size	55.2%		66.7%		62.0%		
% of Total	15.8%		5.0%		39.6%		
No	26	(23.0)	5	(6.0)	49	(51.0)	80
% of No	32.5%		6.3%		61.3%		39.6%
% of Size	44.8%		33.3%		38.0%		
% of Total	12.9%		2.5%		24.3%		
# of Responses	58		15		129		202
% of Responses	28.7%		7.4%		63.8%		100.0%

Not Significant

$$\chi^2=1.049$$

$$d.f.=2$$

$$C=0.071$$

Respondents in the sample to current sex dreams and perceived breast size were analogous.

Current Sex Dreams/Vaginal Image

This chi-square analysis compared current sex dreams with Question #44 which asks the subject to rate her vaginal area. Of the 203 respondents, 124 (61.8%) reported yes, and 75 (38.9%) reported no to having current sex dreams. Nineteen respondents (9.5%) thought their genitals ugly, thirty-six (17.7%) thought their genitals beautiful and 148 (72.9%) thought their genitals just okay. Table 12

summarizes the chi-square evaluation indicating the two independent variables, observed frequencies, expected frequencies (in parentheses), percentage of responses according to each question, percentage of total number of responses and the obtained chi-square value.

Table 12

Chi-Square Analysis of 203 Respondents Comparing Current Sex Dreams With Vaginal Image

Current Sex Dreams	Vaginal Image						# and % Responses
	Ugly		Beautiful		Just Okay		
	O _f	E _f	O _f	E _f	O _f	E _f	
Yes	9	(12.0)	29	(22.0)	86	(90.4)	124
% of Yes	7.3%		23.4%		69.4%		61.8%
% of Image	47.4%		80.5%		58.1%		
% of Total	4.4%		14.2%		42.3%		
No	10	(7.3)	7	(14.0)	62	(57.5)	79
% of No	12.6%		8.8%		78.4%		38.9%
% of Image	52.6%		19.4%		41.8%		
% of Total	4.9%		3.4%		30.5%		
# of Responses	19		36		148		203
% of Responses	9.3%		17.7%		72.9%		100.0%

*Significant at .05

$$\chi^2 = 7.796^*$$

$$d.f. = 2$$

$$C = 0.192$$

A tabled value of $\chi^2 \geq 5.991$, with two degrees of freedom (df=2), was needed to reject the null hypothesis at the .05 level of significance. The obtained χ^2 value of 7.796 was significant at the .01 level and warranted rejection. It was concluded there was a significant relationship between the respondents of the two questions. Discrepancies

between observed and expected frequencies were greater than would be expected to conclude that no significant difference existed. Nine subjects (7.3%) thought their vaginas ugly (expected frequency 12.0), twenty-nine (23.4%) thought their vaginas beautiful (expected frequency 22.0), and eighty-six (69.4%) thought their vaginas just okay (expected frequency 90.4). A much larger number and percent, 124 (61.8%), who answered yes to having nocturnal orgasm contended their vaginal area to be beautiful or just okay, than those who answered no, 79 (38.9%) to having nocturnal orgasm. Ten (12.6%) of these thought their vaginas were ugly (expected frequency 7.3), seven (8.8%) thought their vaginas were beautiful (expected frequency 14.0), and sixty-two (78.4%) thought their vaginas were just okay (expected frequency 57.5).

Two-hundred subjects responded to Question #74, "Have you ever used a mirror to look carefully at your vagina and genitals?" Seventy-five percent or 149 subjects answered yes. Twenty-five percent or fifty-one said no.

Current Nocturnal Orgasm/Initiating Sexual Activity

This chi-square analysis compared current nocturnal orgasm with Question #54, "Have you ever initiated sexual activity?" Of the one-hundred fifty-seven respondents, fifty-five (35.0%) said yes and 102 (64.3%) said no to current nocturnal orgasm. Of these, 108 (68.7%) indicated they had initiated sexual activity and forty-nine (31.2%) responded they had not initiated sexual activity. Table 13 summarizes the chi-square evaluation indicating the two independent variables, observed frequencies, expected frequencies (in parentheses), percentage

of responses according to each question, percentage of total number of responses and the obtained chi-square value.

Table 13

Chi-Square Analysis of 157 Respondents Comparing Current Nocturnal Orgasm With Initiating Sexual Activity

Current Nocturnal Orgasm	Initiating Sexual Activity (SA)				# and % Responses
	Yes		No		
	O _f	E _f	O _f	E _f	
Yes	42	(38.0)	13	(17.2)	55
% of Yes	76.3%		23.6%		35.0%
% of SA	38.8%		26.5%		
% of Total	26.7%		8.3%		
No	66	(70.2)	36	(32.0)	102
% of No	64.7%		35.2%		64.3%
% of SA	61.1%		73.4%		
% of Total	42.0%		22.9%		
# of Responses	108		49		157
% of Responses	68.7%		31.2%		100.0%

Not Significant

$$\chi^2=2.260$$

$$d.f.=1$$

$$C=0.119$$

A tabled value of $\chi^2 \geq 3.841$, with one degree of freedom (df=1), was needed to reject the null hypothesis at the .05 level of significance. The obtained χ^2 value of 2.260 did not warrant rejection. It was concluded there was no significant relationship between the respondents to current nocturnal orgasm versus initiating sexual activity. Discrepancies between observed and expected frequencies were negligible.

In response to a related Question #60, "How would you rate your sex life?" 171 subjects responded. One-hundred twenty-seven (74.2%) rated their sex life as satisfactory, only forty-four (25.7%) rated their sex life as unsatisfactory.

Current Nocturnal Orgasm/Pre-menstrual Sexual Arousal

This tenth chi-square analysis compared current nocturnal orgasm with Question #9 pertaining to pre-menstrual sexual arousal. Of the 181 respondents, sixty-two (34.2%) replied yes to current nocturnal orgasm while 119 (65.7%) replied no to the question. Subjects numbering 106 responded yes to sexual arousal before their menstrual period, with seventy-five (41.7%) responding no. Table 14 summarizes

Table 14

Chi-Square Analysis of 181 Respondents Comparing Current Nocturnal Orgasm with Pre-menstrual Sexual Arousal

Current Nocturnal Orgasm	Pre-menstrual Sexual Arousal (SA)				# and % Responses
	Yes		No		
	O _f	E _f	O _f	E _f	
Yes	46	(36.3)	16	(25.7)	62
% of Yes	74.1%		25.8%		34.2%
% of SA	43.3%		21.3%		
% of Total	25.4%		8.8%		
No	60	(70.0)	59	(49.3)	119
% of No	50.4%		49.6%		65.7%
% of SA	56.6%		78.6%		
% of Total	33.1%		32.5%		
# of Responses	106		75		181
% of Responses	56.8%		41.7%		100.0%

*Significant at .05

$$\chi^2 = 9.493^*$$

$$d.f. = 1$$

$$C = 0.223$$

the chi-square evaluation indicating the two independent variables, observed frequencies, expected frequencies (in parentheses), percentage of responses according to each question, percentage of total number of responses and the obtained chi-square value.

A tabled value of $\chi^2 \geq 3.841$, with one degree of freedom (df=1), was needed to reject the null hypothesis at the .05 level of significance. The obtained χ^2 value of 9.493 (significant at the .01 level ≥ 6.634) warranted rejection of the null hypothesis. It was concluded there was a significant relationship between the respondents to nocturnal orgasm and pre-menstrual sexual arousal. Discrepancies between observed and expected frequencies were greater than would be expected to conclude that no significant relationship between the two independent variables, i.e., these two variables were not considered to be independent of each other.

Over seventy-four percent (74.1%) of the sample indicated they had current nocturnal orgasm as well as being pre-menstrual sexually aroused. This leaves only twenty-five (25.8%) of the sample who do experience nocturnal orgasm but are not pre-menstrual sexually aroused. Fifty percent or less of the sample answered no to nocturnal orgasm (50.4%) and no to pre-menstrual sexual arousal (49.6%).

A companion Question #42, "Have you noticed that your erotic dreams and fantasies vary according to your menstrual cycle?" gave additional information. Forty (69.0%) experienced erotic sex dreams just previous to menses, twelve (2.0%) during menses and six (1.0%) following menses.

Current Nocturnal Orgasm/Incest or Family Friend

This chi-square analysis compared current nocturnal orgasm with Question #67, pertaining to whether the subject had ever been taken sexual advantage of by a relative or family friend. Of the 181 respondents, sixty-three (34.8%) responded yes and 118 (65.1%) responded no to current nocturnal orgasm. Of these respondents, forty-one (23.0%) answered yes to being taken sexual advantage of at an early age, 140 (77.3%) reported they had not been taken sexual advantage of by an adult. Table 15 summarizes the chi-square evaluation

Table 15

Chi-Square Analysis of 181 Respondents Comparing Current Nocturnal Orgasm With Incest or Family Friend

Current Nocturnal Orgasm	Incest or Family Friend				# and % Responses
	Yes		No		
	O _f	E _f	O _f	E _f	
Yes	17	(14.2)	46	(49.0)	63
% of Yes	26.9%		73.0%		34.8%
% of Incest	41.4%		32.8%		
% of Total	9.3%		25.4%		
No	24	(27.0)	94	(91.2)	118
% of Yes	20.3%		79.6%		65.1%
% of Incest	58.5%		67.1%		
% of Total	13.2%		51.3%		
# of Responses	41		140		181
% of Responses	23.0%		77.3%		100.0%

Not Significant

$$\chi^2 = 1.035$$

$$d.f. = 1$$

$$C = 0.075$$

indicating the two independent variables, observed frequencies, expected frequencies (in parentheses), percentage of responses according to each question, percentage of total number of responses and the obtained chi-square value.

A tabled value of $\chi^2 \geq 3.841$, with one degree of freedom (df=1), was needed to reject the null hypotheses at the .05 level of significance. The obtained χ^2 value of 1.035 did not warrant rejection of the null hypothesis. No significant relationship existed between the two independent variables of nocturnal orgasm and sexual advantage.

Oral-Genital Sex/Coitus

This final chi-square analysis compared oral-genital sex with coitus and involved Questions #52 and #58, "Has your partner stimulated your genitals orally? and Are you now having or have you ever had sexual intercourse with a partner?" There were 151 respondents with one-hundred twenty-nine (85.4%) answering yes to oral-genital sex and twenty-two (14.5%) answering no. Of this number, 114 (75.4%) answered yes to coitus and thirty-seven (24.5%) replied no. Table 16 summarizes the chi-square evaluation indicating the two independent variables (oral-genital versus coital), observed frequencies, expected frequencies (in parentheses), percentage of responses according to each question, percentage of total number of responses and the obtained chi-square value.

A tabled value of $\chi^2 \geq 3.841$, with one degree of freedom (df=1), was needed to reject the null hypothesis at the .05 level of significance. The obtained χ^2 value of 9.049 (significant at the .01 level ≥ 6.634) warranted rejection of the null hypothesis. It was concluded

Table 16

Chi-Square Analysis of 151 Respondents Comparing
Oral-Genital Sex With Coitus

Oral-Genital Sex	Coitus				# and % Responses
	Yes		No		
	O _f	E _f	O _f	E _f	
Yes	103	(97.3)	26	(31.6)	129
% of Yes	79.8%		20.1%		85.4%
% of Coitus	90.3%		70.2%		
% of Total	68.2%		17.2%		
No	11	(16.6)	11	(5.4)	22
% of No	5.0%		5.0%		14.5%
% of Coitus	3.6%		29.7%		
% of Total	7.2%		7.2%		
# of Responses	114		37		151
% of Responses	75.4%		24.5%		100.0%

*Significant at .05

$$\chi^2 = 9.049*$$

$$d.f. = 1$$

$$C = 0.237$$

there was a significant difference between the respondents with reference to oral-genital and coitus questions. Discrepancies between observed and expected frequencies were greater than would be expected to conclude that there was no significant relationship between the two independent variables. Of the 151 respondents, 103 (79.8%) answered yes to both oral-genital sex and coitus (expected frequency 97.3), twenty-six (20.1%) answered yes to oral-genital and no to coitus (expected frequency 31.6), eleven (5.0%) of the respondents said no to

oral-genital and yes to coitus (expected frequency 16.6), eleven (5.0%) said no to oral-genital and no to coitus (expected frequency 5.4).

Thus, the overwhelming majority of respondents, 103, were engaged in both oral-genital sex and coitus. Only eleven of the females responding who were participating in coitus refused oral-genital sex. Eleven from the sample of 151, were not permitting either oral-genital sex or coitus. Twenty-six females from the 151 were involved in oral genital stimulation who had not consented to coitus.

Discussion of Results

The statistical results of the research varied with the null hypotheses being accepted in seven instances and rejected in five of the postulates. The null hypothesis was accepted with respect to each of the following independent variables: subjects reporting nocturnal sexual dreams, oral-genital sex, coitus, masturbation, attitude toward breasts, initiating sexual activity and sexual advantage or incest. The results revealed no significant interpretive material and indicated the sample to be analogous in these areas.

The null hypothesis concerning each of the following areas was rejected: subjects reporting nocturnal sexual dreams to orgasm, manipulated orgasm, attitude toward genitals, pre-menstrual sexual arousal and oral-genital stimulation in conjunction with coitus. Significant relationships did exist in these areas.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The structure and results of the amassed data and statistical conclusions are highlighted and summarized in this final chapter. Recommendations for future research are suggested.

Summary

The purpose of the investigation was to explore the incidence of nocturnal orgasm and possible variables connected with this phenomenon in the female. If females experience orgasm naturally and autonomically during sleep, it would follow that orgasmic inhibition is a cultural or learned dysfunction.

Related literature was reviewed. Data were collected with relationship to age, alternate sexual activity, sexual attitudes, self-esteem attitudes, parental-home atmosphere and sexual history, in conjunction with nocturnal orgasm.

The investigation was ultimately to act as a vehicle toward learning what women were thinking and doing in relationship to their sexuality. The intent of the study was to inform the subjects surveyed of the social and educational attitudes, myths, and mores which contribute to withholding accurate information regarding female sexuality. It was a further intention of the study to give "permission" to the female subjects, to become acquainted with their own personal sexual repertoire. Careful thought and consideration were given to the

administration of a seventy-six item questionnaire to the two hundred six subjects. A pre-questionnaire verbal introduction (See Appendix B) was designed to give sex-related information, as well as to elongate the subject's thoughts on sexuality and encompass a seriousness and comradery toward the task. The examiner remained to answer questions. When invited, the examiner returned to the various classes to discuss the results of the survey with the subjects.

Conclusions

The mass of data collected indicates first of all that a comprehensive number, 185 out of 206, or ninety percent of the sample surveyed indicate they do have sexual dreams.

When questioned if they dreamed to orgasm, the accumulative number answering yes was sixty-four or over thirty-one percent. Obviously, a difference exists between the number of females reporting sex dreams and those who dream to orgasm. As with males, females reported that their sex dreams also have the often distressing element of stopping just short of orgasm.

More respondents in the twenty-three and above age group, experienced nocturnal orgasms than the seventeen to nineteen age group or the twenty to twenty-two age group. Forty percent of the older age group as compared to only twenty-nine percent of the two younger groups reported dreaming to orgasm.

Of the one-hundred eighteen females who reported manipulated orgasm during sexual intercourse, ninety-six percent of these also reported current nocturnal orgasm. Seventy-nine percent of the subjects reporting no to nocturnal orgasm still had orgasms with a

partner. The present study lends impetus to findings that more sexually active females are presently responding to orgasm than has been true in the past decades. A large majority of the subjects indicated they reached orgasm more than half the time during coitus, with only ten percent reporting they never do climax. These figures parallel the pilot study results also, and were reason for carefully defining orgasm in the pre-questionnaire instructions. Twenty-seven percent of the sample indicated the question was not applicable to them. Again, it is possible education and increasing women's rights, including sexual rights, are effecting enough of a change in attitudes that females may also participate in the pleasure of sex.

Only one-fourth of the sample indicated they had faked orgasm for the benefit of their partner's ego. These women indicated their partners were frustrated, angry or depressed if the subjects did not reach orgasm. Three of the married women in the sample said they sometimes faked orgasm because they were sleepy and simply wanted coitus to end. Coitus did not have a statistical relationship to nocturnal orgasm in this study. Oral-genital sex was not statistically related to nocturnal orgasm.

While also not statistically related to nocturnal orgasm in the study, the question on masturbation nevertheless provided insight into the high percentage of coital orgasm among the sample. Ninety percent of the women acknowledged masturbation, with only nine (9.9%) percent saying they abstained from masturbation. The high masturbation percentage in the present study corresponds with the equally high percentage (96.1%) of coital orgasm conceded by the sample (See Table 6). Researchers have agreed; masturbation is conducive to coital orgasm.

Perceived breast size had no statistical relationship to nocturnal orgasm, but the subject's concept of her vagina was statistically related to nocturnal orgasm. The largest majority of subjects reporting nocturnal orgasm thought their vaginas to be okay or beautiful. Contrary to popular opinion, how accepting a female is of her genital area may contribute more to her being a sexually responsive partner than her breast size.

Subjects answered a companion question concerning whether they had ever used a mirror to look at their genitals. Seventy-five percent of the females had examined their genitals using a mirror. The twenty-five percent who had not, said they would be embarrassed to look or that they simply had not wanted to look. One subject said her doctor had suggested she look, and another subject reported she and her partner, using a mirror for a better view, had examined her genitals together.

Although not statistically significant, females initiating sexual activity was certainly behaviorally suggestive. Traditional stereotyping depicts the man as dominant and actively aggressive in sexual desires, with the female reserved, shy and only submissive in sexual matters. From a sample of 157, 108 females had initiated sexual activity and only forty-nine had not. Shyness does not diminish sexual arousal and assertiveness in the local Midwestern university female.

Pre-menstrual sexual arousal was related to nocturnal orgasm with close to seventy-five percent of the sample reporting both phenomena. Incest was not statistically significant to nocturnal orgasm; however, the number reporting sexual contact with a relative or family friend may not have been large enough to isolate a positive

or negative relationship. A total of forty-one females or twenty-three (23.0%) percent of the sample had been taken advantage of sexually by a relative or family friend. One subject reported the advantage had been taken by a father, five by stepfathers, nine by brothers, six by uncles, five by grandfathers and ten by family friends. The remainder reported a variety of relatives, i.e., brother-in-law, cousin. The indiscretions reported included: touching the genital area, reported by thirty-three subjects; finger penetration, by fifteen subjects; penile penetration, by nine subjects; and oral sex by four subjects.

Oral-genital sex was statistically related to coitus. What constitutes sexual normality, would appear to be in flux when over thirty percent of the sample report considerable tolerance for oral-genital sex, even without the accompanying coitus. An unusually large majority, eighty percent, report the dual activity. Twelve females reported their partners did not stimulate their genitals orally, but they wished their partners would do so. Only eleven were adamant against allowing oral-genital stimulation. Twenty-six females reported they participated in oral sex while ambiguously indicating they were "saving themselves for marriage." These twenty-six females were participating in oral-genital sex but not coitus, which involves the insertion of a penis. A reluctance to break with traditional concepts of virginity still exists. Also, coitus introduces the possibility of pregnancy while oral-genital sex involves no such risk. Oral-genital stimulation for this generation appears to be analogous to past generation's petting, courting, bundling, spooning, larking or sparking. It was generally understood these activities included

mutual masturbation to orgasm while preserving virginity and not risking pregnancy. The females may be doing what comes naturally and feeling less guilty than their predecessors. In a biological sense, oral sex seems a normal and natural behavior and not the intellectually and legally contrived perversion which it has sometimes been considered.

Written responses on participating in the survey were overwhelmingly positive. Fifty-five percent of those surveyed took the opportunity to comment on their feelings about the questionnaire in the space provided. Of the fifty-five percent who commented, eighty-five percent expressed the opinion that the questionnaire had been an interesting, valuable, or learning experience for them. Thirteen percent reported they were uncomfortable with the subject of sex and with having to think about a sexual questionnaire. Two subjects or two percent of those surveyed did not like the questionnaire. The most often expressed comment was that subjects were glad to be asked to share their honest feelings on sexuality and that they felt the need for more communication between the sexes. The subjects felt in need of more sexually related research which would be shared with them. Many felt isolated with their sexual feelings and problems. Others answered that they enjoyed the memories the questionnaire brought forth. Many indicated they were proud to be women. Two rape victims and three incest victims indicated the questionnaire was the first opportunity they had taken to inform anyone about these traumatic events in their lives.

A large majority, 158, seventy-seven percent, out of 206 subjects in the survey indicated that they do engage in sexual intercourse. Seventy-one percent found participation in sexual intercourse

"joyful", but fifteen percent felt guilty. Nine percent said they only participated in coitus for their partner's benefit and did not necessarily enjoy sex.

One-hundred fifty-nine or seventy-seven percent of the sample were single, forty-one or twenty percent were married, and six in number or three percent were divorced. Twenty-three percent of the sample adhere to the more traditional and conservative behavior of abstaining from pre-marital coitus. Seventy-seven percent of the sample indicated they do engage in sexual intercourse. Twenty percent of the sample who did not engage in coitus did engage in oral-genital sex. Women are slowly laying aside the facade of expectation fulfillment to be counted as physiologically and behaviorally analogous to men. The great majority of females no longer cling tenaciously or uncompromisingly to traditional sexual mores.

Recommendations

Some implications revealed by this study indicate people resist facts and information because of cultural conditioning, myths and mores. Future researchers studying sexuality might consider the following recommendations:

1. Researchers might do well to investigate sexual similarities between the sexes. Similarities, rather than differences are frequently more significant in comparisons and understanding. A discussion of similarities might significantly increase knowledge, positive attitudes and empathy between sexual partners.
2. Researchers must separate physiological sexual facts from oversacramentalization and overromanticization of sex.

3. Researchers might investigate why frequencies of nocturnal orgasm are higher in the male than in the female.

4. Some of the researchers in human sexuality should be women doing research on the more female-oriented problems of incest, dysmenorrhea and menopause. These subjects are not thoroughly covered in the literature.

5. Researchers in human sexuality of the future might consider working as a co-researcher with a member of the opposite sex to help eliminate bias and give an all-inclusive atmosphere to the problem at hand for the benefit of both sexes.

BIBLIOGRAPHY

BIBLIOGRAPHY

A. BOOKS

- Armstrong, Louise. Kiss Daddy Goodnight. New York: Hawthorn Books, Inc., 1978.
- Barach, Lonnie Garfield. For Yourself: The Fulfillment of Female Sexuality. New York: Doubleday and Co., 1976.
- Comfort, Alex. The Joy of Sex. New York: Simon and Schuster, 1972.
- Ellis, Havelock. Psychology of Sex. New York: Emerson Books, Inc., 1964.
- Fulton, Gere B. Sexual Awareness. Boston: Holbrook Press, Inc., 1976.
- Hite, Shere. The Hite Report. New York: Dell Publishing Co., Inc. 1976.
- Kaplan, Helen Singer. The New Sex Therapy. New York: Brunner/Mazel, 1974.
- Katchadourian, Herant. Human Sexuality, Sense and Nonsense. New York: W. W. Norton and Company, Inc., 1972.
- Kinsey, Alfred C., W. B. Pomeroy, C. E. Martin, P. H. Gebhard. Sexual Behavior in the Human Female. Philadelphia: W. B. Saunders Company, 1953.
- _____. Sexual Behavior in the Human Male. Philadelphia: W. B. Saunders Company, 1948.
- LoPiccolo, Joseph and Leslie. Handbook of Sex Therapy. New York: Plenum Press, 1978.
- Martin, M. Kay, B. Voorhies. Female of the Species. New York: Columbia University Press, 1975.
- Masters, Wm. H., V. E. Johnson. Human Sexual Inadequacy. Boston: Little, Brown and Company, 1970.
- _____. Human Sexual Response. Boston: Little, Brown and Company, 1966.
- McCarthy, Barry. What You Still Don't Know About Male Sexuality. New York: Thomas Y. Crowell Company, 1977.

- Ruben, David. Everything You Always Wanted to Know About Sex, New York: David McKay Company, Inc., 1970.
- Schiller, Patricia. Creative Approach to Sex Education on Counseling. New York: Association Press, 1977.
- Seaman, Barbara. Free and Female. New York: Coward, McCann and Geoghegan, Inc., 1972.
- Sisley, Emily L., Bertha Harris. The Joy of Lesbian Sex. New York: Crown Publishers, Inc., 1977.
- Ullman, Leonard P., Leonard Krasner. A Psychological Approach to Abnormal Behavior. New Jersey: Prentice-Hall, Inc., 1975.
- Weinberg, Martin S. Sex Research. New York: Oxford University Press, 1976.

B. JOURNALS

- Abel, Gene G., W. D. Murphy, J. V. Becker, A. Bitar. "Women's Vaginal Responses During REM Sleep," Journal of Sex and Marital Therapy, 5 (1979), 5-13.
- Geer, James H., J. D. Quartararo. "Vaginal Blood Volume Responses During Masturbation," Archives of Sexual Behavior, 5 (5) (1976), 403-413.
- Henton, Comrade L. "Nocturnal Orgasm in College Women: Its Relation to Dreams and Anxiety Associated with Sexual Factors," The Journal of Genetic Psychology, (1976) 245-251.
- Hermon, Judith, Lisa Hirschman. "Father-Daughter Incest," Journal of Women in Culture and Society, Vol. 2, No. 4 (1977), 735-756.
- Sherfey, Mary Jane. "The Evolution and Nature of Female Sexuality in Relation to Psychoanalytic Theory," Journal of the American Psychoanalytic Association, 14 (1966), January: 28-127.
- Vance, Ellen Belle, N. N. Wagner. "Written Descriptions of Orgasm: A Study of Sex Differences," Archives of Sexual Behavior, 5 (1976), 87-98.
- Walsh, Robert H., W. M. Leonard II. "Usage of Terms for Sexual Intercourse by Men and Women," Archives of Sexual Behavior, 3 (1974), 373-376.
- Walsh, W. B. "Validity of Self Report: Another Look," Journal of Counseling Psychology, 16 (1969), 569-574.

Walsh, W. B. "Self-Report Under Socially Undesirable and Distorted Conditions," Journal of Counseling Psychology, 16 (1969), 569-574.

APPENDIX A

Questionnaire

QUESTIONNAIRE

AUGUST 1979 EMPORIA STATE UNIVERSITY

VARIABLES ASSOCIATED WITH NOCTURNAL ORGASM IN FEMALES

WANDA BEAL

Females have seldom been chosen as the object of rigorous, comprehensive study in the social sciences, but rather have typically been treated as peripheral to the mainstream of cultural evolution.

Whether sex has a positive or negative effect on our lives depends at least in part on whether sexual attitudes are based on ignorance and misinformation or fact.

Much psychosexual development in the female is socially controlled, often to her disadvantage. Social and educational attitudes withhold from women information about their own sexuality. There is an unwillingness of society to acknowledge sex as a basic human expression in the female. Parents and other socializing agencies have blunted natural curiosity and perpetuated even negative learning of females toward their bodies. There is need for the female to have information concerning her sexual self without the implication of moral value and social custom.

For instance women do experience nocturnal sex dreams although obviously, we do not ejaculate. "As with the male, the female is often awakened by the muscular spasms or convulsions which follow her orgasms" (Kinsey, 1953:192). Yet, the Psychological Abstracts list only two references to female nocturnal orgasms as compared to 159 references to male "wet dreams". Females clearly have not been given permission by society to be sexual.

As sexual enlightenment continues, findings suggest that the experience of orgasm for males and females is essentially the same. Orgasm in the female is defined as being triggered by stimulation of the clitoris and expressed by a series of rhythmic contractions of the muscles when vasocongestion reaches a critical point. The contractions are preceded by genital engorgement, high color in the skin, erect nipples and vaginal lubrication. A significant difference between male and female sexual response is that many women do not have a refractory phase...that is, the potential exists for another orgasm to be reached immediately. In other words, females are multiple orgasmic.

The present study is an attempt to determine if females are aware of nocturnal orgasms being natural and autonomic in their experience. It would follow that many sexual problems and coital unhappiness could be eliminated by knowledgeable and honest information. The major significance to be derived from the study is that nocturnal sex dreams to orgasm is one activity which provides the best measure of a female's

intrinsic sexuality. The study presumes the essential wholesomeness of the human body and all of its functions, emphasizing the potentialities and values of human existence.

About the questionnaire:

I hope you gather that so many things we feel guilty about and think, "I'm the only one", are really quite normal and natural....we all do it. I think you will find interesting the putting together of your very own sexual history. May I ask you to be honest, very thoughtful and accurate.

There are no right or wrong answers. No answer will offend me. I am not judgmental.

The questionnaires are absolutely anonymous....Do not put your name on them...Sit where no one will view your answers.

You may use the space below to comment on your feelings about the questionnaire if you wish.

QUESTIONNAIRE

AUGUST 1979 EMPORIA STATE UNIVERSITY

VARIABLES ASSOCIATED WITH NOCTURNAL ORGASM IN FEMALES

WANDA BEAL

There are no right or wrong answersBe sure to answer every item only once unless instructed to check more than one answer

Age ___ Grade point average (GPA) ___ Educational level ___ Major ___

Single ___ Married ___ Divorced ___ Cohabiting ___

1. At what age did you start to menstruate? ___
2. Following puberty, how old were you at the time of your first heterosexual intercourse? ___
Not applicable ___
First homosexual intercourse? ___
Not applicable ___
3. Were you allowed to ask questions about sexual topics in your home?
Yes ___ No ___
4. Was affection (touching, holding, caressing) shown freely to you and to your siblings by your parents?
Yes ___ No ___
5. Were you raised in a single parent home? Yes ___ No ___
If yes, with which parent?
Mother ___ Father ___ Other ___
6. Generally, how do you feel about yourself?
I like myself ___
I do not like myself ___
7. Were you comfortable discussing sexual topics in your home?
Yes ___ No ___
8. Have your opinions and attitudes concerning sexuality changed over a period of time? Yes ___ No ___
9. Are you aware of being more horny just before your period?
Yes ___ No ___
10. Do you recall playing any sex games as a child ("Doctor" or "House") which involved showing or touching genitals?
Yes ___ No ___
11. Do you currently experience nocturnal sexual dreams? Yes ___ No ___
Are these dreams accompanied by orgasm? Yes ___ No ___
12. Are you comfortable talking to your partner during lovemaking?
Yes ___ No ___ Occasionally ___

13. About how often do you desire sex? Times per day___
 Times per week___
 Times per month___
 Do you actively seek it? Yes___ No___
14. Do you visualize specific fantasies when you masturbate?
 Yes___ No___
 If yes, the same one___
 If yes, a variety___
15. Can you tell your partner what feels good to your body and what
 you'd like him/her to do?
 Yes___ No___ Only selective things___
16. Do you usually feel you have adequate lubrication (vaginal secretion)
 during sexual intercourse?
 Yes___ No___ Only sometimes___
 Does your lubrication depend on the amount of foreplay?
 Yes___ No___
17. Did you have to learn how to have orgasms? Yes___ No___
 Did they become better or easier for you with practice?
 Yes___ No___
18. Do you have orgasms naturally and easily? Yes___ No___
 Can you have an orgasm with concentrated effort? Yes___ No___
19. Do you ever find it necessary to masturbate to achieve orgasm after
 making love? Yes___ No___
20. Do you usually have sex with the partner you want to have sex with?
 Yes___ No___
 Do you sometimes have sex with someone just to avoid a
 hassle or keep a relationship? Yes___ No___
21. Do you prefer to do things sexually, to others? Yes___ No___
 Or, do you prefer to be passive and have things done to you?
 Yes___ No___
 Or, do you share the give and take? Yes___ No___
22. Do you feel you must have a climax to "perform" for your partner,
 otherwise they may think you're not a real woman? Yes___ No___
23. Do you feel embarrassed asking your partner for clitoral manipulation?
 Yes___ No___
 Do you feel your partner is sacrificing to give it to you?
 Yes___ No___
24. Where did you get most of your information about sex when you were
 a child? (You may check more than one) Friends of the same
 age___ Older friends___ Parents___ Sex education books___
 Erotic or pornographic literature___ Course in school___
 Church___ Other (Please specify)___
25. Did you ever have an opportunity to see animals involved in sexual
 activity? Yes___ No___
 If yes, what was your reaction? Embarrassed___ Interested___
 Stimulated___ Other (Specify)___

26. Have you ever dreamed of anything that had a connection with sexual excitement? Yes___ No___
Was the dream about? Same sex___ Opposite sex___
Animal___ Movie or TV hero___
Other (Specify) _____
27. Do you have erotic dreams? Frequently___ Occasionally___ Not sure___ Seldom___ None I can remember___
28. At what age do you remember experiencing your first sexual dream? 5-10___ 11-15___ 16-18___ 19-21___ 22-25___
Were you sexually aroused? Yes___ No___
Was there a feeling of genital pleasure? Yes___ No___
Did you have an orgasm? Yes___ No___
29. How often do you dream about sexual situations and/or fantasies?
Once a week___ More than once a week___
Once a month___ More than once a month___
Times per year___ Never___
30. Was affection shown freely by your parents to one another?
Yes___ No___
In what way? Patting the fanny___ Squeezing a breast___
(you may check more than one) Kissing___ Caressing___
31. What was your childhood impression of your parents sexual relationship?
Couldn't imagine them having sex___
Suspected they had sex___
Knew they had sex___
Was disgusted at the thought of them having sex___
Was aware they were joyful about their sexuality___
32. Did you ever witness the primal scene (lovemaking) between your parents? Yes___ No___
If so, at what age? ___
Please explain your reaction (May check more than one)
Embarrassed___ Ashamed___
Surprised___ Didn't understand___
Repulsed___ Excited___
Jealous___ Hatred___
Accepting___ Other (Specify)___
Was your reaction (feelings) directed toward: Self___
Mother___ Father___
33. Are you comfortable walking around in front of your partner in the nude? Yes___ No___
Only in the dark___ Only after a long time together___ I don't like my body___ I'm afraid my partner won't like my body___
34. If you seldom or never have orgasms, what factors do you think would contribute to your having them more frequently?
Physical___ Training___
Psychological___ Other (Specify)_____

35. How old were you when you first experimented sexually in the presence of another person?
 5 or under___ 6-10___
 11-15 ___ 16 & over___
36. When you dream at night, do you actually believe that you are in the position of having sexual intercourse? Yes___ No___
 Or, if no, do you just have feelings which would accompany sexual intercourse? Yes___ No___
37. Have you ever awakened from a dream of sexual activity just prior to or on the verge of an orgasm? Yes___ No___
 If yes, did you feel frustrated? ___
 Did you masturbate to completion?___
 Did you get up and seduce the milkman? (or other) ___
 Other (Specify) _____
38. How often was sex the subject of general family conversation while you were a child?
 Frequently___ Occasionally___
 Seldom___ Never___
39. What was the attitude toward nudity in your home when you were a child?
 Very casual, much nudity___
 Casual, some nudity___
 Neither concern nor unconcern___
 Concern that people were properly attired___
 Much concern, no nudity___
40. In general, women do not enjoy sex as much as men.
 Strongly agree___ Moderately agree___
 Slightly agree___ Slightly disagree___
 Moderately disagree___ Strongly disagree___
41. Did you have nocturnal orgasmic dreams earlier in your life?
 Yes___ No___
 Were these nocturnal dreams orgasmic? (did you climax?)
 Yes___ No___
42. Have you noticed that your erotic dreams and fantasies vary according to your menstrual cycle? Yes___ No___
 I have erotic dreams:
 Just previous to my menses___
 During my menses___
 Following my menses___
 No correlation that I can remember___
43. My breasts are: Too small___ · Too large___ Just right___
44. Do you think your vagina and genital area are: Ugly___ Beautiful___
 Just okay___

45. Sexual behavior should be judged by the quality of the relationship between people and not by whether they are married.
 Strongly agree___ Moderately agree___
 Slightly agree___ Slightly disagree___
 Moderately disagree___ Strongly disagree___
46. With how many persons have you (or had you) had premarital sexual intercourse?
 None___ 1-5___
 6-10___ 11-16___
 17 & above___
47. I do engage in sexual intercourse: But I feel guilty___
 But I do not necessarily enjoy it___
 But I do it for my partner's benefit___
 And I find it joyful___
48. What method of contraception do you use?
 None___ The pill___ Condom___
 Diaphragm___ IUD___ Other (Specify)___
49. How many sexual partners have you had to date?
 None___ 1-5___ 6-10___ 11-15___ 16 & above___
50. Which of the following describes your experience with sexual intercourse?
 Very enjoyable___ Mostly enjoyable___
 Occasionally pleasant___
 Neither pleasant nor unpleasant___
 Mostly unpleasant___
 Very unpleasant___
51. If married, with how many different persons have you had extra-marital sexual intercourse?
 None___ One___
 2-3___ 4-5___
 Over 5___
52. How often do you reach orgasm in sexual intercourse?
 Several times on most occasions___ Almost every time___
 About three-fourths of the time___ About half of the time___
 Almost never or never___ Not applicable___
53. Has your partner stimulated your genitals orally?
 Frequently___ Several times___ Once or twice___
 Never, but I would like it___ Never, and I would not permit it___
54. Women should feel free to initiate sexual activity.
 Strongly agree___ Moderately agree___ Slightly agree___
 Slightly disagree___ Moderately disagree___ Strongly disagree___
 Have you ever initiated sexual activity? Yes___ No___
55. Were you orgasmic early in your sexual activity? Yes___ No___
 Did you learn to orgasm later? Yes___ No___

56. At what age did you experience your first nocturnal sexual dream? _____
 Were your genitals well lubricated? Yes ___ No ___
 Did this frighten you? Yes ___ No ___
 Did this please you? Yes ___ No ___
57. I would like to engage in sexual intercourse but:
 I would feel guilty ___ No one asks me ___
 Waiting for marriage ___ I'm afraid to take the step ___
 I'm afraid of disease ___
58. Are you now having or have you ever had sexual intercourse with a partner? Yes ___ No ___
 Do you reach an orgasm during sexual intercourse?
 Always ___ Frequently ___ Occasionally ___
 Seldom ___ Never ___
 Do you reach orgasm from the penis being in the vagina?
 Yes ___ No ___
 Or do you need your clitoris massaged manually or orally?
 Yes ___ No ___
59. In the past six months, how often, on the average did you engage in sexual intercourse?
 Not at all ___ A few times ___ Once or twice a month ___
 Once or twice a week ___ 3-4 times a week ___ 5 or more times a week ___
 Daily or more often ___
60. How would you rate your sex life?
 Very unsatisfactory ___ Unsatisfactory ___ Somewhat unsatisfactory ___
 Somewhat satisfactory ___ Satisfactory ___
 Very satisfactory ___
61. Have any of the following prevented you from freely expressing your sexuality? (May check more than one)
 Fear of pregnancy ___ Fear of disease ___ Social disapproval ___
 Guilt feelings ___ Religious or other moral training ___ None of the above ___ Other (Specify) _____
62. When do you recall first having any pelvic (genital) feelings that were pleasurable? Approximate age ___
 Explain the specific feeling or reaction you had:
 Guilty ___ Frightened ___ Am I the only one? ___ Other (Specify) _____
 Were you with a partner? Yes ___ No ___ Same sex ___
 Opposite sex ___
 Were you awakening from a nap or sleep ___ Playing with toys ___
 Other _____
63. At what age did you first experiment with masturbation or with any kind of solitary activity which produced a genital feeling of pleasure? 5 or under ___ 6-10 ___ 11-15 ___ 16 & over ___
64. Over the past six months, how often have you masturbated?
 Several times a day ___ Daily ___ 3-4 times per week ___
 Twice a week ___ 3-4 times a month ___ Once or twice a month ___
 Once or twice ___ Not at all ___

65. In your first sexual experimentations, were you related to the individual? Yes ___ No ___
 Brother ___ Sister ___ Cousin ___ Other (Specify) _____
66. What parts of your body do you especially like? 1. _____
 2. _____ 3. _____
 What parts of your body do you especially dislike? 1. _____
 2. _____ 3. _____
67. In your early childhood, were you taken sexual advantage of by a relative? Yes ___ No ___
 Brother ___ Sister ___ Mother ___
 Father ___ Uncle ___ Aunt ___
 Family friend, Male ___ Female ___ Other (Specify) _____
 Was this sexual experience: Touching ___
 Finger penetration ___
 Penal penetration ___
 Oral sex ___
 Other (Explain) _____
68. Do you believe basically that normal man and women's sexual desires and satisfactions are the same with variations in intensity and degrees? Yes ___ No ___
 Why do you believe this?
69. Do you think or feel you have any sexual hang-ups? Yes ___ No ___
 If yes, please describe:
 If no, how did you escape them?
70. Have you ever awakened aware of vaginal lubrication (a secretion) or pleasurable feeling but unaware of any sexual dream?
 Yes ___ No ___ If yes, what was your reaction?
71. Do you ever fake orgasms? Yes ___ No ___ If yes, why? (please explain)
72. Generally, how do you feel about your sexual self?
 Am satisfied with myself ___ Would like to improve my body ___
 Would like to improve my attitude ___
 Other (please explain)
73. Do you long for your partner to do something sexually which they do not do? Yes ___ No ___
 Please explain what it is you would like done: And why haven't you asked for it?

74. Have you ever used a mirror to look carefully at your vagina and genitals? Yes ___ No ___ If no, why not? (Please explain)
75. If a man has an orgasm when there is up-and-down friction on his penis, a woman has an orgasm when.... (Please describe)
76. Do you believe that basically a woman's desire for sexual satisfaction is as great as a man's? Yes ___ No ___
Why do you believe this? (Please explain)

APPENDIX B

Verbal comments given prior to
Questionnaire Administration

Hello,

Thank you for inviting me here.

I'm Wanda Beal. I've been a Graduate student at Emporia State for two years now. I've taught Introduction to Psychology and Developmental Psychology while here.

I have a Master's degree in Art Therapy and am now working on a Master's in Clinical Psychology. I expect to get my doctorate in human sexuality...which is what this survey is all about.

It is on sexuality and it asks you some very personal questions; therefore, I want to chat with you a bit first.

By the way, I know what I'm doing without looking at my notes, but in research it's mandatory that I give each group exactly the same directions, so I almost have to read this.

Only in your and my recent lifetime have surveys asked questions and really learned about females from females. Male genitalia are readily visible and often exhibited to peers with proud rivalry. Not so for females. We don't develop the same sense of ownership a male does. For instance, neither parents nor society bother to teach us we have a vulva (and no, that isn't a Swedish car).

We also have a clitoris, and labia involved in sexual excitement. We're simply taught we have a vagina and we must keep our legs crossed toward our bodies of which we have a right to be proud.

There's nothing in the literature about severe cramps, dysmenorrhea, for instance. There's been nothing about our fantasies until just recently.

Okay...I'm researching female nocturnal orgasm. In males, it's called 'wet dreams'.

Obviously we females don't have emissions or ejaculations but we do have sexual dreams and we do have nocturnal orgasms. It's something the body does autonomically. Yet women have not known they're naturally orgasmic. Because of negative training, we can actually will ourselves not to be orgasmic. But Kinsey recorded orgasm in four month old female babies and up to age 86.

Even Dr. Parker, our campus doctor has seen nothing in the literature about female nocturnal orgasm. Sometimes females have been their own worst enemy. You now have an opportunity to be an anonymous but accurate data for your benefit and the benefit of female sexuality.

However, you may not be comfortable taking the survey and of course you have the right not to.

About the questionnaire, there are no right or wrong answers. I need you to answer every question in some way even realizing some questions won't absolutely fit you, choose one that comes the closest.

The survey is set up for computer scoring and a computer can only score what it is programmed to score. If you don't answer or if you write in another answer except where it says other, then I simply can't score the questionnaire.

There are nine questions where I ask for your personal response because I felt very strongly against leading you with preconceived answers. This consistent preclusion of telling rather than asking has resulted in serious distortions in understanding female sexuality. I will score these nine questions myself.

In regard to words...nocturnal means night, and I want to define orgasm for you. (See Questionnaire)

One of the variables I'm researching is female attitudes toward sexuality. There is space on the front of the questionnaire for you to comment on how you felt about answering the questions.

Are there any questions? I will be right here in case you have any as you go along.