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THE EXPRESSED CONCERNS OF MALE ADOLESCENTS WHEN PROVIDED THE INFORMATION THAT THEIR PHYSICAL EXAMINATION MAY BE CONDUCTED BY A FEMALE HEALTH CARE PROVIDER

By

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ABSTRACT

THE EXPRESSED CONCERNS OF MALE ADOLESCENTS
WHEN PROVIDED THE INFORMATION THAT THEIR
PHYSICAL EXAMINATION MAY BE CONDUCTED BY
A FEMALE HEALTH CARE PROVIDER

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In the present study the concerns of male adolescents are identified when provided the information that their complete physical examination might be conducted by a female health care provider instead of a male provider. Additionally the relationships between the Concerns of the participants and their Ages and Tanner Stages of development are determined. Finally the relationship between Tanner Stage and Concerns was identified while holding Age constant.

To determine the relationships between the independent variables Age and Tanner Stage and the dependent variables Concerns (Total), Body Image, Identity, Independence and Relatedness Concerns, Pearson Product-Moment and Partial Correlations were used. The findings show that as Age increased, Concerns (Total) decreased.

The findings further showed that there was no significant relationship between Concerns (Total) and Tanner Stage. Additional data analysis revealed that as Age was held constant there was no significant relationship between Tanner Stage and Concerns.

To My Family, Len, Geoff,

and Steve

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CHAPTER I

THE PROBLEM

Introduction

Currently in the United States there are an increasing number of women who are performing in health care provider roles. These professional women are physicians, nurse practitioners, nurse clinicians, or physician's assistants. With the increase in numbers of female professional health care providers, the likelihood of being examined for health or illness care by such women is therefore greater.

In practice many professional women notice and discuss their apparent effects on their patients, particularly the males. They attribute the effect of male patient embarrassment, to being a female health care provider instead of a male (Chard, 1976). Many professional women examine all ages of female patients, but the examination of male patients is limited to children. The male provider, however, examines all the male patients from adolescence to old age plus female patients of all ages.

In my own experience when examining male adolescents I have seen numerous instances of the patient beginning to tremble during the examination. The trembling continues throughout the examination and usually stops at the conclusion of the exam. Invariably the male patient says, "It's cold in here." Since the room temperature is

controlled and sometimes overheated to protect against cold, I began to suspect that possibly the patients, instead of being cold, are in fact embarrassed to be examined by a woman. Such embarrassment might be difficult to express for a male adolescent. Many adolescent males exhibit trembling, while some walk out of the office when they discover their examination is to be conducted by a female. Therefore there is a need to study the combined issues of the male adolescent and his concerns when he is provided the information that he may be examined by a female health care provider.

Purpose

A review of the literature revealed that no research has been done concerning male patients examined by female health care providers. Some researchers would therefore suggest that an experimental study be designed to measure the effects of females on male patients before and after a health care encounter. It would appear to be more appropriate to start with a descriptive study identifying the concerns of male patients when examined by female health care providers. Since adolescence has been the age at which many health care providers have noted embarrassment in male patients (Chard, 1976) this study is delimited to male adolescents.

The purpose of this research is to identify and describe the concerns of male adolescents when they are provided the information that their physical examination may be conducted by a female health care provider. When concerns are identified, further nursing research can be conducted measuring the effects of examination on male adolescents and determining how best to manage their concerns.

Statement of the Problem

In this study the following questions are addressed:

1. What are the concerns of male adolescents if provided with information that a female health care provider might conduct their physical examination?

2. Is there a relationship between their expressed concerns and age?

3. Is there a relationship between their expressed concerns and Tanner Stage of development?

4. What is the relationship between Tanner Stage, Age, and expressed concerns?

The answers to the above questions provide a beginning to studies related to male adolescents as patients and females as health care providers. From the questions hypotheses are developed depicting the concepts in the present study.

Conceptual Hypotheses

1. Concerns of male adolescents who might have a complete physical exam by a female health care provider can be identified.

2. The concerns expressed by the male adolescents will be related to age.

3. The concerns expressed by the male adolescents will be related to Tanner Stage.

4. Controlling for age, the concerns expressed by the male adolescents will be related to Tanner Stage.

Operational Definition of Concepts

1. Adolescence is defined as a stage in the process of human maturation. This stage occurs between the ages of 10 and 20 in the life cycle of Man (Brown and Murphy, 1975). It is an "in-between" age meaning that the person in this stage of development is neither a

child nor is he yet an adult (Oremland and Oremland, 1974). For the purpose of this study adolescence is defined by age of the male patient and includes ages 13, 14, 15, 16, 17 as designated on the instrument in the demographic section under Age.

2. Tanner Stage for males is the stage of physical development of the penis, scrotum, pubic hair, axillary hair, facial hair, voice and height. The Stages are designated as I, II, III, IV, V with Stage I being prepubescence increasing to Stage V which is adult level of physical development (Tanner, 1973). For the purposes of this study Tanner Stage is determined by the male participant checking all the characteristics of his current development (see Appendix D). Each characteristic listed pertains to a Tanner Stage(s) (see Figure 1). The Stages checked are then scored by the researcher to obtain the current Tanner Stage of the male participant.

3. Concerns are defined as expressed feelings of anxiety or worry when given the information that the physical exam may be conducted by female health care providers. The feelings are expressed on a written instrument by the male adolescent immediately after he is given the information that his complete physical examination might be conducted by a female. Expressed concerns or feelings of anxiety are measured using a Likert scale prior to the physical examination. For the purposes of this study the measured areas of concerns are categorized according to Body Image, Identity, Independence, Relatedness, and Total Concerns. An additionally listed category "Other" is not measured quantitatively, but instead is an open ended statement

Tanner Stage	Male Genital Development	Male and Female Pubic Hair Development	Female Breast Development	Other Changes
I	Prepuberty	Prepuberty;hair over pubic area similar to that on the abdomen.	Prepuberty; increased pigmentation of the papilla only.	
II	Initial enlargement of the scrotum and testes; reddening and texture changes of the scrotum.	Sparse growth of long, straight, downy hair at the base of the penis or along the labia.	Enlargement of areolar diameter; small area of elevation around the papillae.	Usual time of peak height velocity for girls.
III	Initial enlargement of the penis; further growth of testes and scrotum.	Hair becomes darker, more coarse and curly; spreads sparsely over the entire pubic area.	Further elevation and enlargement of breasts and areolas, with no separation of the contours.	Usual point of onset of menstruation. Facial hair begins to grow and voice deepens for boys.
IV	Further enlargement of the penis, testes and scrotum; growth in breadth and development of the glans.	Further spread of hair distribution not extending to the thighs.	Areolas and papillae project from the breast to form a secondary mound.	Usual time of peak height velocity for boys. Axillary hair begins to grow.
V	Adult in size and contour.	Adult in amount and type.	Adult, with projection of the papillae only; recession of the areolas into the general breast contour.	

Source: James M. Tanner, Growth at Adolescence, 2nd ed., Oxford: Blackwell Scientific Publications, 1962, pp. 32-33).

Figure 1.--Developmental Stages of Secondary Sex Characteristics.

allowing the participant the freedom to write any other concern he may have (see Appendix D, Part A).

a. Body Image is the "image of our body which we form in our mind--the way in which our body appears to ourselves" (Schilder, 1935, p. 11). The body image of the adolescent is his perception of his physical body. It is how he views his body at any point in time. For the purposes of this study, Body Image is one of the categories of concerns in the instrument and pertains to the adolescent's perception of his physical body. His perception of his body may partially cause concern or lack of concern relative to the examiner being a female. The items included in the Body Image category contain the words "scrotum," "erection," or "body" (see Appendix D, item numbers 1, 6, 7, 14 and 20).

b. Identity is "the psychological awareness of self-sameness over time with the reciprocal awareness of others' perceptions of self-sameness" (Erikson, 1968, p. 50). "Identity refers to the adolescent's awareness of who he is as well as his perception of the assessment of others regarding who he is. As such, identity is partly self-defined and partly socially conferred" (Sider and Kreider, 1977, p. 844). Identity is defined as one's philosophy of self, or the self-image of who the person is in relation to his behavior, values, work, life style and environment. It is how he views himself as a person, how he defines himself, his values, habits, personality

as opposed to those of other people. For the purpose of this study, Identity is one of the categories of concerns in the instrument and pertains to the philosophy of self as defined by the adolescent. The philosophy of self may partially determine the level of concern or lack of concern relative to the examiner being a woman. The items included in the Identity category contain the words "child," "feelings," "manners," "habits," or "we." See Appendix D, item numbers 2, 9, 13, 15 and 19.

c. Independence is the freedom of the adolescent from a feeling of control by others (Sider and Kreider, 1977). It is a sense of autonomy and refers to the separation of physical and mental control of parents, other adults, and the environment with a move toward bonding with peers and self control. For the purpose of this study, Independence is one of the categories of concerns in the instrument and pertains to the adolescent need or desire for control of both himself and his environment. The need for control may precipitate concern or lack of concern if the examiner is a female. The items included in the Independence category contain the words "let me," "parents," "my word," "my choice," or "control" within their structure. See Appendix D, item numbers 3, 5, 8, 10 and 16.

d. Relatedness refers to developing relationships and interactions with peers and members of the opposite sex (Sider and Kreider, 1977). For the purpose of this study, Relatedness

is one of the categories of concerns in the instrument. The items considered as the Relatedness category contain the words "sexual," "make a pass," or "woman" within their structure, and all imply a relationship or interaction with fear or anxiety concerning this relationship between the adolescent and the female examiner. See Appendix D, item numbers 4, 11, 12, 17 and 18.

e. Other is an area of concern in the instrument in which the adolescent may write an answer to the open-ended statement: "Someting that hasn't been mentioned so far that really concerns me if a woman examines me is _____." This item is placed as the final item in Part A of the instrument. (See Appendix D.)

The sum of the scores of concerns in the categories of Body Image, Identity, Independence and Relatedness on the instrument is computed for each male adolescent participant. The sum is referred to as "Total Concerns."

4. Complete physical examination is defined as assessment of all body systems of the male adolescent using the methods of inspection, palpation, percussion, and auscultation where appropriate. Such systems assessed are the skeletel, muscular, central nervous, peripheral nervous, sensory, cardiovascular, lymph, respiratory, digestive, excretory, reproductive, endocrine and integumentary (Bates, 1974). For the purposes of the study the complete physical examination is conducted for health maintenance or screening

purposes, i.e., school sports physical examinations, and is not related to illness.

5. Female health care provider is defined as women who are:
    a. Registered nurses who are also students currently enrolled in programs preparing nurses to function in expanded roles such as Nurse Practitioners and Nurse Clinicians, or
    b. Certified, or uncertified Nurse Practitioners such as Pediatric Nurse Practitioners, Family Nurse Practitioners or
    c. Nurse Clinicians with a master's degree in nursing such as Family Nurse Clinicians and Clinical Specialists, or
    d. Practicing physicians, or
    e. Medical students, or
    f. Physician's Assistants.

The term "female health care provider" is not defined for the participating adolescents other than that the examiner may be a female. The type of female provider is not the critical issue in the study. The issue is that the provider may be a female.

Delimitation of the Problem Area

The problem area is delimited in nature to the following extent: the population researched is male adolescents between the ages 13-17. The adolescents have appointments at physician offices specifically for receiving complete physical examinations for sports entry, camp, school entry. The male adolescents have not been

frequent health care users as evidenced by diagnoses of illnesses such as diabetes, hypertension, kidney disease, cancer, heart disease, respiratory disease.

Limitations of the Study

The limitations of the study are:

1. Changes in body structure, view point, and perception occur rapidly in the adolescent age group. Therefore the findings in this study may not reflect the concerns of the same participating adolescents at another point in time.

2. The study does not analyze specifically male adolescent perceptions of or previous experience with women, socio-economic background, racial status or cultural status. Such concepts as these could greatly influence their concerns or lack of concerns if women examine them.

3. Another limitation of the study is the instrument itself. Some of the topics in the items responded to by the adolescents may be of concern to the participant if the examiner is a woman or a man, however, each item is worded to call attention to the female examiner.

4. The subjects who agree to participate in the study may be different from those who refuse. Therefore, it is possible that the research findings are not representative of the adolescent age group.

5. The study depends not only on the adolescent knowing his own physical sexual developmental status, but also on his willingness to honestly choose the items in the instrument which reflect such

development. For personal reasons the participant may not be able to select such items, thus distorting the findings. Pilot testing for professionally confirmed accuracy of the sexual development was unable to be conducted due to logistic problems.

Assumptions

In this study the researcher is making the following assumptions:

1. It is assumed that all male adolescents have some concerns when they are provided the information that they may possibly receive a complete physical exam by a female examiner.
2. It is assumed that the concerns expressed on the instrument by the male adolescents are real and honest concerns to the patient.
3. It is assumed that the male adolescents can express their concerns on the given instrument.
4. It is assumed the male adolescents can read and understand the instrument.
5. It is assumed that the male adolescents know their own physical sexual development and can accurately choose the stages of development pertaining to them on the instrument.
6. It is assumed that the age group selected for the study is representative of adolescents in Tanner Stages I-V.
7. It is assumed that the concerns will be the same regardless of the type of female health care provider.

Overview of the Chapters

The study is organized into six chapters. Chapter I provides an introduction, statement of the problem, hypotheses, limitations, operational definitions and the assumptions underlying this study.

In Chapter II the conceptual framework is presented drawing on related adolescent and nursing theory.

In Chapter III the pertinent literature and research in the problem are reviewed.

In Chapter IV methodology and procedures of the research are described.

In Chapter V data presentation and analysis of the results of the research are given and discussed.

In Chapter VI the research findings are summarized and conclusions and recommendations are presented.

CHAPTER II

CONCEPTUAL FRAMEWORK

Introduction

The framework presented in this chapter evolves from concepts in two areas: Adolescence and Nursing. The topics presented are: male-female relationships in health care, adolescent developmental characteristics, and nursing theory as depicted by King (1971). According to King the nursing perceptions are partially formed by experience and a clinical knowledge base. The results of the present study add to the knowledge base of the nurse. The judgments made and actions taken by the nurse reflect his/her understanding and acknowledgment of the expressed concerns of male adolescents when their complete physical examination may be conducted by a female health care provider.

Male-Female Relationships in Health Care

Currently there are an increasing number of female health care providers in the United States due to changes in the needs of, and the attitudes toward, professional women. Such changes in attitudes primarily address the issue of acceptance of women, as well as men, in health care provider roles. As a result of changes in attitudes toward females as professional health care providers, the public has also increased their awareness of potential resources

that women have to offer in health care. Women are now seeking careers in medicine and in the expanded professional nurse roles such as Nurse Practitioners and Nurse Clinicians.

Presently women in the expanded nurse roles function in independent/interdependent and collaborative relationships with physicians and/or other health team members. They establish and maintain their own case-load of patients and provide care through history taking, physical examination, psychosocial counseling, coordination of health care, patient education, health maintenance, screening, and child care. The nurse in the expanded role provides continuous patient care with follow-up as needed. She is primarily concerned with the patient/family as a total person/group, and does not single out parts of the patient, i.e. disease of an organ, as her focus of care. The nurse provides care to the patient and his family in the context of his/their social, biological, psychological, spiritual and cultural aspects of health and illness.

Prior to the movement of nurses into expanded roles, the health care providers who examined patients were primarily male physicians. The role of Nurse Practitioners and Nurse Clinicians did not exist. Due to the lack of female providers (female physicians, Nurse Practitioners, and Nurse Clinicians), many women patients did not have any choice except to be examined by male physicians (Roland, 1977). Therefore in a physical examination, many women experienced sexual embarrassment especially during the breast and pelvic exam. Great care was taken to reduce this embarrassment. Such care included draping, gaining trust and rapport, and relaxation techniques.

However, measures generally are not taken to reduce male embarrassment when they are the patients examined by female providers. An exception is Chard (1976) who provides an approach to reduce embarrassment in male adolescents during an examination by Nurse Practitioners. Chard assumes the male adolescent is embarrassed and that the embarrassment is sexual in nature. Roland presents the male point of view: "Many men reject the thought of having their genitalia examined by a woman . . ." (Roland, 1977, p. 55). Some men flatly refuse a physical examination if they find that the examination is to be completed by a woman (Chard, 1976). Some male adolescents assume a mask of indifference allowing the examination to proceed, but carefully concealing their feelings of embarrassment (Oremland and Oremland, 1974).

When a female patient is examined by a male health care provider, the female is carefully draped exposing only the area to be examined. Then the area is quickly covered as the next area is examined. Medical and nursing textbooks, when discussing the procedures for examination of the female, point out to the reader the necessity of first gaining rapport and trust before conducting the examination. The texts then discuss the modesty of the female patient, draping of the female and keeping eye contact throughout the examination (Bates, 1974). Some texts have entire chapters on the pelvic examination for women, complete with sections on how to reduce the anxiety and embarrassment of the woman (Settlage, 1975). In the above textbook Settlage does not present any section on genital examination of the male patient, his anxieties, fears or

embarrassment. Statements concerning female patients are usually made with emphasis placed on the male examiner having "confidence, gentleness, and reasonable alacrity" (Vaughn and McKay, 1975, p. 1371).

When the patient is a male examined by a female health care provider, nothing is mentioned in the textbooks concerning his modesty or emotional preparation for the examination. There is no mention of draping. The reader is immediately referred to inspection and palpation for key abnormality assessment. The extent of discussion is confined to, "It would seem easier to skip this part of the examination [genital] for some boys because they are so upset by it" (Alexander and Brown, 1974, p. 166). In practice many times the male patient is not given a draping sheet and is allowed to wear his undershorts only, while possible embarrassment or fear due to exposure of his arms, legs and trunk seems to be of no consideration to the examiner. The dilemma is that many examiners assume, by avoidance of the subject, that male patients have no concerns or that their concerns are not that paramount when given a physical examination by a female health care provider.

In summary, a change has occurred in the attitudes of professionals and the public concerning women in professional health care roles. As a result, an increasing number of female professional nurses are seeking careers in expanded roles such as the health care provider role.

Traditionally the relationship between provider and patient has involved the provider as a male physician. Physicians are

generally educated to examine the female patient with gentleness and alacrity in order to reduce female patient embarrassment. When the patient is a male examined by either a male or female provider, there is very little mentioned in health care textbooks concerning the topic of male patient embarrassment. As a result, there are no existing published methods to manage male embarrassment.

As increasing numbers of females become health care providers who examine male patients, it appears that a study is needed to begin to determine if male patients have concerns and if they do, the nature of their concerns if women examine them. One such study should be delimited to the male patient who is at the age of adolescence, because, as noted by many female health care providers, adolescence is the age at which male patient embarrassment is observed in the male-female encounter.

Adolescent Developmental Characteristics

How can we be so sure that male adolescents have no concerns when examined by female health care providers? If they do have concerns, what are they? An ideal age at which to test these questions is adolescence because the adolescent male is at his peak in sexual awareness and physical functioning; yet he is not an adult male who has learned appropriate male-female social interactions (Woods, 1975).

Adult males usually have learned appropriate behavior related to interactions with females (Group for the Advancement of Psychiatry, 1968). In addition, grown men have already reached their ultimate growth and development and do not have a rapidly changing body

structure. Adult males have become accustomed to their body and its functions. Most men have usually defined themselves in society (Diekelmann, 1977). Identity has been established with self confidence in the majority of cases (Erikson, 1968). Adult males are more likely to have become independent physically and emotionally from their parents, and have found that absolute personal control of their bodies and their environment is not as crucial as it was in their adolescent years (Diekelmann, 1977 and Erikson, 1968).

Rarely has the adolescent male reached these adult levels. The adolescent is not yet physically, sexually, mentally, nor emotionally mature. Therefore he is likely to have more concern about his body, his self as a person, his need for control and his ability to relate to women when told that his physical examination may be conducted by a female health care provider.

The adolescent male is different from the adult male (Bruggen and Pitt-Aikens, 1975). The adolescent, according to adolescent theorists, is absorbed in the here and now developmental tasks of (1) reaching physical maturation, (2) establishing a personal identity, (3) gaining a comfortable independence from his parents and (4) establishing relationships with peers and members of the opposite sex (Sider and Kreider, 1977; Goethals and Klos, 1976; Erikson, 1968; and Blos, 1962).

During the process of physical maturation, there is an increased production of gonadotropic hormones which influence rapid development of the genitals and secondary sex characteristics such as axillary and facial hair. Tanner (1973) has characterized the

development of the genitals and secondary sex characteristics into five stages starting at prepubescence and ending with adult development. See Figure 1. In addition growth hormone from the pituitary gland causes rapid growth in the skeletal structure. Together, the gonadotropic and growth hormones in adolescence cause a rapidly changing body structure (Sider and Kreider, 1977). The perception of the male adolescent or image of his body development may therefore influence the amount and type of concerns he presents if examined by a female health care provider. He may feel concern if his image of his body is one that is overdeveloped or underdeveloped. The concern may take the form of "what would she [the female examiner] think if my body is underdeveloped [or overdeveloped]."

In establishing a personal identity, the adolescent seems to be trying to define "Who am I" as opposed to his family members and peers (Keniston, 1975). Freud (1905) first posited the term "identity," but he did not mean or use the term as it is currently employed. Erikson (1963, 1968) is generally credited for the concept "identity" development during adolescence. He compares identity to the opposite end of the pole--role diffusion or, as he sometimes states, "identity confusion" (Erikson, 1968).

In establishing an identity, the adolescent defines his personal views and roles in society concerning vocational issues (Erikson, 1968), i.e. "When I get out of school I will go to college to learn to be an engineer," or "I'm not smart enough to be an engineer. I'm more interested in being a garage mechanic." The

above comments are a reflection of adolescent views of the self in vocational aspects.

The adolescent also establishes his identity vis-a-vis ideological spheres--what he believes in, his philosophy of life, and what is important to him as a person (Erikson, 1968), i.e. "Friendship is important to me." "The world is a nice place to be in for me." "It seems to me that there are a lot of problems, but I also see a lot of solutions, and I'm going to work om them" (above quotes are from researcher experiences with adolescents). "To me this is what politics is all about: getting people to think critically about themselves and others in such a way that they become willing to change" (Goethals and Klos, 1976, p. 207).

The adolescent further establishes an identity in social and sexual spheres, or his beliefs concerning peers, members of the opposite sex, and himself as a sexual being (Erikson, 1968), i.e. "Girls are an important part of my life and I do expect to marry one someday and have children." "I think it's important to treat other people just like you'd like to be treated. That's my way of making friends." "I think I'm very masculine, but sometimes it worries me that the other guys don't think so, because I stick up for girls sometimes" (above quotes are from researcher experiences with adolescents). "During those six months, I was more confused than I had ever been before. Intellectually I had worked out, partly as a result of my relation with Tom in high school, my feeling toward homosexuality. But emotionally I was incredibly ambivalent. I

knew I wanted to relate as fully as possible to Paul, but I could hardly even relax and simply touch him" (Goethals and Klos, 1976, p. 173).

In establishing their personal identity or personality, the adolescent is influenced by his social community, family beliefs and values (Erikson, 1968). The people in his life and their beliefs and values help him establish his own identity.

As he grows older, the adolescent identity becomes more abstract in nature as opposed to the concreteness of his earlier years (Montemayor and Eisen, 1977). For example, the 13 year old may state: "I am John Doe. I live at 3447 Ocean Drive. I am 13 years old. I have a dog. I have a lot of friends." The 17 year old may state his identity in a more abstract manner: "I sometimes think that I am a miserable person. Yet I know that I'm not. I have many sincere friends and I feel a strong happiness when I'm with them. I feel that I am a very deep person, that I have a lot of insight in myself and in others." Therefore, the differences in levels of identity achievement during adolescence may influence the type and amount of concerns the young man presents if he is examined by a female health care provider.

In gaining independence from his parents, the adolescent begins to separate emotionally from his parents, thus causing a strain in the family communication system (Sider and Kreider, 1977 and Keniston, 1975). He is noted for his lack of communication and rebelliousness with adults. The young person changes from day to day in his ability to agree or disagree with any adult. He is

inconsistent in his behavior and communication patterns. Throughout his need for seeking independence is the need to control himself, his life, and his environment (Oremland and Oremland, 1974). Therefore, the concerns of the male adolescent if examined by a female health care provider, may be influenced by his level of achievement in gaining control of his life and independence from his parents.

The ability to establish and maintain long term relationships with peers and the opposite sex is the ultimate task during adolescence (Sider and Kreider, 1977). In establishing relationships with peers and members of the opposite sex, the adolescent learns to initiate contact with peers and the opposite sex. He must appear to "give" to the relationship as well as be gratified for it. Thus reciprocity is the unwritten rule. Some adolescents consciously do this by saying "Hi" with a smile to everyone they see in the halls at school. Initiating contact with peers as above means, "I am a friendly person." Not every adolescent feels comfortable in relationships with peers and the opposite sex (Sider and Kreider, 1977). The ability to feel comfort in relationships especially with the opposite sex is a developmental process (Erikson, 1963) and is sometimes never achieved (Erikson, 1968). Therefore the level of achievement in the ability to establish comfortable relationships with members of the opposite sex--relatedness--may influence the concerns of the male adolescent if told that he may be examined by a female health care provider.

With greater numbers of females in the health care professions (Nurse Practitioners, Nurse Clinicians) whose roles partially

entail giving complete physical examinations, the probability of male adolescents being examined by females is increasing. The context of physical examinations therefore takes on greater significance if seen from the aspect of role reversal. Now the female is likely to be the health care provider, and the male is not the physician but the patient.

It would seem helpful, therefore, knowing what is happening to the adolescent male during this period, vis-a-vis the adolescent characteristics described above, that the nursing profession (primarily females) determine specifically what concerns the male adolescent when he is examined by the female Nurse Clinician or Nurse Practitioner in a primary care setting. A general awareness of these concerns might then precipitate nursing measures and strategies related to these concerns as well as to the physical care of the patient.

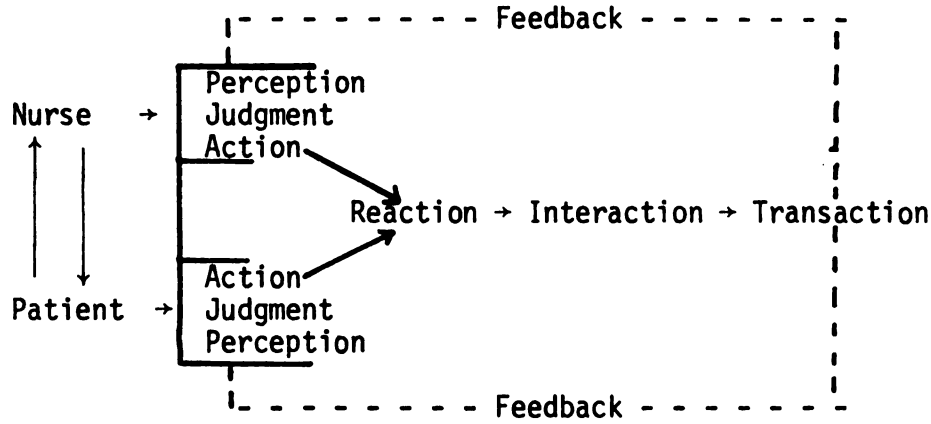
Nursing Theory--Imogene King

The value of King's (1971) Theory as it applies to this study is that the findings from the study become part of nursing's knowledge base affecting nursing perceptions and clinical judgments which, in turn, determine nursing actions. King states that Man reacts to his environment and experiences as a total organism. Part of the role of nursing in interacting with Man utilizes the Nursing Process involving the skills of observation and communication as techniques in assessing patient behavior and physical condition. King further states that in the Nursing Process the two techniques of observation and

communication are then used to plan nursing actions based on the interpretation and evaluation of data gained by the use of the techniques. Many of the physical skills which nurses perform, i.e. taking blood pressures, temperature, etc., can be taught to other health care workers such as nurse aides, but according to King, one of the things that makes professional nursing unique is that nurses take action using the data that they have received from performing these physical skills.

In nurse-patient interactions and transactions the nurse, through the use of the above two techniques, observation and communication, together with a substantial knowledge-base, develops a (1) general perception of the patient and his circumstances which leads to (2) nursing clinical judgments and finally to (3) nursing action. In the theory of nursing, as proposed by King, these three steps are taken by the nurse. The patient also progresses along these same lines. He forms a perception of general circumstances from both within himself and from experiences within his environment. He forms judgments concerning these perceptions and he also takes action. Perhaps his action would be to ask the nurse questions concerning his perception of unfamiliar circumstances. In all cases, according to King, the patient reacts as a total organism. The nurse and the patient then simultaneously perceive a reaction from the other related to the actions each took. They interact with each other and a transaction occurs. See Figure 2.

As stated previously, Nurse Clinicians and Nurse Practitioners focus their care on the total patient. Male adolescent concerns



Source: Imogene M. King, Toward a Theory of Nursing, New York: John Wiley and Sons, 1971.

Figure 2.--Model of King's Theory of Nursing.

in the categories of body image, identity, independence and relatedness if professional females examine them, are part of the total adolescent, and should be considered in their nursing care. For instance, from the viewpoint of the adolescent, his perceptions (of his body development, his self as a person, his need for independence and control of his life, his ability to relate to females) are based on experience and knowledge about himself, life and people. Therefore in any encounter with the female nurse the perceptions the adolescent has acquired form a basis for his judgments and ultimately his actions and reactions. It is necessary, therefore, for the female health care provider to not only be aware of her own perceptions in the encounter with the male adolescent, but also to be aware of the perceptions or concerns of the adolescent if he is examined by females, rather than males. The present study findings

provide an additional knowledge base to female nurses examing male adolescents. The knowledge base influences nursing perceptions. See Figure 3.

One of the ways in which a nurse might utilize the findings of this study would be to observe the secondary sex characteristics of the male adolescent while not yet undressed. She would look for facial hair, lengthening of the mandibles, broadening of the shoulders. If she then related his chronological age to her observations of these secondary sex characteristics, and her knowledge of general adolescent concerns from this study, she might then be able to predict some of his concerns related to examinations by females. Her nursing actions then would center on reducing these areas of concern. See Figure 3. Strategies for managing the concerns involve another research project and thus are not within the scope of this study.

Summary

With greater numbers of females in roles of health care providers, the likelihood also increases that adolescent males will be examined by such professional women. Traditionally the examiner has been a male physician with the patient being a female. Now the trend may reverse these roles of patients and examiners. In the past very little attention has been given the possibility that male adolescents may have concerns about their body development, identity, independence and ability to relate to women when examined by a female health care provider.

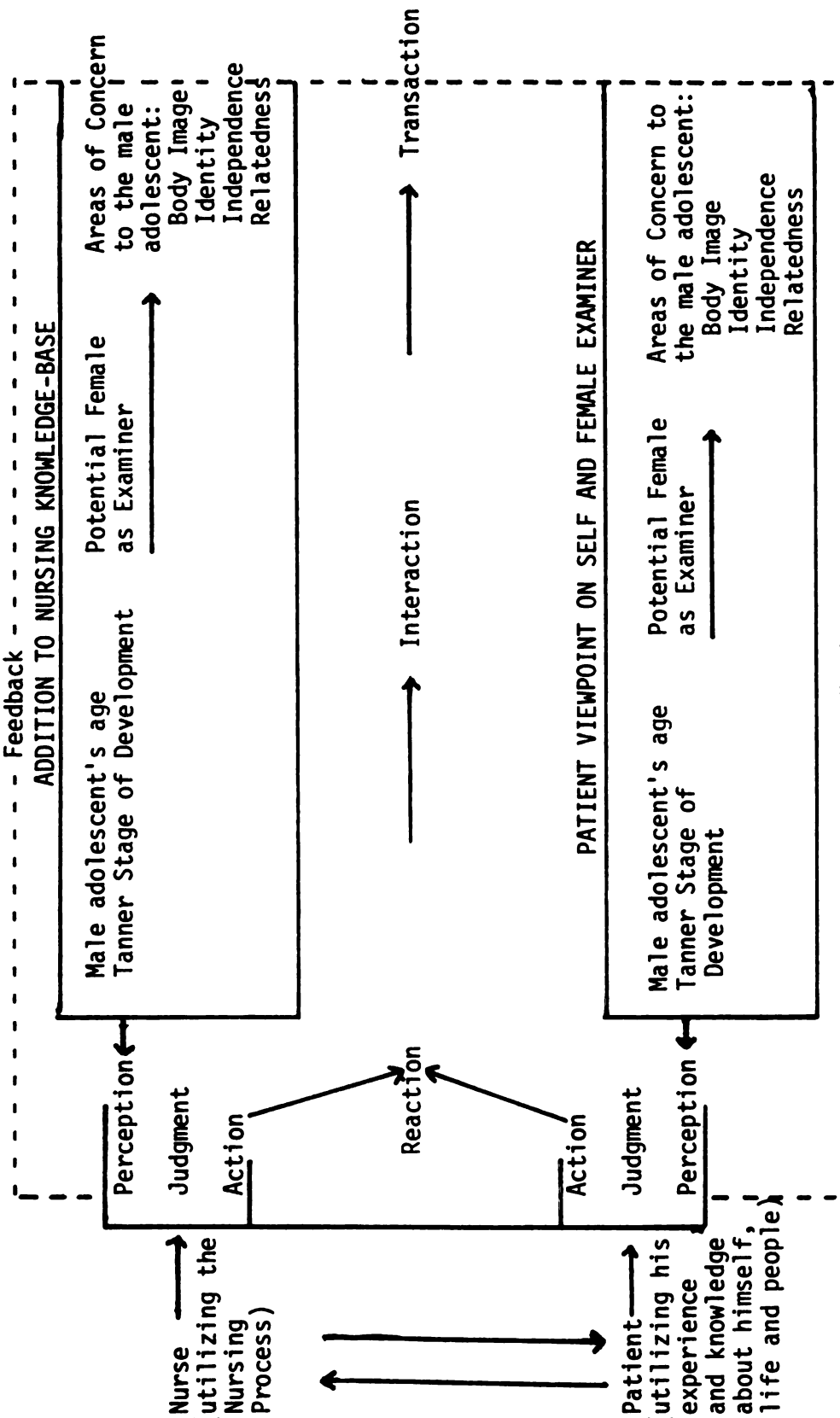


Figure 3.--Operational Model of King's Theory Applied to Male Adolescent Concerns. (Adapted from Imogene M. King, Toward a Theory of Nursing, New York: John Wiley and Sons, 1971.)

The adolescent male is at an appropriate age at which to identify concerns of males if women examine them for health care. The adolescent has a changing body image as a result of physical and sexual growth and the process of maturation. The concerns of young males if women examine them could therefore be related to their own body image at this stage of development.

The adolescent male also has the task of achieving an identity. His identity changes from one of concreteness in early adolescence to that which is more abstract in later adolescence (Piaget, 1969 and Montemayer and Eisen, 1977). Therefore the age of the young person and level of identity achievement may also affect how concerned or how little concerned he is if a female health care provider examines him.

The adolescent male, through the work of achieving an identity, begins to behave in a more independent manner. He becomes more rebellious, communicates only when necessary to adults and generally seeks independence from parents. The nature of the independence-seeking and the need for personal control during adolescence therefore may influence the concerns or lack of concerns of adolescents if a female health care provider examines them.

The adolescent male establishes relationships with peers and members of the opposite sex. The relationships have an unwritten reciprocal agreement: one must give to the relationship in order to receive from it. Some adolescents particularly those who are younger, have not progressed to a level of comfort in establishing relationships. Relatedness is a developmental process, and therefore

male adolescent comfort in relatedness with members of the opposite sex may influence their concerns or lack of concerns if female health care providers examine them.

King's (1971) Theory of Nursing is addressed mainly to show how nursing perceives man and interacts with patients. Nursing perception is influenced by experience and the knowledge based on the findings in this study. Such perceptions are part of the basis for making sound clinical judgments and actions concerning the male adolescent patient when examined by female health care providers. See Figure 3.

In Chapter III, the review of the literature is presented including issues of adolescence and male-female interactions.

CHAPTER III

REVIEW OF THE LITERATURE

Introduction

The review of the literature focuses on issues pertinent to adolescence and male-female interactions. Such areas discussed are adolescence and the processes of physiological development, body image, identity, independence and relatedness. The above issues are generally considered by adolescent theorists (Hall, 1905; Keniston, 1975; Blos, 1962; Erikson, 1968; Goethals, 1975) to be terms applied to critical processes occurring during adolescence. The purpose of the literature review is to describe adolescent characteristics as they relate to concerns of male adolescents examined by female health care providers. The critical processes occurring in individual male adolescents may influence the concern or lack of concern of the adolescent if he is provided the information that his complete physical examination may be conducted by a female health care provider.

Since adolescence is the broad topic discussed in this chapter, a brief comment is initially presented concerning the background of the concept adolescence. Adolescence is presented as one of the eight stages in the life cycle of Man and includes those people ages ten to twenty.

Adolescence

The term "adolescence" came into popular usage in the early 1900's with the advent of the works of G. Stanley Hall (1905). While it is improper to say that Hall discovered the stage of adolescence, he is considered to be the first adolescent theorist (Keniston, 1975). Many people had already been writing about the "problems" of youth such as delinquency and sex, but Hall proposed that a change in youth was occurring because of changes in family structure, family mobility, and industry in our society. With the publication of Hall's book, Adolescence: Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education (1905), behavioralists began to take a closer look at adolescence as a stage of life. The concept of adolescence, as determined by Hall still remains as part of our thinking today (Keniston, 1975).

Currently theorists differ in the terms they have given to sub stages of Adolescence: Early Adolescence, Adolescence Proper and Late Adolescence (Blos, 1962); Early Adolescence, Late Adolescence (Group for the Advancement of Psychiatry, 1968); Early Adolescence, Middle Adolescence and Late Adolescence (Fine, 1973). Essentially, the above adolescent theorists discuss the same physical and psychological phenomena of progressing maturity. Only the titles of the stages differ.

Adolescence now has become a term given to one of the eight stages in the development of Man as delineated by Erikson (1963). The stage occurs between the ages of 10 and 20, when sexual development (puberty) begins and progresses to sexual maturation (Erikson,

1963). Adolescence refers to the "psychological processes of adaptation to the condition of pubescence" (Blos, 1962, p. 2). This stage is noted as an "in-between" age meaning that the adolescent is neither a child nor is he yet an adult (Oremland and Oremland, 1974 and Keniston, 1975). According to Erikson (1963) and The Group for the Advancement of Psychiatry (1968), the stage of adolescence starts when puberty begins and progresses until adult physical, sexual and emotional maturity is achieved. Some theorists say that adolescence also includes the prepubertal years (Brown and Murphy, 1975). Puberty is biological sexual maturation and is determined by the endocrine system (Brown and Murphy, 1975 and Blos, 1962).

Physiological Development

At the onset of puberty there is an increase in gonadotropic hormones initiated by the pituitary gland. The gonadotropic hormones stimulate genital growth and the appearance of the secondary sex characteristics such as pubic hair in boys and girls and breast enlargement in girls. Tanner (1962) has devised a schemata for depicting the developmental stages of genital growth and secondary sex characteristics. He has categorized the orderly progression of characteristics according to stages which occur in adolescent growth.

In males Stage I is associated with pubic hair similar to hair on the abdomen, the genitals similar to those of children. Stage II shows the initial growth of pubic hair as fine and downy with a few straight long hairs; the scrotum and testes begin to enlarge and rugae develop on the skin of the scrotum. The scrotum

becomes reddish in color. In Stage III the pubic hair becomes darker, coarse and curly and spreads over the entire pubic area. The penis begins to grow in breadth and length and the testes and scrotum continue to enlarge. Facial hair begins to grow and the voice begins to deepen. In Stage IV the pubic hair continues to spread but not extending to the medial surface of the thighs. The penis, scrotum and testes continue enlarging with development of the glans. It is usually at this stage that the growth spurt occurs and axillary hair begins to grow. In Stage V the pubic hair is adult in amount and type and extends to the thighs. The penis, scrotum, and testes are adult in size and contour (Tanner, 1962). See Figure 1, page 5.

The age at which the stages occur vary in individuals with Stage I ranging from 10.5 years to 14.5 years and Stage V ranging from 12.5 years to 17.5 years in some cases (Tanner, 1973). Therefore some males have completed their development before the development has even begun in others. In addition an adolescent may exhibit the qualities described in several of the stages simultaneously (Blos, 1962). In the process of sexual maturation rarely does the adolescent clearly exhibit all the characteristics of one stage before progressing to the next (Tanner, 1973). However, the stages of sexual development, now described as "Tanner Stages," remain useful to professionals in clinical practice by allowing the measurement of the physiological maturity of the adolescent.

In a study by Gupta, Attanasio and Raaf (1975), the Tanner Stages were used in relationship with estrogen and androgen

(gonadotropic hormones) levels during physical development of male and female adolescents. The researchers found that in the 43 girls and 44 boys the plasma concentration of estrone, an estrogen, rose steadily in both sexes although more so in girls than boys as they progressed in Tanner Stages. For testosterone, an androgen, the boys showed a spurt after Tanner Stage III, whereas the girls did not show any rise throughout the Tanner Stages. An unexpected finding was that plasma estrogens correlated higher with the clinical assessment of physical sexual maturity by use of the Tanner Stages than did chronological age for girls. Similarly androgens correlated higher with Tanner Staging than chronological age in boys. The Gupta, Attanasio and Raaf (1975) study provides further evidence that, "Chronological age does not provide a valid criterion for physical maturation" (Blos, 1962, p. 6).

Many medical centers currently use the Tanner Scale to measure adolescent physical sexual development. According to Myron M. Faber, M.D.:

> It [Tanner Staging] is a means used to tell the physical sexual developmental level of the adolescents and is more accurate than their chronological age. Tanner Staging is also currently used for placement of students in certain sports team. Schools have found that if they place Tanner Stage I and II adolescents in the Junior Varsity teams, not mixed with Tanner Stages III, IV and V Adolescents, there are fewer injuries in both Junior Varsity and Varsity groups due to the teams playing members of the same or nearly the same physical development.[1]

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[1]Interview with Myron M. Faber, Medical Director, Adolescent Clinic, Clinical Center, East Lansing, Michigan, April 12, 1978.

While Tanner Staging has been effectively used to assess the physical level of sexual development in adolescents, it has not been used in studies related to the affective or psychological domain. The present study attempts to do this, by the hypothesis that the concerns of fear or anxiety (affects) expressed by the male adolescents vis-a-vis examinations by females is related to their Tanner Stage of Physical Sexual development.

Another aspect of physiological development, in addition to gonadotropic hormonal stimulation, is pituitary gland stimulation of growth hormone (Group for the Advancement of Psychiatry, 1968 and Blos, 1962). Growth hormone acts synergistically with the gonadotropic hormone, testosterone, to produce rapid growth spurts in the male skeletal structures such as shoulder development and lengthening of the mandibles and long bones (Tanner, 1973). In addition to general physicians and nurses, other health care providers require knowledge concerning adolescent growth spurts. Frequently plastic surgeons and dentists use Tanner Staging to determine growth. Orthodontists use Tanner Staging to assess for growth spurts in adolescents with malocclusion in relationship to growth of the jaw bones and timing for brace fitting. In a study by Grave and Brown (1976) using aborigines in Australia, the researchers found that peak growth velocity and ossification of the bones occurred in adolescent aborigines at about the same ages as in Caucasian adolescents with the developmental staging (Tanner Stages) and was more informative than their chronological ages. The researchers found this evidence to be particularly useful in clinical applications when a decision

must be made as to when braces need to be applied and tightened. The Grave and Brown (1976) study is useful in that it depicts an area of utilization of the Tanner Stages which has proved effective to the field of dentistry.

In addition to causing growth spurts, growth hormone also causes fluctuations in energy levels resulting in a greater need for sleep (Group for the Advancement of Psychiatry, 1968). The rate of secretion of growth hormone is increased during sleep and causes the adolescent to feel tired one day and tireless the next (Frantz, 1978). His increased need for sleep during this age is due to growth hormone and rapid metabolic changes (Group for the Advancement of Psychiatry, 1968).

In summary puberty is characterized by an increase in gonadotropic and growth hormones. In males the growth spurt, development of pubic hair, enlargement of the penis and scrotum, development of facial and axillary hair, and enlargement of the skeletal structure and larynx all unite to create a rapidly changing body structure. A changing body structure necessitates a changing body image, for as the physical body changes, the image of the body within the self must also change (Sider and Kreider, 1977).

Body Image

Body image is "the picture of our body which we form in our mind--the way in which our body appears to ourselves" (Schilder, 1935, p. 11). Schilder (1935), Erikson (1968), and Blos (1962) agree that body image comes from two sources:

from within the adolescent, and from other people. Additionally the image of the body derived from within the adolescent is from two areas: from direct visual perception and feeling of sensation, and from the self evaluation of and attitudes toward his body (Schilder, 1935; Erikson, 1968; Blos, 1962; and Sider and Kreider, 1977).

With the physiological changes described above that occur during puberty, the body of the adolescent progressively changes from that of a child to that of an adult (Blos, 1962). The adolescent is acutely aware of his changing body at this stage (Blos, 1962). Grooming habits, hair style, clothing, musculature, skin, height, weight and secondary sex characteristics become the focus of his attention (Hansman, 1972). The adolescent is very much aware not only of his own perceptions of his body, but also of other's perceptions, especially peers (Giuffra, 1975; Blos, 1962). The young person wants his body to be accepted by these significant others and is willing to go to great lengths with much anxiety in order to gain peer acceptance (Oremland and Oremland, 1974). Schilder (1935) and Blos (1962) agree that peer recognition, evaluation, and acceptance of the body helps to influence the changing body image of the adolescent. Consequently the adolescent continually looks to his social environment for cues concerning acceptance of his changing body (Sider and Kreider, 1977).

Frequently young people have developed viewpoints concerning ideal body types, and such viewpoints often determine whether or not they will accept variations in the bodies of their peers (Lerner

and Iwawaki, 1975). In research conducted to compare Japanese and American adolescent (14 and 15 year olds) preferences of male body builds, the researchers found that in both cultures male and female adolescents preferred the mesomorph (muscular, athletic) type of body build. They tended to give negative opinions to the endomorph (thin) and ectomorph (fat) type of body. The study is interesting in that even though the heads of the bodies were covered, the mesomorph was designated the best looking, the strongest, the best leader, had the most friends, and was the most honest person (Lerner and Iwawaki, 1975).

During adolescence, as age and experience increase, the perception of the body becomes more accurate (Halmi, Goldberg and Cunningham, 1977). In a study concerning adolescent girls the researchers found that girls age 10-18 tend to have a perceptual distortion of the width and length of their bodies, but that as age increased the distortion decreased, becoming more accurate in actual body length and width. Their study, while utilizing female participants, shows that the perceptual skills of the adolescent concerning his body image develop with increasing cognitive skills and age (Halmi, Goldberg, and Cunningham, 1977). No research was reviewed using males as participants in similar studies. Therefore, distortion of the body image in male adolescents is an area requiring further study.

One of the most perplexing phenomena to adolescents is that their bodies develop at differing rates (Blos, 1962). Therefore the adolescent tends to compare his body to that of his peers, causing

much anxiety when he finds that he is not the same in development as his friends (Blos, 1962). In males variations occur in the development of the genitals, facial hair, larynx, axillary hair and the growth spurt. Anxiety concerning his body image is produced when the adolescent sees that his friends are not developing in the same manner as himself (Blos, 1962). The young person may feel that he is overdeveloped or underdeveloped compared to his friends. The result is that during physical examinations the adolescent reacts "with self conscious reluctance, which is prompted by the fear that the physician may discover inappropriate or abnormal developmental characteristics" (Blos, 1962, p. 8). Therefore, if the examiner is a professional female the male adolescent concern about his body may become even greater than if the examiner is a man.

In summary, a changing body image in male adolescents is the result of a physically changing body structure. The image of the body results from two sources: the self and significant others outside the self. The male adolescent is consciously aware of the changes in size and shape of his penis and scrotum, the development of pubic, facial and axillary hair, the deepening of his voice, and his growth in height. The male adolescent would prefer to have a muscular, athletic type of build and becomes anxious if he perceives his body to be different in development than his peers. He fears being abnormal if the image of his body is one of overdevelopment or underdevelopment. The adolescent body image therefore becomes partially interrelated to his personality--his identity. One of the aspects of adolescent identity thus involves the body image.

Identity

Coupled with his changing body image is the need for the adolescent to see his own identity--"the style of one's individuality" (Erikson, 1968, p. 50). Identity refers to how the adolescent defines himself relative to his body, behavior, values, habits, occupational goals, life style, and peers. Erikson (1968) states that identity thus has many facets or subcategories such as gender identity, personal identity, social identity, occupational identity.

A different point of view on identity is posed by Burton and Whiting (1961, p. 87) who state that identity is "a person's position or positions in the status system of this society . . ." Burton and Whiting further define types of identity in three categories: attributed--those statuses assigned to the person by society; subjective--those statuses assigned to the person by himself; and optative--those statuses the person wishes he could have, but which are barred from him.

Keniston (1975, p. 9) talks about the emergence of the "real self" referring to identity during adolescence, while Douvan (1975, p. 23) states that male adolescent identity proceeds in an orderly progression by ". . . defining the self, finding a fit between the internal world of taste, talent, and unique life history and the roles provided and legitimated by the culture." While identity is seen by different theorists in similar ways, Erikson (1956) has become most associated with the term (Goethals and Klos, 1976).

In seeking a personal identity the adolescent strives for individuality in relationship to his family and peers (Keniston,

1975 and Blos, 1962). He also painfully recognizes his need for connectedness or interdependence with these same people (Giuffra, 1975). He seems to say, "This is me," or "This is not me" (Blos, 1962, p. 12), "But I can't quite be me without them also" (Guiffra, 1975).

One of the difficulties adolescents have in establishing their own identity is that there are so many choices available to them. The American culture provides many acceptable variations in work, values, life styles, and relationships (Keniston, 1975 and Sider and Kreider, 1977). According to Erikson (1968), a sense of identity becomes more necessary but creates more problems wherever there are a wide range of possible identities. Therefore the adolescent developmental task of establishing an identity is accomplished by bouncing ideas, goals and behaviors back and forth with peers and parents to see "what works" (Guiffra, 1975). The young person may feel secure in being able to define himself in relation to values, life style, work, relationships, etc. However, he may feel insecure in defining himself in these areas if he is not able to make progress in the definition of himself. Thus lack of personal identity results in role diffusion (Erikson, 1963).

Identity as opposed to role diffusion was once believed to be "achieved" before one reaches adulthood. Coleman, Herzberg, and Morris (1977) found that for boys, anxiety concerning concept of the self (identity) in the future increased with age from 12 to 16. In other words, "Who will I be in the future?" caused more anxiety than "Who am I now?" All ages tested (12, 14, 16) were able to give

positive statements concerning their present identity, acceptance, and achievement. In contrast to this study, Josselson, Greenberger and McConochie (1976) found that whether or not identity was achieved, in the present and future was determined by the level of psychosocial maturity of the male adolescents. These researchers found that the higher the level of psychosocial maturity the more the male adolescent focused on a positive present and future identity.

Identity achievement is a large part of adolescence. The point under study is that the concerns expressed by the male adolescent when told he may have a physical examination by a female, might be related to identity achievement. A woman may pose as more of a threat to the identity than a man.

In summary, identity is seen as a definition of the self, of "the style of one's individuality" (Erikson, 1968, p. 50). Identity is the emergence of the "real self," a critical issue in adolescence (Blos, 1962). Identity is defined in terms of the body, behavior, values, habits, occupational goals, life style and peers. It is the answer to the question, "Who am I?" (Coleman, Herzberg, and Morris, 1976). The process of achieving an identity creates individuality in the person. Individuality separates the adolescent into an interdependent yet independent human being (Giuffra, 1975).

Independence

Independence is defined as the rejection of old emotional ties with parents with a shift to investments of emotions to peers and others outside the family (Goethals and Klos, 1976). Identity

and independence are related to each other in that identity is extremely difficult to achieve without a certain degree of psychological independence (Goethals and Klos, 1976). Erikson (1968, p. 136) calls the independence issue in adolescence "distantiation" or parental rejection. Autonomy is sometimes equated with independence, yet independent behavior may not be the same as autonomous action in a psychological sense (Goethals and Klos, 1976). A person may appear to act independently yet may not be able to to psychologically autonomous (Goethals and Klos, 1976).

Using a psychoanalytical approach to independence, Goethals and Klos (1976, p. 26) feel that the rejection of old emotional ties with parents "can be facilitated or hindered by parental attitudes and behavior." Independence is not something suddenly acquired within the adolescent. It evolves from a mutual interaction over time between the adolescent and his parents (Blos, 1962). As proposed by Goethals and Klos three factors facilitate adolescent independence:

> (1) that the parent recognizes the adolescent as a separate person in his own right, which implies that independent or competent behavior by the adolescent is gratifying rather than threatening to the parent; (2) that the parent can show genuine care or concern but not overinvolvement, and can give or offer but not impose; and (3) that the parent is able to terminate old ways of relating when they no longer are adequate or appropriate, . . . (Goethals and Klos, 1976, p. 26)

The adolescent strives for independence primarily from his parents but also from the society of adults, in general (Keniston, 1975). Therefore, communication patterns with parents and other

adults become strained. "He lives in a world of his own" (Sider and Kreider, 1977, p. 842). The adolescent speaks to adults only when necessary and usually only in short sentences composed of "yes" and "no" responses (Sider and Kreider, 1977). Other information so necessary to open communication is not forthcoming from the young person (Sider and Kreider, 1977). Adolescents appear agreeable one day and rebellious the next day. Both physical and emotional withdrawal from parents and other adults occurs as adolescents move toward the outside world of independence. Thus the adolescent is in a constant state of change both in mind and body.

Cognitive abilities increase during this period of development (Piaget, 1969) as seen by the need to question and disagree with adults. The young person can no longer blankly accept all the ideas and values of his parents and society. In working through these disagreements, he often is inconsistent and uncertain, causing stress both to his family and to himself (Giuffra, 1975).

While striving for independence, the adolescent feels a paramount need to be in <u>control</u> of himself, life and also the environment (Giuffra, 1975). Feelings of helplessness and vulnerability (as occur in hospitalizations and physical examinations) can cause extreme anxiety and depression (Oremland and Oremland, 1974). The adolescent fears loss of body control, functioning, and disfigurement (Oremland and Oremland, 1974). The difficulty arises from the fact that in order to alleviate these anxieties and fears, the adolescent can no longer accept parental cuddling and reassurance, nor has he learned to handle these anxieties and fears as an adult.

Consequently, the adolescent learns covertness. Frequently the young person presents himself to peers and adults in a "behavioral mask" (Oremland and Oremland, 1974, p. 44), because of a fear of being "seen." The adolescent feels that other people will know his body, his deepest secrets, his fantasies just by looking at him. Therefore, things that seem trivial to adults take on major significance to the adolescent, i.e., fear of having an erection during a physical examination (Chard, 1976). Adolescents typically assume a behavioral mask, though subconscious to them because it seems to allow an avoidance of being "seen." Thus one of the main aspects of gaining psychological independence from parents and other adults is the paramount need for control of both the self, life and the environment during adolescence.

In summary, independence is the rejection of old emotional ties to parents with a shift of emotional investments to peers and others outside the family (Goethals and Klos, 1976). Adolescent independence can be fostered or facilitated by parents and is an issue which can cause family strain. One of the basic needs of the adolescent in gaining independence is the paramount necessity for control of both himself and his environment. The need for control can cause problems in relationships with others, especially in health care encounters where control of situations is generally assumed by the examiner. A woman as the health care provider may pose more of a threat to the adolescent need for control than a man. Threat to personal control may then make a difficult relationship between the male patient and female examiner.

Relatedness

Relatedness is defined as the ability to form long term relationships with peers and members of the opposite sex (Sider and Kreider, 1977). The ability to establish relationships starts long before adolescence, but a need for mutuality or "search for a soulmate" (Keniston, 1975, p. 17) becomes, for the first time in early adolescence, a primary goal. With the increasing development of cognitive skills (Piaget, 1969) the adolescent now can look at the possibilities of friendship and intimacy (Keniston, 1975).

The adolescent is primarily concerned in establishing relationships with members of the opposite sex (Group for the Advancement of Psychiatry, 1968). This is the ultimate achievement (Blos, 1962; and Sider and Kreider, 1977). The young person must initiate contact with others and must appear to contribute to the relationship in order to succeed in it. "Reciprocity is the rule . . . One cannot receive without giving" (Sider and Kreider, 1977, p. 843).

In establishing relationships with members of the opposite sex, the adolescent is frequently preoccupied with sex, masturbation and sexual fantasies. While sexual fantasies and masturbation are primary activities in males more so than in females (Group for the Advancement of Psychiatry, 1968), recent studies have shown that fantasy and masturbation are nearly as common in girls (49 percent) as in boys (65 percent) with only slightly higher frequency in boys (Sorenson Report, 1973). Masturbation and fantasy go well together for many adolescents. They are activities that can be done in solitary, meeting needs that may be unattainable to the young person.

Masturbation can be seen as a way of releasing muscular tension and extra energy in the adolescent and is also a way of seeking pleasure from the body. The adolescent learns through masturbation that indeed he can control pleasure with his body (Katchadourian and Lunde, 1977).

The Sorensen (1973) report further states that there are categories of fantasies during masturbation which differ between male and female adolescents:

> For boys
> Sex with someone who is forced to submit
> Sex with more than one female
> Group sex
> Sex when one is forced to submit
> Varying degrees of violence to the other person
> Oral and anal sex
>
> For girls
> Sex with a male who is much admired
> Sex with one or more males when one is forced to submit
> Inflicting mild violence on the other person
> Oral sex (passive) (p. 137)

The Sorensen Report (1973) is one of the most thorough, valid and generalizable studies on adolescent sexuality in American (Nehnevajsa, 1973).

Sex, masturbation and fantasies concerning sex may involve homosexual ideas during adolescence (Sider and Kreider, 1977), for not always does the adolescent seek relationships with members of the opposite sex. Relationships, either heterosexual or homosexual, rely on the development of the adolescent sexual identity (Erikson, 1968; Blos, 1962; and Goethals and Klos, 1976), thus linking one aspect of the general term "identity" to relatedness (Erikson, 1968).

Thus establishing relationships with other people becomes a complex task for the adolescent. He must develop the capacity to love, the ability to initiate contact, the need to "seek a soulmate" (Keniston, 1975, p. 17) and a comfort with his own sexuality. An ability to establish a comfort in relationships with members of the opposite sex may be difficult for the young male especially when told that the physical examination he is about to have may be conducted by a female health care provider. If he is not yet comfortable in the relatedness area, a female examiner may cause him more concern in his relationship with her than a man.

Therefore male adolescents, when provided the information that their physical examination may be conducted by a female health care provider, might express concerns or lack of concern about the male patient-female examiner encounter. The concerns of the adolescent may be related to the age, to the physiological development as determined by Tanner Staging, and to the issues of body image, identity, independence and relatedness. With the threat of the female examiner as opposed to a male examiner, the male adolescent may express more concern involving body image, identity, independence and relatedness than he would if examined by a man.

Summary

Literature presenting the characteristic phenomena occurring during adolescence has been reviewed. Areas discussed were: adolescence and the process of physiological development, body image, identity, independence and relatedness.

In puberty stimulation of the pituitary gland causes an increase in growth and gonadotropic hormones resulting in a changing body structure. In the male adolescent body changes occur in the form of growth spurts, with development of pubic, facial and axillary hair. The penis and scrotum enlarge, and the voice deepens. Tanner (1973) has devised a schemata for depicting the stages of adolescent physiological development know as Tanner Stages. A changing body structure causes the adolescent to change his body image or the perception in his mind of his body. Since the body image is part of himself as a person, the adolescent identity becomes involved. Identity is "the style of one's individuality" (Erikson, 1968, p. 50). It is how the adolescent defines himself in relation to his body, his behavior, his values, his habits, his occupational goals, his life style, and his peers (Erikson, 1968). When the adolescent begins to establish his identity, he becomes more independent psychologically from his parents. Independence is the rejection of old emotional ties to parents with a shift to emotional investments in peers and significant others outside the family (Goethals and Klos, 1976). The need for control of the self and the environment becomes paramount to the adolescent seeking independence. In turn, the need for control causes difficulty in forming relationships with peers and members of the opposite sex. The ability to form relationships--relatedness--is the ultimate goal of adolescence. In establishing relationships the adolescent must develop the capacity to love, the ability to initiate contact with others, the need to "seek a

soulmate" (Keniston, 1975, p. 17), and a comfort with his own sexuality.

Each of the above processes during adolescence: physiological development as determined by Tanner Stage, body image, identity, independence and relatedness are issues which are traditionally discussed in adolescent literature. They are issues that are interrelated in the total person, for physiological development influences body image, and body image is partially related to identity. Identity affects the ability to become independent, and the need for independence and control can affect the ability to establish relatedness.

In the review of the literature most research involving adolescents has primarily been limited to the study of only one of the above aspects of adolescence, not all of the issues simultaneously. Nursing believes issues of the <u>total</u> person are of value in comprehensive care (King, 1971). Therefore all of the above adolescent phenomena are of importance in this study. Each of the issues of adolescence [physiological development, (Tanner Stage), body image, identity, independence and relatedness] as seen in a total adolescent approach are therefore important in the study of concerns of the male when provided the information that his complete physical examination may be conducted by a female health care provider.

Chapter IV presents the methodology and procedures employed in the study.

CHAPTER IV

METHODOLOGY AND PROCEDURE

Overview

The descriptive study was designed to identify concerns of male adolescents when given the information that their complete physical examination may be conducted by a female health care provider. The study specifically identifies (1) the direction and degree of relationship between the expressed Concerns of male adolescents in the categories of Body Image, Identity, Independence, Relatedness, Concerns (Total) and Ages of the adolescents; (2) the direction and degree of relationship between the expressed concerns in the categories of Body Image, Identity, Independence, Relatedness, Concerns (Total) and Tanner Stages of development; and (3) the direction and degree of relationship between the expressed concerns in the categories of Body Image, Identity, Independence, Relatedness, Concerns (Total) and Tanner Stages of development while holding Age constant. Correlation is used to determine the relationship among the variables under study.

Correlation is used when: (1) the variables cannot be manipulated by the researcher and (2) when the research questions and hypotheses are stated to determine relationships between two variables. Correlation is the appropriate analysis for this study because causal relationships cannot be established between the

independent variables Age and Tanner Stage, and the dependent variables Concerns [Concerns (Total), Body Image, Identity, Independence and Relatedness]. The independent variables (Age and Tanner Stage) cannot be manipulated by the researcher since they are naturally occurring phenomena in the male adolescents. Further correlation is necessary because the hypotheses intend to show relationships between the variables.

From a population of male adolescents residing in eight lower Michigan cities the data were compiled using a two part instrument. Part A of the instrument measured the expressed concerns of the adolescents when given the information that their physical examination may be conducted by a female (see Appendix D, Part A). Part B asked the adolescent to check all items which pertained to their current physiological development (see Appendix D, Part B). Age of the participant is ascertained in the demographic section of the instrument. The instrument was completed by the participant prior to the physical examination, and in each setting an actual potential existed for the examinations to be conducted by a female. The male adolescent was aware of the potential female examiner prior to completing the instrument. All sites (private physician offices) employ female and male health care providers who conduct physical examinations. Results of the data provided in the instrument were analyzed by correlations to determine the relationships between the Concerns, Age, and Tanner Stage, when the male was provided information that he may have a physical examination by a professional female.

A pilot study using nine male adolescents was conducted to test the procedure and refine the instrument. Revisions were made concerning item sequence and wording in Part A and construction of items in Part B (for the original instrument, see Appendix E). After these revisions the study was implemented.

The purpose of this chapter is to present the methodology and procedures involved. Included are the population, description of settings, the instrument, data collection procedures, instrument scoring, data analysis, and human rights protection.

Population

The population selected for the study was adolescents ranging in age from 10-20. The criteria for selection were based primarily on age and sex. Only those who were males and in the age range of 13-17 were selected for the study. The purpose of their office visit was to be for a complete physical examination for sports, camp, or school entry. The above purpose from researcher experience is often the only occasion in which the adolescent encounters a health care provider. In addition the participants selected were presumed to be healthy with no known chronic illnesses such as diabetes, heart disease, kidney disease, cancer, or respiratory disease which required them to see the doctor and/or female health care provider more than three times per year. Such a prerequisite was necessary because those patients seeking frequent care for illnesses may have been different from those who were basically healthy, seeking care less frequently. Therefore the above criterion for selection was deemed necessary in order to reduce one source of variation between

the participating individuals. Standard criteria for selection of participants are presented in Figure 4.

Participants must meet the following criteria:

A. Sex--male.

B. Age--Range 13 to 17 years.

C. Purpose of their office visit--
a complete physical exam for

(1) sports or

(2) camp or

(3) school entry.

D. Basically healthy with no known chronic illness such as diabetes, heart disease, kidney disease, respiratory disease, cancer.

E. Have not seen the doctor and/or female health care provider for care more than three times per year.

F. Personal adolescent consent to participate.

Figure 4.--Criteria for Selection of Participants in the Study.

While not considered as a criterion for selection of participants, the researcher requested each participant to check (in the demographic section of the instrument) whether or not he had ever been examined by a female health care provider (see Appendix D). Participants who had examinations by professional females in the past may have responded differently on the instrument than participants who had only been examined by male providers. Since all the

settings utilized in the study employed female health care providers for the last two to three years, it was likely that many of the participating adolescents had been examined by females in the past. Although having past examinations by females did not exclude the participant from the study, the data concerning this topic allowed further discussion of the participants.

Descriptions of Settings

The researcher contacted six private physician offices in southern Michigan cities requesting permission to administer the instrument in their offices while utilizing the aid of receptionists (see Appendix G for permission letters from physicians). Three offices refused due to the time involved in the administration of the instruments. Either the physicians or their receptionists felt they could not allow time away from their office duties. One physician felt that too many research projects had been conducted in his office, therefore he did not wish to participate. Another physician stated that the study was too late since all the physical exams in his practice had been completed for the year. The three remaining offices (physicians and receptionists) agreed to participate primarily because they were interested in the results of the study. Each of these physicians had been contemplating the effects of their employed female health care providers in examinations on male patients. Permission letters obtained from the three participating physicians allowed the data to be collected in their private offices (see Appendix G). The office settings were designated as Centers A, B, and D.

The office practice at Center D provides care for primarily city infants, children, and adolescents since the physician is a pediatrician. This physician and two female Pediatric Nurse Practitioners have approximately 12,250 patient contacts per year, 5 percent or 613 of which are adolescents. The population of the city at Center D is approximately 70,000.

The Center B is an office providing family care to primarily rural patients of all ages. Center B is in a small town with a population of approximately 1500 people. The physician and female Physician's Assistant are the sole health care providers within a 10-15 mile radius. They have approximately 7600 patient contacts per year, 33 percent or 2508 of which are adolescents. The Center B office conducts most of the physical examinations for sports programs, camp and school entry on adolescents residing within this rural area.

The office practice at Center A provides care to patients of all ages. The physician practices in internal medicine, and he employs a female Pediatric Nurse Practitioner. Center A is in a city with a population of approximately 7800 people. Center A providers have approximately 7750 patient contacts per year, 7 percent or 525 of which are adolescents. Most of the participants at Center A were from area small towns. The Center A practice provides health care to a large number of adolescents in the summer for sports programs, camp, and school entry physical examinations.

The three centers administered the instrument in late summer, 1978, a time when most of the participants were obtaining

health care for the purpose of sports program entry. Centers A and D had completed most of the adolescent examinations earlier in the summer for camp and sports program entry yet the centers still participated in the study since the physical examinations for the coming high school football season had not been completed at Centers A and D.

The Instrument

The development of the instrument, pre-pilot testing, pilot testing, reliability and validity of the instrument are presented in the following section.

Overview

The initial content for items in the instrument emerged from a literature review. The content for Part A of the instrument involved the four basic categories of concerns in adolescence: body image, identity, independence, and relatedness. The content in Part B involved the Tanner Stages of physiological development. In reviewing the literature pertinent to adolescence, concerns of male adolescents, and examinations by females, the researcher became aware that no instrument existed interrelating these particular areas. Many instruments were available describing attitudes and anxieties related to various objects and persons, however none presented anxiety or attitude related to male adolescents examined for health care by professional females. Therefore it was necessary for the researcher to design the instrument for the study using the literature

and various experts in adolescence and psychometrics (see Appendix D).

Pre-Pilot Testing

In preparing items for an instrument Borg and Gall (1971, p. 198) recommend that the initial step for the researcher is to ask a sample of subjects meeting the established criteria to respond to open ended statements such as "something that really concerns me if a woman conducts may physical examination is _____." In this manner a number of items can be constructed based on the sample answers to the open-ended statements. However, adolescents typically respond in yes and no statements and do not elaborate as stated in Chapters I and II. Responses in detail are necessary to obtain information for item construction. Therefore building the items for the instrument had to be accomplished through a literature review and aid of experts in the areas of adolescence and psychometrics. While the above method of item construction is approved when the recommended method is not feasible, item construction through the use of literature review and experts alone requires pretesting for greater reliability and validity.

The initial preparation of Part A of the instrument included a list of 28 items classified as the variable "concerns." The items were divided into the categories of Body Image, Identity, Independence and Relatedness. Each of the items contained the word "concern" since the purpose of the instrument was to measure the concern of the male adolescent. In addition each of the items contained the words "she," "her," or "woman" relating the concern to the female

examiner. The items were then developed encompassing the concern, the female examiner and an issue of each of the categories body image, identity, independence, and relatedness. The items were written in a positive style: "It concerns me that . . . ." A yes-no response scale was provided for each item to evaluate the responses ("Yes this concerns me" or "No this does not concern me").

Since a part of the study focused on the relationship between concerns [Body Image, Identity, Independence, Relatedness and Concerns (Total)] and Tanner Stage, Part B was constructed to identify the Tanner Stage (physiological development) of the participant. To construct Part B of the instrument the researcher initially formed five items each corresponding to one of the five Tanner Stages in Figure 1, Chapter I. The items were formed by stating all the physical developments encountered in each Tanner Stage. The body developments involved the penis, scrotum, pubic, axillary and facial hair, voice, and height (growth spurt) (Tanner, 1973). The items were sequenced randomly. A commentary at the beginning of Part B was provided to orient the participant to the importance of growth and development. Directions were presented asking the participant to choose the one item which currently characterized his growth and development. Part B was presented following Part A so that the items, primarily sexual in nature, were not read first by the respondent (see Appendix E). The researcher and adolescent experts estimated that presenting Part B first might be too threatening to the participants.

Both Parts A and B were then administered to three male adolescents in a pre-pilot test. The purpose of the pre-pilot test was to (1) ascertain whether the content presented was measuring concerns of the male adolescents if a professional female might examine them; (2) determine whether the participants could state other concerns not mentioned in the instrument; (3) determine whether the adolescents understood the items; and (4) determine whether the participants felt free to respond to material of a sexual nature.

The three participating male adolescents met the stated criteria for selection (see Figure 4). They were aged 13, 13, and 14. The three adolescents were friends of the researcher which provided ease of discussion and questioning if necessary. The young men were provided privacy in separate rooms with the researcher available but not physically present in any of the rooms.

During and after the administration, the participants were encouraged to discuss any items they did not understand or to which they had difficulty in responding. The researcher noted that items written in an abstract manner in Part A, particularly concerning the Identity category, were difficult for the 13 and 14 year old adolescents. They repeatedly asked the researcher to tell them what she meant in the item. They stated that since the meaning was unclear, it was easier to respond to the abstractly-worded items with "no" indicating that the situation posed in the item was of no concern to them. When re-stated by the researcher in more concrete words, the adolescents changed their responses to "Yes" in most cases. The research of Montemayor and Eisen (1977) and Piaget (1969)

concerned with cognitive development and the abstract identity supports the phenomena which occurred in the above initial administration of the instrument. The researcher re-worded all items in Part A so that their concreteness enabled the younger aged adolescents, as well as those older, to understand each item.

One of the statements made by the three participating adolescents and supported by a consulting psychometrician was that the instrument was too lengthy. Therefore the researcher reduced the number of items in Part A from 28 to 20, choosing those items which showed a clear understanding and concern to the adolescents.

Five items were included in each of the four categories of Body Image, Identity, Independence and Relatedness. In addition to the resulting 20 items another item was provided. The 21st item was open-ended allowing the adolescent to write in any other concern he might have if a female health care provider examined him. The researcher hypothesized that the open-ended statement might not receive many responses, but was of necessity to ensure that all possible concerns were available for participant response.

Another revision was made in the method for responding to the first 20 items. Instead of yes-no responses the Likert method was employed using a five-point scale (Crano and Brewer, 1973). The adolescent then had the opportunity to respond to each item by choosing one of the following:

Strongly Agree Agree Undecided Disagree Strongly Disagree

The Likert method was chosen because the scale measures the level of agreement or disagreement, not just yes or no. The Likert method is further useful in that the scale has a higher reliability in terms of internal consistency (Crano and Brewer, 1973). Part A of the instrument was then ready for pilot testing (see Appendix E).

In reviewing Part B of the pre-pilot test, none of the three participants expressed difficulty in choosing the one item most like their physiological development. One 13 year old chose Tanner Stage II; one 13 year old chose Tanner Stage III as did the 14 year old. Perhaps they were too embarrassed to express a problem in responding to the items in Part B. The researcher had worded this part of the instrument in concrete, ordinary (scientific terminology displayed together with street words) terms for ease in adolescent understanding. Perhaps therefore, the adolescents in fact did not have difficulty in responding to Part B because of the above measures. Part B was not changed and thus was ready for pilot testing (see Appendix E).

Pilot Testing

After the changes were made in the pre-pilot instrument the refined instrument with both Parts A and B was administered in a pilot test to determine the ease of administration. It was further necessary to know whether the refined instrument measured concerns if a male is examined by a female. Nine male adolescents participated, aged 14-16, none of which had participated in the pre-pilot test. Their Tanner Stages ranged from three to five. The adolescents

met the criteria for selection in this study stated in Figure 4. The pilot test took approximately 10-15 minutes to complete (see Appendix E).

Re-evaluation after pilot testing resulted in items again being re-worded so that of the first 20 items in Part A, ten were stated positively and ten negatively. Item number 21 remained open-ended. The sequence of each item was changed so that not all five items of the four categories (Body Image, Identity, Independence and Relatedness) followed each other. The above two changes were made so that the adolescents would not become conditioned to the style of wording, but would instead be forced to think about each item separately (Crano and Brewer, 1973).

Part B of the instrument was changed in format concerning the identification of the Tanner Stage of the adolescent. The researcher and consulting adolescent experts agreed that all parts of the body do not grow and develop simultaneously as stated in the schemata of Tanner Stages in Figure 1 (Group for the Advancement of Psychiatry, 1968; Blos, 1962). Some aspects of the body grow and develop exceeding the rate of growth and development of other parts. Thus it would not be realistic for the adolescent to choose all the aspects of development for one Tanner Stage only. Therefore Part B was revised to include a grid of items (see Figure 5). Five items related to pubic hair, three items to axillary hair, three items to facial hair, five items to penis and scrotum, three items to voice, and one item to height. Each of the items pertained to either one Tanner Stage or two or three Tanner Stages simultaneously.

PUBIC (GROIN) HAIR				
The hair around my groin (crotch) is short, soft and fuzzy.	The hair around my groin (crotch) is darker, more coarse and curly.	The hair around my groin (crotch) is spreads almost to my legs.	The hair around the groin (crotch) has a few long straight hairs, and the rest is short and soft.	The hair around my groin (crotch) spreads down my legs.
I	III	IV	II	V

AXILLARY HAIR			FACIAL HAIR		
I don't have any hair under my arms.	I have a small amount of hair under my arms.	I have a lot of hair under my arms.	I have a few hairs on my face, but I don't need to shave.	I have to shave every day because of so much hair on my face now.	My face is soft, and I don't have any hair on it.
I, II, III	IV	V	III	IV, V	I, II

PENIS AND SCROTUM				
My penis and scrotum (balls) have been growing and my penis has developed a rim around the end of it.	My scrotum (balls) are beginning to turn dark reddish and the skin seems to have small ridges on it.	My penis is just beginning to grow longer and wider.	My penis and scrotum (balls) have not begun to grow yet.	My penis and scrotum (balls) are about the size of most adult men.
IV, V	II	III	I	V

VOICE			HEIGHT
My voice has not started to deepen yet.	My voice is beginning to be sometimes low and sometimes high. My voice cracks.	My voice stays low all the time now.	I've grown at least two inches in the last six months.
I, II	III	IV, V	IV

Figure 5.--Grid of Physiological Development for Tanner Staging, Part B of the Instrument.

The adolescent was given directions to choose all the items which currently pertained to him. The researcher then estimated the realistic Tanner Stage of the individual upon completion of the instrument. With these revisions both Parts A and B were prepared for actual data collection. Since the instrument had not been standardized, but developed by the researcher through the aid of experts in adolescence and a literature review, the appropriate procedure was to test the instrument for reliability (Borg and Gall, 1971).

Reliability

The term reliability traditionally has referred to the degree to which scores of subjects at one administration of an instrument correspond to the scores of the same subjects at another administration of the same instrument (Test-Retest Method) (Borg and Gall, 1971).

Reliability has now come to mean additionally internal consistency or interrelatedness between the items in the instrument. Many techniques are available in testing for reliability. Such techniques are the Test-Retest, Alternate Forms and Split-Half Methods.

In the present study the Test-Retest Method described above was not feasible since the researcher did not have access to the same subjects for retesting at a later time. Additionally, the Test-Retest Method requires a time lapse to reduce subject memory of the items. However if the time between administrations of the instrument is too long, then growth and maturation of the subjects can be a cause of changes in subject responses. Growth and maturation become

extraneous variables which alter the correlations for instrument reliability (Borg and Gall, 1971).

Another method for testing the reliability of an instrument is the Alternate Forms Method, which is similar to the Test-Retest Method except that at the second administration of the instrument a different instrument very much like the first one is administered. The Alternate Forms Method eliminates the memory factor of the test-retest method, but relies on the availability of a similar second instrument. Therefore the Alternate Forms technique was also not feasible in the present study due to a lack of (1) access to the same subjects for retesting and (2) a second similar instrument.

Another technique to measure reliability of an instrument is the Split-Half Method. The Split-Half technique is accomplished by dividing the number of items in half and then obtaining the correlation between the two halves. The problem with this method is that once the correlation is obtained, the reliability of only half of the items not the total scale, is obtained.

Therefore in order to test for the inter item relatedness or internal consistency of the <u>total</u> scales in Parts A and B the researcher applied the Cronback (1951) formula for "Coefficient Alpha:"

$$r_{tt} = \frac{k}{k-1}\left(1 - \frac{\Sigma\sigma_i^2}{\sigma_T^2}\right)$$

where k = the number of items in the total scale

σ_T^2 = the variance of the total scale

$\Sigma\sigma_i^2$ = the sum of the variances of each item in the scale

r_{tt} = coefficient Alpha, the estimate of full scale reliability

The higher the coefficient, the greater the scale reliability. "'Coefficient alpha,' the average interitem correlation of all items constituting a scale, represents probably the best estimate of internal consistency" (Crano and Brewer, 1973, p. 230). In addition to testing for reliability of the instrument, testing for the validity of the instrument was necessary, since the instrument was constructed by the researcher, and since the instrument had not been previously tested. Additionally reliability testing alone is not sufficient since an instrument can have a high reliability coefficient and yet not be valid.

Validity

Validity means that an instrument is measuring what it is supposed to measure. In the present study the questions referring to the validity of the instrument are: (1) in Part A, is the instrument measuring concerns of male adolescents when provided the information that their physical examination might be conducted by a female? (2) In Part B is the instrument measuring the Tanner Stage of physiological development of the male adolescent participants?

To measure the validity of a scale or instrument, the validity coefficient can be calculated. The validity coefficient is calculated by correlating the scores on two similar instruments administered to the same sample. Again, the correlation between two similar instruments was not feasible in the present study since no other instrument was available for comparison.

There are many types (content, concurrent, construct, predictive, face) of validity, but the aim or purpose of the testing

situation determines the type to be estimated (Dick and Hagerty, 1971). For instance the researcher was not interested in predicting (predictive validity) the future concerns of the same sample at a later date. In the present study content validity was the focus of attention. Content validity refers to the degree to which the items in the instrument represent all possible responses in the criterion (in this study--Concerns and Tanner Stages) under investigation (Crano and Brewer, 1973). When dealing with attitudes or opinions as in the present study, the assessment of all possible responses in the criteria (male adolescent concerns . . . female examiner and Tanner Stages) becomes a subjective undertaking.

There is no statistical test to apply to content validity. The researcher is required to review all the literature possible obtaining as much material as is feasible for item construction. Then the estimate of content validity is almost entirely dependent upon the subjective judgment of the researcher (Crano and Brewer, 1973).

For the present study content validity was estimated by the judgment of the researcher and consulting adolescent experts because no other criterion measurement was available. Content validation is accomplished through subjective scrutiny of each item making certain that the item is a representaive of the universe (Kerlinger, 1967) of attitudes or opinions in the area.

Perhaps the researcher could have simultaneously administered a standard manifest anxiety scale to the male adolescents along with Part A of the instrument. Scores on such a scale could then have

been correlated with Part A scores to obtain a validity coefficient in the general universe of anxiety (or concerns). Although such a correlation would measure the validity coefficient of anxiety between the two scales, it would not measure anxiety related to male adolescents who might be examined by female health providers. In addition, the instrument would again be too lengthy and thus would require more time for participant completion. Therefore content validity by subjective researcher and adolescent expert endeavors was the only method employed in estimating the validity of the instrument.

In discussing the instrument used in the study the presentation has focused on an overview of the development of the instrument, the pre-pilot and pilot testing, reliability and validity of the instrument. The next section presents the data collection procedure.

Data Collection Procedure

The following section discusses the procedure employed in the data collection. After standardizing the criteria for selection (Figure 4) and obtaining permission from the physician offices at the three centers, personal contact was made by the researcher at each center to explain and present the materials to the providers and receptionists. The receptionists received written standardized directions about the procedures involving administration of the instrument. The written directions were provided for uniformity in the data collection process (see Appendix F).

Referring to the directions provided the receptionist, the role of the receptionist in the study was to (1) screen the adolescents according to the criteria for participation; (2) introduce the study to the potential subject and his parents, if available; (3) obtain signatures on the consent form if the adolescent agreed to participate; (4) answer the questions of the participants and/or parents; (5) provide privacy to the adolescent while completing the instrument; (6) mail the completed instruments enclosed in the stamped self-addressed envelopes to the researcher; and (7) note the age and observable behavior of those who refused (see Appendix F). All three receptionists agreed to perform these functions.

Each receptionist received a packet including:

1. The written directions with
   (a) Criteria for selection of the participants
   (b) Directions on how to introduce the study to the adolescent and/or parent
   (c) Which materials to present the adolescent and when to give them to him
   (d) What to do if the adolescent arrived alone
   (e) What to do if he arrived with a parent
   (f) What to do with the signed consent forms
   (g) What to do with the sealed envelopes
   (h) Directions for privacy
   (i) What to note and observe when a potential subject refused participation in the study (see Appendix F)
2. Stamped self-addressed envelopes
3. Letters from the researcher entitled "To The Adolescent" (see Appendix C)

4. Letters to the adolescent and parents from the researcher entitled "Dear Adolescent and Parents" (see Appendix B)

5. Consent forms (see Appendix B)

6. The instruments (see Appendix D)

Prior to the study the adolescents were scheduled for appointments at the centers for physical examinations. As they arrived at the centers the receptionist, using the written researcher directions, privately introduced them to the research which was supported by the physician (see Appendix F). She then provided each participant with a consent form (Appendix B) and the letter entitled "To The Adolescent" (see Appendix C). The letter further explained the study, posed the threat that a female might examine them after they were finished participating in the study, explained the necessity of consent, gave directions for anonymity and privacy, allowed questions to be asked by the adolescent, and stated that they were allowed to refuse to participate and the refusal would not alter their health care. At the same time if the parents were available, they were provided the letter to the adolescent and parents from the researcher. The letter explained the study, privacy, and consent necessary for participation and allowance for questions. The adolescent and parent were asked if they had any questions. Then the adolescent and parent, if available, were asked to sign the consent form if they agreed to participate in the study.

If written consent was obtained, the adolescent was provided the (1) instrument by the receptionist (Appendix D). The instrument contained directions for both Parts A and B, and (2) the envelope

in which to privately seal the completed instrument. Even though the letters from the researcher had directed the adolescent to seal the completed instrument in the envelope, the receptionist now reiterated the directions. The participant was then taken either to a vacant examining room or private area in the waiting room to complete the instrument while alone and seal it in the envelope. Upon completion, the adolescent handed the sealed envelope to the receptionist for mailing. The signed consent forms, separate from the completed instruments, were retrieved by the researcher from the office sites at intervals throughout the data collection period (late July to mid-September) (see Appendix B). The data was collected until mid-September since most physical examinations for sports, camp, and school entry were by then completed. After the instruments were returned to the researcher, the process of scoring was initiated.

Scoring

The following section discusses the procedure for scoring Parts A and B of the completed instrument. The scoring procedure for Part A was as follows: Using the Likert scale for items 1-20, a possibility of points ranging from one to five was assigned each of the responses

Strongly Agree Agree Undecided Disagree Strongly Disagree

depending on the degree of concern to the adolescent. Five points were assigned for the greatest degree of agreement or disagreement,

depending on the wording of the item, and one point for the least degree of agreement or disagreement. Two, three and four points were given for the responses agree, undecided, and disagree depending on the wording of the item. For example, if the adolescent strongly agreed with item number six ("She would have to see my body in order to examine me, but this doesn't concern me.") he received one point because this statement did not concern him (see Appendix D for assigned points to each response in each item).

Five items were assigned to each of the four categories of concerns in adolescence: Body Image, Identity, Independence, and Relatedness for a possible total of 25 points in each category. If an individual had a score of 20 in any one category he could be considered to have a high degree of concern if a woman examined him. A sum of the scores in each category resulted in a Total Score for each individual, with a possible score of 100. Thus if an individual had a total score of 90, he would be considered to have a high degree of concern if a female might examine him. Item number 21 was not calculated in any quantitative score, but described independently for each individual who utilized the freedom to express any other concern. No numerical value was assigned to the open-ended statement.

The scoring procedure for Part B was as follows: Each of the 20 items pertained to either one Tanner Stage or two or three stages simultaneously. Each item was assigned the appropriate Tanner Stage(s) based on Figure 1 in Chapter I. The Tanner Stage of each participant was calculated by adding all the Tanner Stages assigned to each item checked by the adolescent then dividing the

sum by the number of stages checked. For example if the participant checked item number four under pubic hair (Tanner Stage II), item number two under axillary hair (Tanner Stage IV), item number one under facial hair (Tanner Stage III), item number one under penis and scrotum (Tanner Stages IV and V), item number two under voice (Tanner Stage III) and item number one under height (Tanner Stage IV) then by adding all the above Tanner Stages (25) and dividing by the number of Tanner Stages checked (7) his realistic Tanner Stage would be 3.57 or rounded off to Tanner Stage IV. Using the above method, the Tanner Stage of all participants was calculated. Once the instruments were scored, the data were analyzed.

Data Analysis

The following section presents the techniques used in the data analysis of the study. Initially the operational definitions of the concepts, the variables, hypotheses and the statistical techniques used in testing the hypotheses are presented.

Operational Definitions of Concepts

The determine the content for the instrument the concepts of adolescence, concerns, body image, identity, independence, relatedness, other, total concerns, physiological development (Tanner Stage), complete physical examination, female health care provider, were defined operationally from the literature review. The following definitions apply in the study:

1. Adolescence is defined as a stage in the process of human maturation. This stage occurs between the ages of ten and twenty in

the life cycle of Man (Brown and Murphy, 1975). It is an "in-between" age meaning that the person in this stage of development is neither a child, nor is he yet an adult (Oremland and Oremland, 1974). For the purpose of this study adolescence is defined by age of the male patient and includes ages 13, 14, 15, 16, 17 as designated on the instrument in the demographic section under Age.

2. Concerns are defined as expressed feelings of anxiety or worry when given the information that the physical exam may be conducted by a female health care provider. The feelings are expressed on a written instrument by the male adolescent immediately after he is given the information that his complete physical examination might be conducted by a female. Expressed concerns or feelings of anxiety are measured using a Likert scale prior to the physical examination. For the purposes of this study the measured areas of concerns are categorized according to Body Image, Identity, Independence, Relatedness, and Concerns (Total). An additionally listed category "Other" is not measured quantitatively, but instead is an open-ended statement allowing the participant the freedom to write any other concern he may have (see Appendix D, Part A).

(a) Body Image is the "picture of our body which we form in our mind--the way in which our body appears to ourselves" (Schilder, 1935, p. 11). The body image of the adolescent is his perception of his physical body. It is how he views his body at any point in time. For the purposes of this study, Body Image is one of the categories of concerns in the

instrument and pertains to the adolescent's perception of his physical body. His perception of his body may partially cause concern or lack of concern relative to the examiner being a female. The items included in the Body Image category contain the words "scrotum," "erection," or "body." See Appendix D, item numbers 1, 6, 7, 14 and 20.

b. Identity is "the psychological awareness of self-sameness over time with the reciprocal awareness of others' perceptions of self-sameness" (Erikson, 1968, p. 20). "Identity refers to the adolescent's awareness of who he is as well as his perception of the assessment of others regarding who he is. As such, identity is partly self-defined and partly socially conferred" (Sider and Kreider, 1977, p. 844). Identity is defined as one's philosophy of self, or the self-image of who the person is in relation to his behavior, values, work, life style and environment. It is how he views himself as a person, how he defines himself, his values, habits, personality as opposed to those of other people. For the purpose of this study, Identity is one of the categories of concerns in the instrument and pertains to the philosophy of self as defined by the adolescent. The philosophy of self may partially determine the level of concern or lack of concern relative to the examiner being a woman. The items included in the Identity category contain the words

"child," "feelings," "manners," "habits," or "we." See Appendix D, item numbers 2, 9, 13, 15 and 19.

c. Independence is the freedom of the adolescent from a feeling of control by others (Sider and Kreider, 1977). It is a sense of autonomy and refers to the separation of physical and mental control of parents, other adults and the environment with a move toward bonding with peers and self control. For the purpose of this study, Independence is one of the categories of concerns in the instrument and pertains to the adolescent need or desire for control of both himself and his environment. The need for control may precipitate concern or lack of concern if the examiner is a female. The items included in the Independence category contain the words "let me," "parents," "my word," "my choice," or "control" within their structure. See Appendix D, item numbers 3, 5, 8, 10 and 16.

d. Relatedness refers to developing relationships and interactions with peers and members of the opposite sex (Sider and Kreider, 1977). For the purpose of this study, Relatedness is one of the categories of concerns in the instrument. The items considered as the Relatedness category contain the words "sexual," "make a pass," or "woman" within their structure, and all imply a relationship or interaction with fear or anxiety concerning this relationship between the adolescent and the female examiner. See Appendix D, item numbers 4, 11, 12, 17 and 18.

e. Other is an area of concern in the instrument in which the adolescent may write an answer to the open-ended statement: "Something that hasn't been mentioned so far that really concerns me if a woman examines me is _____." This item is placed as the final item in Part A of the instrument (see Appendix D).

The sum of the scores of concerns in the categories of Body Image, Identity, Independence and Relatedness on the instrument is computed for each male adolescent participant. The sum is referred to as "Concerns (Total)."

3. Tanner Stage for males is the stage of physical development of the penis, scrotum, pubic hair, axillary hair, facial hair, voice and height. The Stages are designated as I, II, III, IV, V with Stage I being prepubescence increasing to Stage V which is adult level of physical development (Tanner, 1973). For the purposes of this study Tanner Stage is determined by the male participant checking all the characteristics of his current development (see Appendix D). Each characteristic listed pertains to a Tanner Stage(s) (see Figure 1). The Stages checked are then scored by the researcher to obtain the current Tanner Stage of the male participant.

4. Complete physical examination is defined as assessment of all body systems of the male adolescent using the methods of inspection, palpation, percussion, and auscultation where appropriate. Such systems assessed are the skeletal, muscular, central nervous, peripheral nervous, sensory, cardiovascular, lymph, respiratory, digestive, excretory, reproductive, endocrine, and integumentary

(Bates, 1974). For the purposes of the study the complete physical examination is conducted for health maintenance or screening purposes, i.e., school sports physical examinations, and is not related to illness.

5. Female health care provider is defined as women who are:
   a. Registered nurses who are also students currently enrolled in programs preparing nurses to function in expanded roles such as Nurse Practitioners and Nurse Clinicians, or
   b. Certified, or uncertified Nurse Practitioners such as Pediatric Nurse Practitioners, Family Nurse Practitioners or
   c. Nurse Clinicians with a master's degree in nursing such as Family Nurse Clinicians and Clinical Specialists, or
   d. Practicing physicians, or
   e. Medical students, or
   f. Physician's Assistants.

The term "female health care provider" is not defined for the participating adolescents other than that the examiner may be a female. The type of female provider is not the critical issue in the study. The issue is that the provider may be a female.

With the concepts defined operationally, the variables of focus were determined.

The Variables

The present study, descriptive in nature, involved three variables each of which was quantitative: Age, Tanner Stage and Concerns (total). Concerns (total), the dependent variable, was further divided into four subvariables Body Image, Identity, Independence and Relatedness. Age and Tanner Stage were treated as independent variables in the study with one of the questions posed in the hypothesis section, Chapter I: Are these variables (Age, Tanner Stage) independent of each other? Adding the four subvariables of Concerns, Concerns (Total), Age and Tanner Stage, the resulting number of variables for data analysis in the study was seven. Hypotheses were then developed employing the variables Age, Tanner Stage, and Concerns (Total) and subvariables.

The Hypotheses

From the research questions stated in Chapter I and from the variables determined above the following hypotheses were tested in the study:

Hypothesis:	Variables Represented:
1. Concerns of male adolescents who might have a complete physical exam by a female health care provider can be identified.	Concerns (total), Body Image, Identity, Independence, Relatedness.
2. The concerns expressed by the male adolescent will be related to age.	Concerns (total), Age, Body Image, Identity, Independence, Relatedness.
3. The concerns expressed by the male adolescents will be related to Tanner Stage.	Concerns (total), Tanner Stage, Body Image, Identity, Independence, Relatedness.

Hypothesis:	Variables Represented:
4. Controlling for age, the concerns expressed by the male adolescents will be related to Tanner Stage.	Concerns (total), Age, Tanner Stage, Body Image, Identity, Independence, Relatedness.

The hypotheses were then tested for statistical significance.

The Statistical Techniques

The following section provides the techniques used to test each hypothesis. Hypothesis 1 was not tested statistically but was analyzed by frequency counts of items causing high and low concern for each subvariable Body Image, Identity, Independence and Relatedness. Hypotheses 2 and 3 deal with relationships between the independent variables (Age, Tanner Stage) and the dependent variable Concern (Total) and subvariables Body Image, Identity, Independence and Relatedness.

Descriptive studies are aimed at describing situations or conditions which occur at the present time. In a descriptive study where a determination of relationships between two variables needs to be identified, as in Hypotheses 2 and 3 above, the data are analyzed by the technique of correlation (Galfo and Miller, 1970).

Experimental techniques, in contrast to correlational analysis, rely on researcher ability to manipulate variables (Crano and Brewer, 1973). In the present study, the variables Age and Tanner Stages cannot be manipulated since they are naturally predetermined characteristics of the individual. Similarly, because the researcher does not have the freedom to manipulate Age and Tanner Stage, no causal relationship can be established between Age

and Concerns, Tanner Stage and Concerns, or Age, Tanner Stage and Concerns as in experimental techniques (Crano and Brewer, 1973). However if the researcher asks the question, "Are the variables in some way related to one another?" as in Hypotheses 3 and 4 above, then the appropriate technique is correlation (Crano and Brewer, 1973). While there are several correlational formulas, when both variables are expressed in the form of continuous scores, the appropriate technique with the smallest standard error is Pearson Product-Moment Correlation (r) (Borg and Gall, 1971). Therefore Hypotheses 2 and 3 were tested using the Pearson Product-Moment Correlation. The statistical formula for Pearson Product-Moment Correlation Coefficient (Payne, 1968) is stated as

$$r = \frac{\Sigma Z_x \; Z_y}{N}$$

$$\text{where } Z_x = \frac{x - \bar{x}}{\sigma_x}$$

$$\text{and } Z_y = \frac{y - \bar{y}}{\sigma_y}$$

The interpretation of r, once computed between any two of the seven variables in the study, was as follows:

1. r from 0.00 to 0.15 or 0.20 represents negligible, or if close to 0.20, very slight relationship between the variables.
2. r from 0.20 to 0.40 represents low correlation present, but slight.
3. r from 0.40 to 0.60 represents moderate or fair correlation.
4. r from 0.60 to 0.80 represents marked, somewhat high relationship.
5. r from 0.80 to 1.00 represents high to very high relationship (Van Ormer and Williams, 1941, p. 65).

Statistical significance of r is determined by the number of participants (N). Therefore in the present study in order for the null hypotheses to be rejected at the .05 level of confidence, the correlation coefficients (r) were required to be +0.291 or higher, or -0.291 or higher, to be considered statistically significant (based on an N of 45) (Townsend and Burke, 1975). For instance if the correlation coefficient (r) was 0.14 for Concerns (Total) and Age there was a negligible relationship between the two variables and the relationship cannot be considered statistically significant at the .05 level.

An example of a correlation matrix is presented demonstrating the correlation coefficients (r) for the seven variables in Hypotheses 2 and 3 (see Table 1). Actual correlation coefficients (r) from the formula for Pearson Product-Moment Correlation are demonstrated in Chapter V.

	Concerns (Total)	Body Image	Iden-tity	Independ-ence	Related-ness	Age	Tanner Stage
Concerns (Total)	r						
Body Image		r					
Identity			r				
Independence				r			
Relatedness					r		
Age						r	
Tanner Stage							r

Table 1.--Example Correlation Matrix for Seven Study Variables.

Hypothesis 4 above requires a special formula for the correlation coefficient computation. The formula for partial correlation is used. The purpose of partial correlation is to determine the relationship between two variables while holding a third variable constant. In using Partial Correlation the assumption is that the variable held constant (Age in Hypothesis 4) has an influence on the other two variables (Concerns and Tanner Stage). By "partialling out" Age, the net correlation coefficient has the same effect as if all the participants had the same age (Borg and Gall, 1971). The formula for partial correlation is stated as

$$r_{12\ 3} = \frac{r_{12} - r_{13}r_{23}}{\sqrt{1 - r^2_{13}}\sqrt{1-r^2_{23}}}$$

where

r_{12} = the correlation coefficient (r) between variables 1 and 2

r_{13} = the correlation coefficient (r) between variables 1 and 3

r_{23} = the correlation coefficient (r) between variables 2 and 3

r^2_{13} = the square of the correlation coefficient (r) between variables 1 and 3

r^2_{23} = the square of the correlation coefficient (r) between variables 2 and 3

The partial correlation formula was utilized because the researcher hypothesized that age might influence the variables Concerns and Tanner Stage. Therefore the relationship between Concerns and Tanner Stage was identified as if the age of all the participants was the same. The tests results to determine the direction and degree of

relationship between the variables in hypotheses 2, 3, and 4 are presented in Chapter V.

Human Rights Protection

The measures taken to ensure that the rights of the participants were protected is presented in this section. To ensure protection of the rights of the individuals in the study measures were taken such as providing them with the information that the study was supported by the physician, providing privacy while completing the instrument, and informing the participants that they had the right to refuse to participate. The participation was voluntary with written consent obtained by the adolescent and parents if available. The adolescents were provided an envelope in which to seal the completed instrument so that no one other than the researcher had access to their responses. Anonymity was provided by assigning an identification number to their instrument, rather than name. The written consent forms and instruments were returned separately, providing further protection to the adolescent. For a complete review of the Human Rights Protection Procedures see Appendix H.

Chapter IV has provided an overview of the methodology and procedures involved in the study. The discussion has included a presentation of the population, a description of the settings, the development of the instrument, the data collection procedure, scoring, the data analysis techniques, and human rights protection. In Chapter V the data is presented. Analysis of data is directed toward the hypotheses for the study.

CHAPTER V

DATA PRESENTATION AND ANALYSIS

Overview

In this chapter the data are focused on the concerns of male adolescents when provided the information that their complete physical examination may be conducted by a female health care provider. The findings are presented based on data collected from 45 male adolescents at three physician office centers. The data describe the relationships of Concerns (Total), Body Image Concerns, Identity Concerns, Independence Concerns, Relatedness Concerns with Age and Tanner Stage of physiological development. The findings are presented in the following manner:

1. Descriptive Findings of the Population
2. Data Presentation for Hypotheses
    a. Descriptive findings of population concerns (Hypothesis 1).
    b. Relationships of independent variable Age with dependent variables Concerns (Total), Body Image Concerns, Identity Concerns, Independence Concerns, and Relatedness Concerns (Hypothesis 2).
    c. Relationships of independent variable Tanner Stage with dependent variables Concerns (Total), Body Image Concerns, Identity Concerns, Independence Concerns and Relatedness Concerns (Hypothesis 3).
    d. Relationships of independent variable Tanner Stage with dependent variables Concerns (Total), Body Image Concerns, Identity Concerns, Independence

Concerns, and Relatedness Concerns, while holding the independent variable Age constant (Hypothesis 4).

3. Reliability of the Instrument

4. Summary of the chapter

To test Hypotheses 2 through 4, the relationships of the independent variables, Age and Tanner Stage, and dependent variables, Concerns (Total), Body Image Concerns, Identity Concerns, Independence Concerns and Relatedness Concerns, were analyzed using the statistical formulas of Pearson Product-Moment Correlation and Partial correlation. To test for the reliability of the instrument, the statistical formula for coefficient alpha was used.

Descriptive Findings of the Population

The study population consisted of male adolescents between the ages of 13 and 17 who were seen at three physician office centers. The purpose of their scheduled office visits was for receiving a complete physical examination for school, sports programs, or camp entry. The adolescents were aware that all centers employed female health care providers. When the male adolescents arrived at the centers they were informed about the study and that their planned physical examination might be conducted by a female health care provider instead of a male provider. If the adolescents agreed to participate they were then asked to express their feelings on a written instrument regarding their concerns if their examination might be conducted by a female health care provider instead of a male provider.

Participants and Nonparticipants

Of the three centers A, B and D, seven adolescents agreed to participate from Center A, 45 agreed to participate from Center B, and one agreed to participate from Center D, for a total of 53 consenting adolescents. All the participants met the criteria for selection except four from Center B who were aged 18. The four 18 year old adolescents were still allowed to participate, but the data compiled from their concern responses on the instrument were not analyzed with the resulting total group. Instead the data and demographic information from the 18 year olds were descriptively compared with the total group.

When the instruments were scored the researcher discovered that one adolescent from Center B had misinterpreted the directions and so incorrectly responded to the instrument. In addition three adolescents, two from Center A and one from Center B, had not completed the instrument. Therefore, out of the total number (53) who participated, 45 instruments were complete and met the criteria for data analysis (53 minus four 18 year olds, minus four non-useable instruments).

The receptionists at each of the Centers were asked to observe specific characteristics of the adolescents who refused to participate since the researcher felt that the nature of the refusals would be important to note as additional findings. While the receptionist viewpoints were subjective, the nature of the refusals provided a supplement to the study findings. The receptionists noted the age of the refusing adolescents and any observable circumstances such as

obvious or stated embarrassment, disinterest and parent or other person attending the center with the adolescent. Six adolescents refused to participate. One, age 16 from Center B said he was not interested. Five adolescents age 13, 13, 13, 13, and 14 refused from Center A and were noted to be embarrassed according to the female health care provider at that center. These five adolescents were also noted to be in Tanner I or II Stages as estimated by the female provider. At the end of the data collection period, the researcher discovered that at Center A instead of the receptionist administering the instrument, as directed by the researcher, the female provider had administered the instruments. Additionally the female provider had allowed the participatns to first leaf through the instrument before following the steps in the directions from the researcher. Several explanations may account for the five male adolescent refusals to participate in the study at Center A. The explanations may be:

(1) By the female health care provider administering the instrument, she was the actual threat in the study to the male adolescent.

(2) Allowing the adolescents to see the instrument before following the established steps in the directions may have caused adolescent embarrassment due to items which were sexual in nature.

(3) The five adolescents were at the lower end of the age range in the study, and were in Tanner Stage I or II by estimation of the female health care provider who examined them.

Age and Tanner Stage

The summary data of ages and Tanner Stages of the 45 participants plus the four 18 year olds in the study population are presented in Table 2. Seventeen (35 percent) of the participants were age 14 and two (4 percent) were 13 years; 13 (27 percent) were 15 years; seven (14 percent) were 16 years; six (12 percent) were 17 years and four (8 percent) were 18 years old. Twenty three (47 percent) of the participants were in Tanner Stage IV with none (0 percent) in Tanner Stage I, one (two percent) in Tanner Stage II, 17 (35 percent) in Tanner Stage III and eight (16 percent) in Tanner Stage V.

Table 2.--Age and Tanner Stages of the Study Population and Eighteen Year Olds (N=49).

	Number of Participants		Percentage
Age			
13	2		4
14	17		35
15	13		27
16	7		14
17	6		12
18	4		8
TOTAL	49	TOTAL	100
Tanner Stage			
I	0		0
II	1		2
III	17		35
IV	23		47
V	8		16
TOTAL	49	TOTAL	100

By examining Table 3 the number of participants in Tanner Stages for age can be seen. When the Tanner Stages of the participants were categorized with their ages the 13 year olds were solely in Tanner Stage III.

Table 3.--Number Per Tanner Stage for Age of Study Population and 18 Year Olds (N=49).

Tanner Stage	AGE						Total
	13 (N=2)	14 (N=17)	15 (N=13)	16 (N=7)	17 (N=6)	18 (N=4)	
I (N=0)	0	0	0	0	0	0	0
II (N=1)	0	0	0	0	0	0	1
III (N=17)	2	7	5	1	1	1	17
IV (N=23)	0	8	7	3	2	3	23
V (N=8)	0	1	1	3	3	0	8
TOTAL	2	17	13	7	6	4	

Eight of the 14 year olds were in Tanner Stage IV; seven were in Tanner Stage III; one was in Tanner Stage II and one was in Tanner Stage V. None of the 14 year olds were in Tanner Stage I. Seven of the 15 year olds were in Tanner Stage IV; five were in Tanner Stage III and one was in Tanner Stage V. None of the 15 year olds were in Tanner Stages I or II. When the data were analyzed by 16 year olds three were in Tanner Stage IV and three were in Tanner Stage V, while one was in Tanner Stage III. None of the 16 year olds were in Tanner Stages I or II. Three of the 17 year olds were in Tanner Stage V, with two in Tanner Stage IV and one in Tanner Stage III. None of the 17 year olds were in Tanner Stage

I or II. Three of the 18 year olds were in Tanner Stage IV with one in Tanner Stage III and none in Tanner Stages I or II.

In Tables 2 and 3 the variation can be seen in rates of physiological growth and development during adolescence as described by Blos (1962) and Tanner (1973) in Chapter III. For example there were more 14 and 15 year olds in the study population that were in Tanner Stage V than 18 year olds. The expectation would be that most of the 18 year olds would have been in Tanner Stage V since the 18 year old is closer to adulthood than the 14 year old. The initial data therefore show that in the study population there is a variation in the stages of physiological development (Tanner Stages) which is not explained by age. Such developmental variation is typical in adolescence as stated by Blos (1962) and Tanner (1973).

Previous Examinations by Female Health Care Providers

Part of the demographic data included the question, "Have you ever been examined by a female health care provider before?" The adolescent simply responded by answering "Yes" or "No" to this question. If an adolescent had had the previous experience of being examined by a female then it could be expected that he may have responded differently on the instrument than the participant who had never been examined by females.

Of the 45 participants and four 18 year olds, 23 or 47 percent had previously been examined by female health care providers (see Table 4). The adolescents who had previously been examined by females were shown to have lower mean scores on Concerns (Total)

Table 4.--Previously Examined by Females and Mean Scores on Concerns for Mean Age and Mean Tanner Stage.

	MEAN SCORES				
	Concerns (Total)	Body Image Concerns	Identity Concern	Independence Concern	Relatedness Concern
Previously examined by a Female (N=23) mean Tanner Stage = 3.74, mean age = 14.78	53.96	12.17	13.65	15.17	13.22
Never examined by a Female (N=26) mean Tanner Stage = 3.81, mean age = 15.58	56.00	14.08	13.58	14.58	13.77
t value	-.66	-2.00	.02	.82	-1.00

(53.96), lower mean scores on Body Image (12.17), slightly higher mean scores on Identity (13.65), higher mean scores on Independence (15.17) and slightly lower mean scores on Relatedness (13.22) than the participants who had never been examined by females. Therefore the participants who had previously been examined by females had less Concerns (Total), less concerns in the area of Body Image, slightly more concerns in the area of Identity, more concerns in the area of Independence, and slightly less concerns in the area of Relatedness than the adolescents who had never been examined by female health care providers.

The mean age of the adolescents who had previously been examined by female health care providers was 14.78 years and their mean Tanner Stage was 3.74. The mean age and mean Tanner Stage of the adolescents who never had been examined by females was 15.58 years and 3.81 respectively. Therefore the younger aged, slightly less physically developed adolescents, previously examined by females had fewer Concerns (Total) than the older, slightly more physically developed adolescents who never had been examined by professional women. However the mean scores, on Concerns, Age and Tanner Stage of the two groups are quite similar, with the difference between the mean scores for the two groups almost negligible. A t test was used to test for the significance between the means of the two groups. None of the mean scores were significant at the .05 level of confidence (2.04). Therefore essentially there was no difference between the two groups on concern scores.

Summary

The preceding section has presented the descriptive findings of the study population. The specific characteristics of the population described were: the participants and nonparticipants, Age and Tanner Stages of the participants, and adolescents who had previously been examined by female health care providers compared to the adolescents who had never been examined by female providers.

The following section presents the data for the research hypotheses. Specifically the hypotheses focused on the nature of the Concerns, the relationships of the Concerns, [Concerns (Total),

Body Image Concerns, Identity Concerns, Independence Concerns, and Relatedness Concerns] to Age and Tanner Stage, and the relationship of Concerns and Tanner Stage if Age was held constant.

Data Presentation for Hypotheses

Hypothesis 1: Descriptive Findings of Concerns

> Concerns of male adolescents who might have a complete physical examination by a female health care provider can be identified.

The above hypothesis, for descriptive analysis, was divided into six parts each of which are discussed separately. The six parts were Body Image Concerns, Identity Concerns, Independence Concerns, Relatedness Concerns, mean Concern scores for Age and Tanner Stage, and Other Concerns.

Body Image Concerns. The items on the instrument (see Appendix D) measuring concerns in the area of adolescent Body Image were:

Item 1. Concern about being overdeveloped or underdeveloped if examined by a woman.

Item 6. Concern that the body of the adolescent would have to be seen (viewed) by the female examiner.

Item 7. Concern that the female examiner might not realize the tenderness of the scrotum.

Item 14. Concern that the adolescent might have an erection during the examination conducted by the female provider.

Item 20. Concern that the body of the adolescent would have to be touched by the female examiner.

In Table 5 the frequency distributions are presented with age of the adolescents who were concerned in each of the five items. In all age groups except the 13 year olds, item 20 (see Appendix D) about the body being touched by the female provider caused the most concern. In the 14 year old group 12 adolescents (71 percent) were concerned that the female examiner would have to touch their body; nine (69 percent) of the 15 year olds, six (86 percent) of the 16 year olds and six (100 percent) of the 17 year olds were concerned about the female provider touching their body. Of the total group (N=45) of adolescents, 33 (73 percent) were concerned about being touched by the female. Item 1 (see Appendix D) about being overdeveloped or underdeveloped caused the most concern for the 13 year olds. Both 13 year olds (100 percent) were concerned about their development.

Item 7 (see Appendix D) that the female examiner would not realize the tenderness of their scrotum also caused concern to the adolescents. One of the 13 year olds (50 percent), four of the 14 year olds (24 percent), four the 15 year olds (31 percent), four of the 16 year olds (57 percent), and four of the 17 year olds (67 percent) were concerned that the female examiner would not realize the tenderness of the scrotum, resulting in 17 individuals or 38 percent of the total group (N=45).

Only six individuals or 13 percent of the total group (N=45) were concerned about their bodies being seen by the female examiner (item 6, Appendix D) with 12 individuals or 27 percent of the total

Table 5.--Total Number and Percentage of Individuals Identifying Body Image Concerns for Age According to Item Number.

Item	Number of Individuals By Age Who Were Concerned					Total Number and Percent of Total Group Who Were Concerned (N=45)	
	13 N=2	14 N=17	15 N=13	16 N=7	17 N=6	Total Number Concerned	Percent of Total Group
1 Overdeveloped-Underdeveloped	2	5	3	1	3	14	31
6 Seen	0	2	2	1	1	6	13
7 Scrotal Tenderness	1	4	4	4	2	17	38
14 Erection	0	3	3	4	2	12	27
20 Touched	0	12	9	6	6	33	73

group concerned about having an erection during the examination (item 14, Appendix D) and 14 adolescents or 31 percent of the total group concerned about being overdeveloped or underdeveloped if examined by a female health care provider (item 1, Appendix D).

In summary, the situations posing the greatest concern to the adolescents in the Body Image area were that their body would have to be touched by the female examiner (73 percent) and that the female examiner would not realize the tenderness of their scrotum (38 percent) (items 20 and 7, Appendix D).

Identity Concerns. The items on the instrument measuring concerns in the area of adolescent Identity (see Appendix D) were:

Item 2. Concern that the female examiner might talk to and treat the adolescent as if he were a child.

Item 9. Concern that the female examiner might want to know about the habits of the adolescent such as smoking, drinking, drugs.

Item 13. Concern that the female examiner might not approve of the manners and language of the adolescent.

Item 15. Concern that the female examiner would herd the adolescent through so fast that they would not get a good physical examination.

Item 19. Concern that the female examiner would not understand the adolescent or his feelings.

In Table 6 the frequency distribution is presented with age of the adolescents who were concerned in each of the five items. The greatest amount of concerns (30 individuals or 67 percent) of the total group (N=45) was that they would be herded through so fast by the female examiner that they would not get a good physical examination (item 15, Appendix D). Twenty-eight individuals or 62 percent of the total group were concerned that the female examiner would not approve of their habits such as drinking, smoking, drugs (item 9, Appendix D). Twenty-four individuals or 53 percent of the total group were concerned that the female examiner would not understand them or their feelings (item 19, Appendix D). Nineteen adolescents or 42 percent of the total group were concerned that the female

Table 6.--Total Number and Percentage of Individuals Identifying Identity Concerns for Age According to Item Number.

Item	Number of Individuals By Age Who Were Concerned					Total Number and Percent of Total Group Who Were Concerned (N=45)	
	13 N=2	14 N=17	15 N=13	16 N=7	17 N=6	Total Number Concerned	Percent of Total Group
2 Child	2	8	4	2	3	19	42
9 Habits	1	9	7	6	5	28	62
13 Manners and Language	0	6	6	1	3	16	36
15 Herd	0	10	9	5	6	30	67
19 Understand	0	10	5	5	4	24	53

examiner might talk to them and treat them like a child (item 2, Appendix D). Sixteen individuals or 36 percent of the total group were concerned that the female examiner would not approve of their manners and language (item 13, Appendix D).

In examining the age groups and concerns, the situation causing the most concern to the two (100 percent) 13 year olds was that the female examiner would treat them and talk to them like a child (item 2, Appendix D). Two situations caused 10 (59 percent) of the 14 year olds concern: the concern that the female examiner would herd them through so fast that they would not get a good

physical examination (item 15, Appendix D) and the concern that the female examiner would not understand them or their feelings (item 19, Appendix D). Six adolescents (35 percent) were concerned that the female examiner would not approve of their language and manners (item 13, Appendix D). Nine (53 percent) of the 14 year olds were concerned that the female examiner would want to know about their habits such as drinking, smoking and drugs (item 9, Appendix D). Eight (47 percent) of the 14 year olds were concerned that the female examiner would talk to them and treat them like a child (item 2, Appendix D).

In the 15 year old group nine (69 percent) individuals were concerned that they would be herded through so fast that they would not get a good physical examination (item 15, Appendix D). Seven (54 percent) of the 15 year olds were concerned that the female examiner would want to know about their habits such as drinking, smoking, drugs (item 9, Appendix D). Six (46 percent) of the 15 year olds were concerned that the female examiner would not approve of their language or manners (item 13, Appendix D). Five (38 percent) of the 15 year olds were concerned that the female examiner would not understand them or their feelings (item 19, Appendix D). Four (31 percent) of the 15 year olds were concerned that the female examiner might talk to them and treat them like a child (item 2, Appendix D). Therefore the situation causing concern to the majority (nine persons or 69 percent) of 15 year olds was that they would be herded through so fast that they would not get a good physical examination (item 15, Appendix D).

In the 16 year old group six (86 percent) of the individuals were concerned that the female examiner might want to know about their habits such as drinking, smoking and drugs (item 9, Appendix D). Five (71 percent) of the 16 year olds were concerned about two things: that the female examiner would herd them through so fast they they would not get a good physical examination (item 15, Appendix D) and that the female examiner would not understand them or their feelings (item 19, Appendix D). Two (29 percent) of the 16 year olds were concerned that the female examiner would talk to them and treat them like a child (item 2, Appendix D). One (14 percent) of the 16 year olds was concerned that the female examiner might not approve of his language and manners (item 13, Appendix D). Therefore the item which caused concern to the greatest number (six individuals or 86 percent) of 16 year olds was that the female examiner might want to know about their habits.

In the 17 year old group the greatest amount of concern in the Identity area was that the female examiner would herd them through so fast that they would not get a good physical examination (item 15, Appendix D). All six (100 percent) of the 17 year olds expressed the above concern. Five (83 percent) of the 17 year olds were concerned that the female examiner might want to know about their habits such as drinking, smoking, drugs (item 9, Appendix D). Four (67 percent) of the 17 year olds were concerned that the female examiner would not understand them or their feelings (item 19, Appendix D). Three (50 percent) of the 17 year olds were concerned about two things: that the female examiner might not approve of their language and

manners (item 13, Appendix D) and that the female examiner might talk to them and treat them like a child (item 2, Appendix D). Therefore in the 17 year old group, the item posing concern to the greatest number (100 percent) of individuals was that they would not get a good physical examination.

In summary the concerns of the total group in the Identity area were focused primarily on the concerns that the female examiner would herd them through so fast that they would not get a good physical examination (30 individuals or 67 percent) and that the female examiner might want to know about their habits such as drinking, smoking and drugs (28 individuals or 62 percent).

Independence Concerns. The items on the instrument measuring concerns in the area of adolescent need for control and independence (see Appendix D) were:

Item 3. Concern that the female examiner might find something wrong and tell the parents of the adolescent, but not the adolescent.

Item 5. Concern that nobody had given the adolescent a choice of whether he wanted a man or woman to conduct his physical examination.

Item 8. Concern that the female examiner will be in control of the physical examination telling the adolescent what to do.

Item 10. Concern that if the female examiner finds some little thing wrong with the adolescent then she would not let him play in sports.

Item 16. Concern that the female examiner would not take the word of the adolescent on things during the examination.

In Table 7 the frequency distribution is presented with age of the adolescents who were concerned in each of the five Independence items. Twenty-seven individuals or 60 percent of the total group were concerned that the female examiner might not take their word on things (item 16, Appendix D). Nineteen individuals (42 percent of the total group) were additionally concerned about two things: that the female examiner would find something wrong and tell his parents but not the adolescent himself (item 3, Appendix D), and that nobody had given them their choice of whether they wanted to be examined by a man or woman (item 5, Appendix D). Eighteen adolescents (40 percent of the total group) were concerned that the female examiner might find some little thing wrong with them and then not allow them to play sports (item 10, Appendix D). Item 8 (Appendix D) received only seven (16 percent of the total group) responses and was the concern that the female examiner would be in control of the examination telling the adolescent what to do.

In the 13 year old group item 16 (Appendix D) that the female examiner might not take the word of the adolescent, was of concern to both (100 percent) young men. The two 13 year olds did not express any concern about the situations in the other four items.

In the 14 year old group 13 responses of concern (76 percent) were expressed for item 16 (Appendix D) that the female examiner might not take their word. Three items received expressed concern

Table 7.--Total Number and Percentage of Individuals Identifying Independence Concerns for Age According to Item Number.

Item	Number of Individuals By Age Who Were Concerned					Total Number and Percent of Total Group Who Were Concerned (N=45)	
	13 N=2	14 N=17	15 N=13	16 N=7	17 N=6	Total Number Concerned	Percent of Total Group
3 Parents	0	6	8	3	2	19	42
5 Choice	0	6	5	3	5	19	42
8 Control	0	5	0	1	1	7	16
10 Little Thing	0	6	5	4	3	18	40
16 Word	2	13	6	3	3	27	60

by six (35 percent) of the 14 year olds: that the female examiner would find something wrong and tell their parents but not them (item 3, Appendix D); that nobody had given them a choice of whether they wanted a man or woman to conduct their physical examination (item 5, Appendix D); that the female examiner might find some little thing wrong and then not allow them to play sports (item 10, Appendix D). The item posing concern to five (39 percent) of the 14 year olds was that the female examiner would be in control of the examination telling them what to do (item 8, Appendix D).

In the 15 year old group the item posing concern to eight of the adolescents (62 percent) was that the female examiner would

find something wrong and tell their parents but not them (item 3, Appendix D). Six of the 15 year olds (46 percent) were concerned that the female examiner might not take their word (item 16, Appendix D). Two items posed concern to five (38 percent) of the 15 year olds: that nobody had given them a choice of whether they wanted a man or woman to conduct their physical examination (item 5, Appendix D), and that the female examiner might find some little thing wrong then not allow them to play sports (item 10, Appendix D). None of the 15 year olds were concerned that the female examiner would be in control of the examination telling the adolescents what to do (item 8, Appendix D).

In the 16 year old group the item posing concern to four (57 percent) of adolescents was that the female examiner might find some little thing wrong and then not allow them to play sports (item 10, Appendix D). Three items posed concern to three (43 percent) of the 16 year olds: that the female examiner might find something wrong and tell their parents but not them (item 3, Appendix D); that nobody had given them a choice of whether they wanted a man or woman to conduct their physical examination (item 5, Appendix D); and that the female examiner might not take their word (item 16, Appendix D). The item posing concern to one of the 16 year olds (14 percent) was that the female examiner would be in control of the examination telling him what to do (item 8, Appendix D).

In the 17 year old group, unlike the other age groups, the item posing concern to five (83 percent) individuals was that nobody had given them the choice of whether they wanted a man or woman

to conduct their physical examination (item 5, Appendix D). Two items posed concern to three (50 percent) of the 17 year olds: that the female examiner would find some little thing wrong and then not allow them to play sports (item 10, Appendix D) and that the female examiner might not take their word (item 16, Appendix D). Concern that the female examiner might find something wrong and tell their parents but not them was expressed by two (33 percent) of the 17 year olds (item 3, Appendix D). The item posing concern to one (17 percent) of the 17 year olds was that the female examiner would be in control of the examination telling him what to do (item 8, Appendix D).

In summary the concerns of the total group in the Independence area were primarily focused (27 individuals or 60 percent) on the concern that the female examiner might not take their word (item 16, Appendix D). The item posing concern to the least number (seven individuals or 16 percent) of adolescents was that the female examiner would be in control of the examination telling them what to do (item 8, Appendix D).

Relatedness Concerns. The items on the instrument (see Appendix D) measuring concerns about adolescent relatedness or ability to establish relationships with peers and members of the opposite sex were:

Item 4. Concern that the female examiner might make a pass at the adolescent.

Item 11. Concern about what the other guys would think if they knew a woman had examined the adolescent.

Item 12. Concern that they would like to ask questions about things like venereal disease but are too embarrassed to ask a woman.

Item 17. Concern that the female examiner might question them about their sexual relationships.

Item 18. Concern because they get very embarrassed whenever around women.

In Table 8 the frequency distribution is presented with age of the adolescents who were concerned in each of the five Relatedness items. Thirty-seven (82 percent) individuals out of the total group were concerned about what the other guys would think if they knew a woman had examined them (item 11, Appendix D). Two items posed concern to 26 individuals (58 percent) out of the total group: concern that they would like to ask questions about venereal disease for instance but are too embarrassed to ask a woman (item 12, Appendix D), and concern that the female examiner might question them about their sexual relationships (item 17, Appendix D). Twenty-four individuals (53 percent) expressed concern because they are easily embarrassed whenever around women (item 18, Appendix D). Twenty-one adolescents (47 percent) were concerned that the female examiner might make a pass at them (item 4, Appendix D).

In the 13 year old group the item posing concern to both (100 percent) of the young men was that the female examiner might question them about their sexual relationships (item 17, Appendix D). Three items posed concern to one (50 percent) of the 13 year olds: that the female examiner might make a pass at him (item 4,

Table 8.--Total Number and Percentage of Individuals Identifying Relatedness Concerns for Age According to Item Number.

Item	Number of Individuals By Age Who Were Concerned					Total Number and Percent of Total Group Who Were Concerned (N=45)	
	13 N=2	14 N=17	15 N=13	16 N=7	17 N=6	Total Number Concerned	Percent of Total Group
4 Pass	1	9	4	2	5	21	47
11 Other Guys	1	14	11	5	6	37	82
12 Questions	1	11	6	4	4	26	58
17 Sexual Relationships	2	12	7	1	4	26	58
18 Embarrassment	0	8	9	5	2	24	53

(Appendix D); concern about what the other guys would think if they knew a woman had examined him (item 11, Appendix D); and concern because he would like to ask questions for instance about venereal disease, but is too embarrassed to ask a woman (item 12, Appendix D). The 13 year olds were not concerned because of embarrassment whenever around women (item 18, Appendix D).

In the 14 year old group, as in the older age groups, the item posing concern to 14 (82 percent) of adolescents was the concern about what the other guys would think if they knew a woman had examined them (item 11, Appendix D). Twelve (71 percent) of the 14

year olds were concerned that the female examiner might question them about their sexual relationships (item 17, Appendix D). Eleven (65 percent) of the 14 year olds were concerned because they would like to ask questions for instance about venereal disease but are too embarrassed to ask a woman (item 12, Appendix D). Nine (53 percent) of the 14 year olds were concerned that the female examiner might make a pass at them (item 4, Appendix D). Eight (47 percent) of the 14 year olds were concerned because of embarrassment whenever around women (item 18, Appendix D).

In the 15 year old group the item posing concern to 11 (85 percent) of adolescents was concern about what the other guys would think if they knew a woman had examined them (item 11, Appendix D). Nine (69 percent) of the 15 year olds were concerned because of embarrassment whenever around women (item 18, Appendix D). Seven (54 percent) of the 15 year olds were concerned that the female examiner might question them about their sexual relationships (item 17, Appendix D). Six (46 percent) of the 15 year olds were concerned because they have questions they would like to ask for instance about venereal disease but are too embarrassed to ask a woman (item 12, Appendix D). The item posing concern to four (31 percent) of 15 year olds was that the female examiner might make a pass at them (item 4, Appendix D).

In the 16 year old group two items posing concern to five (71 percent) of the adolescents were: concern about what the other guys would think if they knew a woman had examined them (item 11, Appendix D), and concern because they were easily embarrassed

whenever around women (item 18, Appendix D). Four (57 percent) of the 16 year olds were concerned because they would like to ask questions for instance about venereal disease but are too embarrassed to ask a woman (item 12, Appendix D). Only two (29 percent) of the 16 year olds were concerned that the female examiner might make a pass at them (item 4, Appendix D). The item posing concern to one (14 percent) of 16 year olds was the concern that the female examiner might question him about his sexual relationships (item 17, Appendix D).

In the 17 year old group the item posing concern to all six (100 percent) of the adolescents was concern about what the other guys would think if they knew a woman had examined them (item 11, Appendix D). Five (83 percent) of the 17 year olds were concerned that the female examiner might make a pass at them (item 4, Appendix D). Two items posed concern to five (67 percent) of the 17 year olds: concern because they have questions they would like to ask for instance about venereal disease but are too embarrassed to ask a woman (item 12, Appendix D), and concern that the female examiner might question them about their sexual relationships (item 17, Appendix D). The item posing concern to two (33 percent) of 17 year olds was concern because of embarrassment whenever around women (item 18, Appendix D).

Therefore the concerns of the total group in the Relatedness area were primarily focused (37 individuals or 82 percent) on the concern about what the other guys would think if they knew a woman had examined them (item 11, Appendix D). The item posing concern

to the least number (21 individuals or 47 percent) of adolescents was that the female examiner might make a pass at the adolescent (item 4, Appendix D).

The mean scores of Concerns of the five age groups were then categorized according to Body Image Concerns (BI), Identity Concerns (Id), Independence Concerns (In), Relatedness Concerns (R), and Concerns (Total) (To) and Tanner Stage I, II, III, IV, and V. Thus the concerns of the adolescents by age groups and Tanner Stage could be examined. The total number of possible points for each category was 25 with a resulting possibility of 100 points for Concerns (Total).

Mean Concern Scores for Age and Tanner Stage. In Table 9 the mean Concern scores for Age and Tanner Stage of the study population is presented. For the 13 year olds, both in Tanner Stage III the mean Body Image Concern score was 16.5; the mean Identity Concern score was 18; the mean Independence Concern score was 19.5; the mean Relatedness Concern score was 17.5 and the mean Concerns (Total) score was 71.5.

In the 14 year old group the one participant in Tanner Stage II had a Body Image Concern score of 12, an Identity Concern score of 9, an Independence Concern score of 10, a Relatedness Concern Score of 14 and a Concerns (Total) score of 45.0. In the Tanner Stage III 14 year olds (N=7) the mean Body Image Concern score was 14.86, mean Identity Concern score was 14.86, mean Independence Concern score was 16.43, mean Relatedness Concern score was 14.29 and Concerns (Total) score was 58.57. In the Tanner Stage IV 14 year

TABLE 9.--Mean Concern Scores for Age and Tanner Stage.

	Age 13 (N = 2)					Age 14 (N = 17)					Age 15 (N = 13)					Age 16 (N = 7)					Age 17 (N = 6)				
	Concerns					Concerns					Concerns					Concerns					Concerns				
Tanner Stage	B[a]	Id[a]	In[a]	R[a]	To[b]	B[a]	Id[a]	In[a]	R[a]	To[b]	B[a]	Id[a]	In[a]	R[a]	To[b]	B[a]	Id[a]	In[a]	R[a]	To[b]	B[a]	Id[a]	In[a]	R[a]	To[b]
I																									
II						12	9	10	10	N= 1 45.0															
III	16.5	18	19.5	17.5	N=2 71.5	14.86	14.86	16.43	14.29	N = 7 58.57	13.4	14.4	12.2	14.2	N= 5 54.2	14	17	16	14	N= 1 61.0	14	14	12	17	N= 1 57.0
IV						13	13.63	15.75	13.38	N = 8 62.25	14.29	13.57	15	13.14	N= 7 56.0	10	11	11.33	11.67	N= 3 44.0	12.5	16.5	18	15.5	N= 2 62.5
V						13	16	19	14	N= 1 62.0	19	11	16	12	N= 1 58.0	11.67	10	15.67	11.67	N= 3 49.0	10	10.67	11	12.67	N= 3 44.33

a = Total Possible Score is 25 points
b = Total Possible Score is 100 points
B = Body Image Concerns Mean Scores
Id = Identity Concerns Mean Scores
In = Independence Concerns Mean Scores
R = Relatedness Concerns Mean Scores
To = Concerns (Total) Mean Scores

olds (N=8) the mean Body Image Concern score was 13.0, the mean Identity score was 13.63, the mean Independence Concern score was 15.75, the mean Relatedness Concern score was 13.38, and the mean Concerns (Total) score was 62.25. In Tanner Stage V the one 14 year old had a Body Image Concern score of 13, Identity Concern score of 16, Independence Concern score of 19, Relatedness Concern score of 14 and Concerns (Total) score of 62.0.

In the 15 year old group the mean score of the adolescents in Tanner Stage III (N=5) in Body Image Concern was 13.4, in Identity Concern was 14.4, in Independence Concern was 12.2, in Relatedness Concern was 14.2 and Concerns (Total) score was 54.2. The mean score of the 15 year olds in Tanner Stage IV (N=7) in Body Image Concern was 14.29, in Identity Concern was 13.57, in Independence Concern was 15, in Relatedness Concern was 13.14 and the mean Concerns (Total) score was 56.0. The scores of the one 15 year old in Tanner Stage V was 19 in Body Image Concerns, 11 in Identity Concern, 16 in Independence Concern, 12 in Relatedness Concern and 58.0 in Concerns (Total).

In the 16 year old age group the scores of the one adolescent in Tanner Stage III in the Body Image Concern area was 14, in Identity Concern was 17, in Independence Concern was 16, in Relatedness Concern was 14 and Concerns (Total) score was 61.0. The mean score of Adolescents age 16, Tanner Stage IV (N=3) in the area of Body Image Concern was 10, in Identity Concern was 11, in Independence Concern was 11.33, in Relatedness Concern was 11.67, in Concerns (Total) was 44.0. The mean score of adolescents age 16, Tanner

Stage V (N=3) in the Body Image Concern area was 11.67, in Identity Concern was 10, in Independence Concern was 15.67, in Relatedness Concern was 11.67 and mean Concerns (Total) score was 49.0

The one adolescent age 17 in Tanner Stage III had a score of 14 in Body Image Concern, 14 in Identity Concern, 12 in Independence Concern, 17 in Relatedness Concern and a Concerns (Total) score of 57.0. The 17 year olds in Tanner Stage IV (N=2) had mean scores of 12.5, 16.5, 18, 15.5, and 62.5 in Body Image Concerns, Identity Concerns, Independence Concerns, Relatedness Concerns, and Concerns (Total), respectively. The adolescents age 17 in Tanner Stage V (N=3) had mean scores of 10, 10.67, 11, 12.67 and 44.33 in Body Image Concern, Identity Concern, Independence Concern, Relatedness Concern and Concerns (Total), respectively.

Other Concerns. Only one of the 45 individuals utilized the open-ended item to express additional concerns not mentioned in the first section of the instrument. The young man was 15 years old, in Tanner Stage IV and had scores of 16, 13, 16, 10 and 55 in the areas of Body Image Concern, Identity Concern, Independence Concern, Relatedness Concern and Concerns (Total), respectively.

The adolescent expressing the additional concern stated that he felt men and women were equally capable as health care providers but that he was embarrassed to be examined by a woman. He felt men should examine the male patients and women should examine the female patients. Since only one adolescent responded to the open-ended item, the expressed concern of the above adolescent could not be categorized or compared to the other concerns.

Summary

In this section the descriptive findings of Concerns for Hypothesis 1 have been presented. Among the findings in the area of Body Image Concerns the item posing concern to the greatest number of adolescents (33 individuals or 73 percent) was that the female health care provider would have to touch their bodies during the physical examination (item 20, Appendix D). The item posing concern to the least number of adolescents (six individuals or 13 percent) was that the female examiner would have to see their body (item 6, Appendix D). However, the number of adolescents concerned with each situation presented in the items varied for age groups (see Table 5).

In the Identity area the item posing concern to the greatest number of adolescents (30 individuals or 67 percent) was that the female examiner would herd them through so fast they they would not get a good physical examination (item 15, Appendix D). The item relates to Identity in that the adolescent feels he is a person of worth--worthy of receiving a good physical examination. In the Identity area the item posing concern to the least number of adolescents (16 individuals or 36 percent) was that the female examiner might not approve of the language and manners of the adolescent (item 13, Appendix D). However, the number of adolescents concerned in each of the five items of the Identity area varied for age groups (see Table 6).

In the Independence area the item posing concern to the greatest number of adolescents (27 individuals or 60 percent) was

concern that the female examiner might not take their word on things during the physical examination (item 16, Appendix D). The item posing concern to the least number of adolescents (seven individuals or 16 percent) was that the female examiner would be in control of the physical examination telling the adolescent what to do (item 8, Appendix D). However, as with the other areas of concern, the number of adolescents concerned in the five Independence items varied with age groups (see Table 7).

In the Relatedness area the item posing concern to the greatest number of adolescents (37 individuals or 82 percent) was concern about what the other guys would think if they knew a woman had examined them (item 11, Appendix D). The item posing concern to the least number of adolescents (21 individuals or 47 percent) was that the female examiner might make a pass at them (item 4, Appendix D). The concerns in the Relatedness area varied for age groups (see Table 8).

Additionally the mean concern scores in the areas of Body Image, Identity, Independence, Relatedness and Concerns (Total) were presented not only for age but also for Tanner Stage. The diversity in the scores can be viewed in Table 9.

Only one adolescent utilized the open-ended item for other concerns not mentioned in Part A of the instrument. The young man stated that he felt men and women were equally capable as health care providers but that he was embarrassed to be examined by women. The adolescent felt that men should examine the male patients and

women should examine the female patients. In the following section data are presented for Hypothesis 2.

Hypothesis 2

> The Concerns expressed by the male adolescents will be related to Age.

The dependent variable Concerns (Total) in Hypothesis 2 was divided into four subvariables Body Image Concerns, Identity Concerns, Independence Concerns, and Relatedness Concerns. The relationship of each subvariable, as well as the major variable Concerns (Total), and the independent variable Age was then determined by using the formula for Pearson Product-Moment Correlation (see Table 10). The percent of variation in Concerns explained by Age is represented as the shared variation for each subhypothesis.

Table 10.--Correlation Matrix Presenting the Pearson Product-Moment Correlation Coefficients for the Seven Study Variables.

Study Variables	STUDY VARIABLES						
	Concerns (Total)	Body Image Concerns	Identity Concerns	Independence Concerns	Relatedness Concerns	Age	Tanner Stage
Concerns (Total)	1.00						
Body Image Concerns	.79*	1.00					
Identity Concerns	.71*	.38*	1.00				
Independence Concerns	.74*	.47*	.31*	1.00			
Relatedness Concerns	.73*	.47*	.44*	.34*	1.00		
Age	-.35*	-.29*	-.25	-.33*	-.15	1.00	
Tanner Stage	-.25	-.18	-.30*	.01	-.30*	.46*	1.00

*=significant at the .05 level of confidence.

Subhypothesis 2-A: Body Image Concerns expressed by the male adolescent will be related to Age.

The Pearson-Product Moment Correlation (r) between the independent variable Age and the dependent variable Body Image was -.29 (see Table 10) which was significant at the .05 level. While the correlation coefficient represented a low inverse relationship between Body Image Concerns and Age the percentage of variation shared between the variables was 8.4. Essentially the null hypothesis was rejected, and the findings show that as Age increased concerns in the Body Image area descreased.

Subhypothesis 2-B: Identity Concerns expressed by the male adolescent will be related to Age.

The Pearson Product-Moment Correlation (r) between the independent variable Age and the dependent variable Identity was -.25 (see Table 10) which was not significant at the .05 level of confidence. The relationship between the variables was low with a shared variation of 6.3 percent. In this case the null hypothesis could not be rejected since there essentially was an insignificant low inverse relationship between Age and Identity concerns.

Subhypothesis 2-C: Independence Concerns expressed by the male adolescent will be related to Age.

The Pearson Product-Moment Correlation (r) between the independent variable Age and the dependent variable Independence was -.33 (see Table 10) which was significant at the .05 level of confidence. The relationship between the variables was low with a shared variation of 10.9 percent. Therefore the null hypothesis was rejected showing that there was a low inverse significant

relationship between the variables. As Age increased concerns in the Independence area decreased.

Subhypothesis 2-D: Relatedness Concerns expressed by the male adolescent will be related to Age.

The Pearson Product-Moment Correlation (r) between the independent variable Age and the dependent variable Relatedness was -.15 (see Table 10) which was not significant at the .05 level of confidence. The relationship between the variables was negligible with a shared variation of 2.3 percent. Therefore the null hypothesis was not rejected because there was essentially a negligible insignificant relationship between the variables.

In testing Hypothesis 2 overall the Pearson Product-Moment Correlation (r) between the independent variable Age and the dependent variable Concerns (Total) was -.35 (see Table 10) which was significant at the .05 level of confidence. Again the relationship between the two variables was low but nearly a moderate relationship with a shared variation of 12.3 percent. The null hypothesis therefore was rejected showing that there was a low inverse significant relationship between Age and Concerns. In summary as Age increased Concerns decreased. In the following section data are presented for Hypothesis 3.

Hypothesis 3

The Concerns expressed by the male adolescents will be related to Tanner Stage.

The dependent variable Concerns (Total) in Hypothesis 3 was divided into four subvariables Body Image Concerns, Identity Concerns,

Independence Concerns and Relatedness Concerns. The relationship between each subvariable, as well as the major variable Concerns (Total), and the independent variable Tanner Stage was then determined using the formula for Pearson Product-Moment Correlation. The percent of variation in Concerns explained by Tanner Stage is represented by the shared variation in each subhypothesis.

Subhypothesis 3-A: Body Image Concerns expressed by the male adolescent will be related to Tanner Stage.

The Pearson Product-Moment Correlation (r) between the independent variable Tanner Stage and the dependent variable Body Image was -.18 (see Table 10) which was not significant at the .05 level of confidence. The correlation coefficient represents a negligible relationship with a shared variation of 3.2 percent. Essentially there was a negligible inverse insignificant relationship between the variables Tanner Stage and Concerns in the Body Image area. Therefore the null hypothesis was not rejected.

Subhypothesis 3-B: Identity Concerns expressed by the male adolescent will be related to Tanner Stage.

The Pearson Product-Moment Correlation (r) between the independent variable Tanner Stage and the dependent variable Identity was -.30 (see Table 10) with a shared variation of 9 percent which was significant at the .05 level of confidence. Therefore the null hypothesis was rejected showing that there was a low inverse significant relationship between Tanner Stage and Concerns in the Identity area. As Tanner Stage increased, Concerns in the Identity area decreased.

Subhypothesis 3-C: Independence Concerns expressed by the male adolescent will be related to Tanner Stage.

The Pearson Product-Moment Correlation (r) between the independent variable Tanner Stage and the dependent variable Independence was .01 (see Table 10) with a shared variation of 0 percent. The correlation coefficient was not significant at the .05 level of confidence. Essentially there was no relationship between Tanner Stage and Independence Concerns and thus the null hypothesis was not rejected.

Subhypothesis 3-D: Relatedness Concerns expressed by the male adolescents will be related to Tanner Stage.

The Pearson Product-Moment Correlation (r) between the independent variable Tanner Stage and the dependent variable Relatedness was -.30 (see Table 10) which was significant at the .05 level of confidence. The percentage of shared variation was 9 percent. Therefore the null hypothesis was rejected showing there was a low inverse significant relationship between Tanner Stage and Relatedness Concerns. As Tanner Stage increased, concerns in the Relatedness area decreased.

In testing Hypothesis 3 overall the Pearson Product-Moment Correlation (r) between the independent variable Tanner Stage and the dependent variable Concerns (Total) was -.25 (see Table 10) which was not significant at the .05 level. The shared variation was 6.3 percent. Therefore the null of Hypothesis 3 was not rejected since there was a low inverse insignificant relationship between Tanner Stage and Concerns (Total). Table 10 (p. 117) summarizes the

correlation coefficients in Hypotheses 2 and 3 by presenting a correlation matrix of the seven study variables.

Hypothesis 4

> Controlling for Age, the concerns expressed by the male adolescent will be related to Tanner Stage.

As in Hypotheses 2 and 3 the variable Concerns (Total) was divided into four subvariables, Body Image Concerns, Identity Concerns, Independence Concerns, and Relatedness Concerns. In order to test Hypothesis 4 the correlation coefficients (r) from Table 10 were utilized in the Partial Correlation formula. Partial correlation was utilized to determine the effect of Age on the correlation between Tanner Stage and Concerns.

Table 11 represents the Pearson Product-Moment Correlations between

1. Tanner Stage and Concerns (Total, Body Image Concerns, Identity Concerns, Independence Concerns and Relatedness Concerns) and
2. Partial Correlations between Tanner Stage and Concerns (Total, Body Image Concerns, Identity Concerns, Independence Concerns and Relatedness Concerns) when Age was held constant.

In examining the Partial Correlations one can see that there were low and negligible relationships between Tanner Stage and Concerns at the start, but the relationship between Age and Concerns was greater. Therefore when Age was held constant the negligible and low relationships between Tanner Stage and Concerns became even

Table 11.--Pearson Product-Moment Correlation Coefficients (r) Between Concerns and Tanner Stage with Partial Correlations Holding Age Constant.

	Tanner Stage	Partial Correlations With Age Constant
Concerns (Total)	-.25	-.10
Body Image (BI)	-.18	-.05
Identity (Id)	-.30*	-.21
Independence (In)	.01	.19
Relatedness (R)	-.30*	-.27

*=significant at the .05 level of confidence.

lower. The effect of Age was such a unique contributing factor in the relationship between Tanner Stage and Concerns that when Age was partialled out, there was little remaining in the relationship between Concerns and Tanner Stage. Thus the null hypothesis could not be rejected because the low and negligible relationships between Tanner Stage and Concerns if Age was held constant were not significant at the .05 level of confidence. The indication was that Age was what made the difference on Concerns, not Tanner Stage. For a summary of the findings for Hypotheses 2 through 4, see Table 12.

Reliability of the Instrument

The reliability or internal consistency of Part A of the instrument (Concerns) was measured using the formula for coefficient Alpha as stated in Chapter IV. The total scale measuring concerns

TABLE 12.--Summary of Hypotheses 2 through 4 with Variables, Results and Interpretations.

Hypothesis	Variables Represented	Correlation (r) Between Variables	Null Hypothesis Rejected at the .05 Level of Confidence	Interpretation
2	Concerns (Total) with Age	-.35	Yes	Low, inverse, significant relationship
	Body Image Concerns with Age	-.29	Yes	Low, inverse, significant relationship
	Identity Concerns with Age	-.25	No	Low, inverse, insignificant relationship
	Independence Concerns with Age	-.33	Yes	Low, inverse, insignificant relationship
	Relatedness Concerns with Age	-.15	No	Negligible, inverse, insignificant relationship
3	Concerns (Total) with Tanner Stage	-.25	No	Low, inverse, insignificant relationship
	Body Image Concerns with Tanner Stage	-.18	No	Negligible, inverse, insignificant relationship
	Identity Concerns with Tanner Stage	-.30	Yes	Low, inverse, significant relationship
	Independence Concerns with Tanner Stage	.01	No	Negligible, insignificant relationship
	Relatedness Concerns with Tanner Stage	-.30	Yes	Low, inverse, significant relationship
4	Concerns (Total) with Tanner Stage·Age	-.10	No	Negligible, inverse, insignificant relationship
	Body Image Concerns with Tanner Stage·Age	-.05	No	Negligible, inverse, insignificant relationship
	Identity Concerns with Tanner Stage·Age	-.21	No	Low, inverse, insignificant relationship
	Independence Concerns with Tanner Stage·Age	.19	No	Negligible, insignificant relationship
	Relatedness Concerns with Tanner Stage·Age	-.27	No	Low, inverse, insignificant relationship

of the adolescents was divided into five areas: Body Image Scale, Identity Scale, Independence Scale, Relatedness Scale and the Concerns (Total) scale.

To measure the reliability coefficient of the scale, the variance of the total scale and the variances of each item in the scale were obtained. Then using the Cronback (1951) formula for coefficient Alpha the reliability coefficient of the scale was computed. The reliability coefficient for the entire Concerns (Total) scales (Part A of the instrument) was .74 showing a marked, inter-relationship between the items in the scale.

The reliability coefficients were not as high in the smaller scales of Body Image (.55), Identity (.35), Independence (.52) and Relatedness (.17). However, reliability coefficients for parts of a total scale are expected to be lower when the number of items (k) in the scale is reduced as in the above cases. The smaller scales each had only five items while the entire scale had 20 items. The inter-item relationships of the smaller scales could have been increased merely by increasing the number of similar items in their scales. However, such a technique would have made the instrument much longer, an issue the researcher wished to avoid. Thus when the entire scale reliability was estimated, the internal consistency of the scale was marked.

The reliability of Part B of the instrument was not estimated statistically since some of the items in the scale had more than one value. When items have more than one value as in Part B, then statistical computation cannot be done. Thus one of the limitations

of Part B was that it could not be tested for internal consistency.

Summary

In Chapter V the data and analysis have been presented for the research hypotheses. An overview was presented describing the focus of the chapter. The descriptive findings of the population presented a discussion of the participants and non-participants, Ages and Tanner Stages of the participants, and data about previous examinations by female health care providers. The data were presented for each of the four hypotheses. For Hypothesis 1 the descriptive findings of Concerns were presented in the areas of Body Image, Identity, Independence, Relatedness, mean concern scores for Age and Tanner Stage, and Other Concerns. For Hypotheses 2 and 3 the Pearson Product-Moment Correlation Coefficients were presented for relationships between the independent and dependent variables. For Hypothesis 4 the Pearson Product-Moment Correlation Coefficients and Partial Correlations were presented for the relationships between Age, Tanner Stage and Concerns. The reliability of the instrument was presented with coefficient Alpha.

In Chapter VI the summary, conclusions, and implications for future studies are presented. The chapter focuses on the summary and interpretation of the findings, generalizing the results, the implications for nursing and other health related professions, and the recommendations for future study.

CHAPTER VI

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of the study was to identify the concerns of male adolescents age 13 to 17 when they were provided the information that their complete physical examination might be conducted by a female health care provider instead of a male provider. Specifically the study identified the relationships among the variables Age, Tanner Stage, Concerns (Total), Body Image Concerns, Identity Concerns, Independence Concerns and Relatedness Concerns.

More women are seeking careers in the health care fields with increasing numbers of women currently working in roles as health care providers. One of the functions of health care providers is to conduct physical examinations on patients.

Previous to the movement of nurses (primarily women) into the expanded health care roles, the person conducting physical examinations on patients of all ages and both sexes was usually the male physician. Female physicians were, and still are, a minority group. In examining the female patient, the male provider took measures to reduce the concerns of female patient embarrassment. However when the roles are reversed with the patient a male and the provider a female very little consideration has been given to the concerns of the male patient. In a review of the literature no research was

identified studying the problem of male patient concerns when examined by professional women. Therefore the present study was initiated to identify male concerns when the examiner might be a female. The study was delimited to male adolescents since adolescence is the age at which many changes occur both physiologically and emotionally. The changes occurring in the adolescent are in the areas of physiological (Tanner Stages) growth and development, Body Image, Identity, Independence and Relatedness.

The researcher was primarily interested in determining whether the male adolescent concerns (if a woman examines him instead of a man) in the areas of Body Image, Identity, Independence and Relatedness might be related to the Age of the adolescent and/or his Tanner Stage of physiological development.

Research questions were formulated after the above problem was identified and the variables Age, Tanner Stage, Body Image, Identity, Independence and Relatedness were defined. Specifically the questions were:

1. What are the concerns of male adolescents if provided the information that a female health care provider might conduct their physical examination?

2. Is there a relationship between their expressed Concerns and Age?

3. Is there a relationship between their expressed Concerns and Tanner Stage of development?

4. What is the relationship between Concerns and Tanner Stage if Age is constant?

The intent of the study was to initially identify specific concerns of the male adolescents, therefore Hypothesis 1 was developed as follows:

1. Concerns of male adolescents who might have a complete physical examination by a female health care provider can be identified.

The dependent variable Concerns was divided into the subvariables Concerns (Total), Body Image Concerns, Identity Concerns, Independence Concerns and Relatedness Concerns with the descriptive data presented for each Concern subvariable.

In order to answer questions 2 and 3 the following hypotheses were developed:

2. The Concerns expressed by the male adolescents will be related to Age.

3. The Concerns expressed by the male adolescents will be related to Tanner Stage.

In each of the above hypotheses the dependent variable Concerns was divided into the subvariables Concerns (Total), Body Image Concerns, Identity Concerns, Independence Concerns and Relatedness Concerns. Then each subvariable was correlated with the independent variables Age (in Hypothesis 2) and Tanner Stage (in Hypothesis 3).

In order to answer question 4, Hypothesis 4 was developed as follows:

4. Controlling for Age, the Concerns expressed by the male adolescents will be related to Tanner Stage.

As in Hypotheses 2 and 3 above, the dependent variable Concerns was divided into the subvariables Concerns (Total), Body Image Concerns, Identity Concerns, Independence Concerns and Relatedness Concerns. Then each subvariable was correlated with the independent variable Tanner Stage while holding the other independent variable, Age, constant.

The data presentation and analysis focused on the findings for each of the four hypotheses. The results of the study (1) form a basis for further research by health care professionals, (2) extend the knowledge base of nursing and (3) influence the perceptions, clinical judgment and actions of nursing (King, 1971). The following sections present the summary and interpretations of the findings, the problems encountered, the implications for nursing and other health professions, and the recommendations for future studies.

Summary and Interpretations of the Findings

This section describes the findings from the study. Each hypothesis is presented and briefly discussed.

Hypothesis 1

> Concerns of male adolescents who might have a complete physical examination by a female health care provider can be identified.

Body Image Concerns. The item (see pages 95 and 97) posing concern to 33 (73 percent) of the participants in the area of Body Image was the concern that the female provider would have to touch the body of the adolescent during the physical examination (item 20, Appendix D). However this concern was not shared in the 13 year old group. Instead the 13 year olds were concerned that the female examiner might think their bodies were overdeveloped or underdeveloped for their age. Such a finding might be expected since the 13 year olds, both in Tanner Stage III, had begun and were progressing in rapid body structure changes. There were no trends or patterns in

the age groups concerned about overdevelopment or underdevelopment. As age increased the percentage of concern about overdevelopment or underdevelopment decreased (five individuals or 29 percent) at 14 years, decreased (three individuals or 23 percent) at 15 years, further decreased (one person or 14 percent) at 16 years, then increased (three persons, or 50 percent) at 17 years. Perhaps the increase at 17 years can be explained by the assumption that at age 17 the growth and development of the body is complete or nearly complete in many cases. If the adolescent perceives his body to be overdeveloped or underdeveloped, then the adolescent may also foresee few future changes in body structure to correct the overdevelopment or underdevelopment. In other words, the adolescent may think that at 17 years, it is too late to do anything about his growth and development. All age groups were least concerned with the female examiner seeing their bodies during the examination which possibly could have been explained if other factors had been studied such as relationship with mothers and sisters and perception of women as health care providers. Perhaps the experiences of the adolescents were such that the seeing of viewing of their bodies by family members of the opposite sex were normal occurrences and therefore no cause for concern in the present study. Another explanation may be that seeing the body is not as threatening as touching the body.

The percentage of adolescents concerned that the female examiner might not realize the tenderness of the scrotum increased with age except at the 13 year old level. However with an N of two

in the 13 year old group, one was concerned about this situation while the other was not concerned. Perhaps the concern increasing with age can be explained by the fact that adolescents become more aware of the tenderness of the scrotum as the testicles develop. Therefore the older more fully developed adolescents may be more aware of scrotal tenderness than the younger less developed adolescents. In addition the older adolescents may have had previous sports injuries involving the scrotum. They could have been concerned because of thinking that no woman (female examiner) would possibly know about the tenderness of the scrotum since they (female examiners) do not have a scrotum.

Concern about having an erection during the examination increased with age until reaching the 17 year level, thereby decreasing. Since three of the six 17 year olds were in Tanner Stage V possibly there was less concern in the 17 year olds because they had achieved adult level development with perhaps more emotional acceptance of an erection. Another explanation for less concern in the 17 year olds might be that at Tanner Stage V the adolescents may have felt the female examiner would understand if they had an erection.

Identity Concerns. The item (see pages 98 and 99) posing concern to the greatest number (30 individuals or 67 percent) of adolescents in the area of Identity was concern that the young men would be herded through so fast that they would not get a good physical examination. The above situation was interpreted by the researcher to mean that the adolescents valued themselves as persons

and wanted to know their health status through a good physical examination. The percentage of adolescents concerned increased as age increased. Perhaps health status becomes more important to the adolescent identity as age increases. In addition the older adolescents possibly had previous experiences with hurried physical examinations thereby causing increasing concern about the quality of the examination.

The 13 year olds did not share the above concern. Instead the 13 year olds were more concerned that the female examiner might treat them and talk to them like a child. The finding may be explained by the fact that at age 13 the adolescent now has status as a teenager. To be treated as a child places him back in the childhood category, threatening his new identity as a teenager. Additionally, he may see the female examiner as a mothering role, but not any longer desiring to be mothered. Treating him as a child could be seen as mothering to him. Concern that the female examiner might treat them and talk to them as a child steadily decreased as age increased until reaching the 17 year old level where the concern again increased to a level even higher than in the 14 year old group. Such a phenomenon may be partially explained by the fact that adolescents typically do not like to be treated as children, for childhood is a past stage beyond which they have progressed. As the adolescent identity or "style of one's individuality" (Erikson, 1968, p. 50) becomes more established with increasing age and cognitive development, the concern for a female examiner treating the adolescent as a child may become less threatening to the more developed identity.

The above proposition could be true until age 17 when the identity may be far established. Then if a female examiner treated or talked to the adolescent as a child such action would be so inappropriate that it could be seen as a threat to the established identity.

Concern that the female examiner might question the adolescents about their habits such as drinking, smoking and drugs was expressed by the participants with very little variation between age groups until age 16 and 17 when the concern abruptly increased. Perhaps the older adolescents had more access to the stated habits which are not legal for minors thereby posing more concern if the female examiner discovered the access. Additionally the older adolescents may have felt that their habits were private parts of themselves and not pertinent to the physical examination.

Concern that the female examiner might not approve of their manners and language did not form any patterns. As age increased concern increased to age 15 then abruptly decreased at 16 years and again increased at 17 years. Perhaps the lack of a pattern can be explained by the individual differences in personalities and family norms of language and manners in the study population. For example some of the adolescents may have come from families where manners or language are not part of the cultural lessons to be learned, thus what the female examiner might think of the adolescent language or manners would be of no concern. Additionally the American culture provides many different, and yet acceptable, patterns of behavior, language and manners. The patterns of manners and language (part of the identity) are a piece of the adolescent individuality and

style. Therefore with the understanding of individual differences and personalities in the American culture, the fact that no trends were identified in the age groups (concern that the female examiner might not approve of the manners or language of the adolescent) might be expected.

As in the above situation, the concern that the female examiner might not understand the adolescent or his feelings showed no patterns in the age groups. Individual opinions about the self and female examiners might influence the concern or lack of concern by the adolescents. For instance if the adolescent had the opinion that female examiners could not possibly understand a male adolescent, then the age of the adolescent may not make any difference. Therefore no patterns by age groups would be expected.

Independence Concerns. The item posing the greatest concern to the adolescents in the Independence area (see pages 102-104) was that the female examiner might not take the word of the adolescent (item 16, Appendix D). However the concern decreased with increases in age. An explanation for the decreased concern with age and supported by Blos (1962) may be that as the adolescent becomes older with increasing cognitive abilities and approaching adult physiological development, he begins to talk, reason, and look more like an adult. The older adolescent realizes that more adults (female examiners) seem to take his word because of the increased capabilities in expressing himself in an independent manner. Therefore the older adolescent would be less concerned about his word being taken by the female examiner than the younger adolescent who had not achieved such capabilities.

Concern that the female examiner might find something wrong with the adolescent and then tell the parents but not the adolescent was greatest in the 15 year old group. However the only pattern exhibited by the finding was that the concern increased from age 13 to age 15 then decreased at age 16 and 17. Perhaps the 15 year olds as a group felt more of a need to be informed as the independent patient than the other age groups. In other words, the 15 year olds may have felt that their rights as independent patients to know the truth about their health status was a priority over their parents' rights to know the information. Independence usually becomes less an issue as adolescents get older and parental ties decrease (Goethals and Klos, 1976) which could explain why the concern decreased after age 15.

Concern that nobody had asked them their choice of whether they wanted a man or woman to conduct their physical examination increased with increases in age. The data show that the study population had greater needs for control in the situation as the adolescent age increased. The finding does not support the theory (Blos, 1962) that need for control decreases with increasing age. Instead the finding may be explained by the assumption that the adolescents felt they had a right to choose who may conduct their physical examinations. Lack of such a right may have threatened their feelings of independence.

However control of the above situation did not necessarily mean that the adolescents were concerned about control of all situations. A low (seven individuals or 16 percent) percentage of

adolescents in all age groups were concerned that the female examiner would be in control of the physical examination telling them what to do. Perhaps the adolescents expected that the female examiner would be in control of the examination since physical examinations were an area of her expertise. Additionally, they may have expected the female examiner to tell them what to do since this is the way our present health care system has conditioned patients.

Concern that the female examiner might find some little thing wrong during the physical examination and then not allow the adolescent to play in sports increased with age up to 16 years then decreased at age 17. Since the majority of adolescents had scheduled their physical examinations for the purpose of sports entry, the assumption would be that the majority of adolescents were interested in some sports program. Therefore concern that the adolescent might not be allowed to play sports would be expected, especially if for some little reason controlled by the female examiner. A possible reason for the decrease in percentage of concern at age 17 might be that the older adolescents felt they would be able to influence or control the female examiner about the small finding in the physical examination. Additionally the older adolescents may have been regular sports participants and never had anything wrong in the past, so concern that something would be found now might be low.

Relatedness Concerns. The largest percentage (37 individuals or 82 percent) of adolescent concerns in the Relatedness area (see pages 106-108) was concern about what the other guys would think if they knew a woman had conducted their physical examination. The

concern increased with increasing age until dropping somewhat at age 16 then again increasing at age 17. In part, relationships with peers depend on "what the other guys think" about the adolescent. The ability to establish relationships with peers and members of the opposite sex increases with age and experience (Group for the Advancement of Psychiatry, 1968). Thus concern about what the other guys would think if they knew a female had examined the adolescent would be expected to decrease with increasing age. The assumption would be that a female examiner instead of a male examiner would not make any difference to the older adolescent who has comfortable peer relationships. However, since the study population showed increasing concern with increasing age, the researcher must conclude that "what the other guys think" was a priority whether or not the ability to establish comfortable relationships with peers and members of the opposite sex increased with age.

Concern that the female examiner might make a pass at the adolescent decreased with age until age 17 when the concern increased. Perhaps the more physically mature 17 year olds perceived their physical development and age as approximating the female examiner age and development. Therefore with greater abilities and more experience in relationships with members of the opposite sex, the adolescents at age 17 may have felt that there was a realistic possibility that the female examiner might make a pass at them. Such a possibility may also have reflected fantasy-thinking in the 17 year olds (Sorensen, 1973).

Concern because of questions the adolescent would like to ask for instance about venereal disease but are afraid to ask a woman showed no pattern for age groups. The 14 and 17 year olds had the most concern with the 15 year olds the least concern. Perhaps the lack of any pattern can be explained by individual opinions about women as health care providers, as persons who answer questions. In addition whether the male adolescent was embarrassed to ask a woman provider questions may have been determined by his ability to relate to women in general and women as examiners specifically. The ability may not be related to age as assumed, but could be related to lack of knowledge about venereal disease or anything else with an inability to admit this lack to a woman.

Concern that the female examiner might question the adolescent about his sexual relationships decreased with increasing age until age 17 where the concern sharply increased. The 17 year olds expressed more concern possibly because of greater accessibility to sexual relationships at the older age, which may cause embarrassment if questioned by a female. Additionally the age of the female examiner might approximate the age of the 17 year old thereby causing more of a threat if questioned about sexual relationships. The younger aged adolescents as well as the 17 year olds may have had concern because of sexual inexperience which if discovered by the female examiner might cause embarrassment. However the above two explanations do not explain why the 16 year olds were least concerned about the situation when the youngest and oldest ages were most concerned. The ability of males to establish sexual relationships is

expected in American society. Additionally there is pressure to succeed in such relationships to the extent that if the male fails in the relationship embarrassment results. Therefore if the male adolescent was questioned about his sexual relationships, successful or not successful, by a female examiner then concern would be expected to be great at all ages.

The concern because of embarrassment whenever around women increased with increasing age until age 17 when the concern decreased. Such a finding might be expected since it is assumed that the 17 year old has more years of experience in relationships with females than younger adolescents (Sorensen, 1973).

In summary the concerns of the male adolescents have been presented and discussed in the four areas of Body Image, Identity, Independence and Relatedness. The next section presents the findings and discussion for Hypothesis 2.

Hypothesis 2

> The Concerns expressed by male adolescents will be related to Age.

Concerns included Body Image Concerns, Identity Concerns, Independence Concerns, Relatedness Concerns and Concerns (Total). Body Image Concerns and Age were significant and inversely related. While the relationship was low, the findings show that as Age increased, Body Image Concerns decreased. Such a relationship might be expected since the adolescent has been assumed to gradually adjust to his body structure with increasing years (Schilder, 1935). Table 5 (p. 97) did not necessarily show a decrease in Concerns with increase in Age

probably because the Table was based on numbers of adolescents within age groups. To test Hypothesis 2 correlation was done using raw Concern scores, not numbers of individuals, which was a more accurate measure of Concerns and Age. The findings support the assumptions of female providers who have noted in their practice that the early adolescent age males seem to be more overtly embarrassed when examined by female health care providers than the older adolescents and adult men.

Identity Concerns and Age were not significantly related although a low inverse relationship was found ($r = -.25$). How the adolescents defined themselves in relation to their values, habits, personal worth and feelings was not a significant influence on Concern or lack of concern if a woman was the examiner instead of a man. Such a finding does not support the assumptions of many female providers who feel that the adolescent personality determines whether the male patient will be concerned if examined by a female provider instead of a man.

Independence Concerns and Age were significantly related, the relationship being inverse and low ($r = -.33$). As male adolescent age increased Independence concerns decreased when the examiner might be a female. Such a finding might be expected since as age increases the independence and need for control of all situations is not a new issue to the adolescent. As he matures, the adolescent begins to realize that some things are under his control while other things are not. The adolescent rebelliousness thus mellows with age. The above findings are supported in theories by Blos (1962). In

practice therefore female examiners might note the age of a male adolescent and then realize that the younger adolescent may exhibit more of a need for control and independence than the older adolescent.

Relatedness Concerns and Age were not significantly related. The relationship was inverse and negligible ($r = -.15$). Concern about the ability to relate to women and peers was not influenced by the age of the participant. The finding does not support the assumption of Sider and Kreider (1977) that as the male becomes older relationships with peers and members of the opposite sex become easier and more comfortable in establishing. The participants in the study were primarily of rural backgrounds and all were caucasian. The findings may have changed had the adolescent had varied socio-economic backgrounds and racial status.

Concerns (Total) and Age were significantly related, the relationship inverse and low ($r = -.35$). As Age increased the combined Body Image, Identity, Independence and Relatedness Concerns decreased. As might be expected the relationship between Concerns (Total) and Age was greater than the relationship between any of the separate areas of Concern and Age because of increasing the number of items in the scale. The practical significance of the relationship between Age and Concerns (Total) is that the female health care provider can easier remember the one overall relationship between Concerns (Total) and Age than each of the relationships between the four subareas of Concern and Age. In other words, Concern about being examined by a female health care provider decreased with increasing age, a finding supported by many professional women in practice.

Hypothesis 3

The Concerns expressed by the male adolescents will be related to Tanner Stage.

Body Image Concerns and Tanner Stage were not significantly related. The relationship was inverse and negligible ($r = -.18$). Such a finding was unexpected since the assumption was that the Tanner Stage of physiological development would be highly correlated with concerns about the body and examinations by female providers. Possibly the findings show that something else was happening in the variables Tanner Stage and Body Image Concerns which was not analyzed in the study. For instance maybe the adolescent males were not concerned whether the examiner was male or female but instead concerned about body issues if anyone examined them no matter what their Tanner Stage of development.

Identity Concerns and Tanner Stage were significantly related, the relationship low and inverse ($r = -.30$). As Tanner Stage increased Identity Concerns decreased. The finding supports the theory by Erikson (1968) that physiological development is related to personality or Identity. Therefore as the male adolescent matures physiologically the decreasing concern if a female might examine him would be related to his maturing personality.

Independence Concerns and Tanner Stage were not related significantly. The correlation coefficient was so low ($r = .01$) that no relationship could be identified between the two variables. Tanner Stage of physiological development did not effect Concerns in the Independence area. Both the more developed and less developed

adolescents expressed concerns in the independence area if examined by female providers. Possibly the adolescent independence needs are related to the concern of a female examiner not the Tanner Stage. Further study may be necessary to determine such a relationship.

Relatedness Concerns and Tanner Stage were significantly related, the relationship low and inverse ($r = -.30$). As the Tanner Stage increased toward adult development the Relatedness Concerns decreased if examined by a female health care provider. The finding supports many female providers who hypothesize that physiologically maturing of the adolescent provides the adolescent confidence in establishing comfortable relationships with peers and members of the opposite sex. Additionally repeated positive experiences with peers and women are enhanced by physiological maturation according to Sider and Kreider (1977) and aid the confidence in establishing such relationships. The finding also partially explains the reason the Tanner Stage I or II male adolescent may tremble during a physical examination by a female or he may totally refuse health care from a female provider.

The relationship between Concerns (Total) and Tanner Stage was not significant, although there was a low inverse relationship ($r = -.25$). Perhaps such a finding could be explained because there were no adolescents in Tanner Stage I and only one in Tanner Stage II. Therefore the variation in Tanner Stages was small. Additionally Tanner Staging by use of the instrument may not have been accurate due to: (1) discriminating ability in choosing items pertaining to the adolescent; (2) inability to admit underdevelopment; (3) inaccurate

body perception as in Halmi, Goldberg and Cunningham (1977) study with girls; (4) lack of reliability of the Tanner Scale. Thus Tanner Stage I and II adolescents may have actually participated in the study, but their Tanner Stages not accurately measured, thereby altering the relationship between Concerns and Tanner Stage.

Hypothesis 4

> Controlling for Age, the Concerns expressed by the male adolescents will be related to Tanner Stage.

The relationships between Tanner Stage and Concerns were low and negligible (see Table 11, p. 123). When Age was held constant no significant relationship remained between Tanner Stage and Concerns. Essentially the findings show that the Concerns of the male adolescent participants, when provided the information that their physical examination might be conducted by a female health care provider, were not significantly related to the Tanner Stage of physical development. However due to the above four possible reasons for inaccurate measurement of the Tanner Stages and the type of participating adolescents (rural, caucasian, athletic) the reader should not generalize that there is no relationship between Concerns and Tanner Stage if Age is held constant. If the above possible inaccuracies in measurement had been corrected and if there had been varied types of participants (equal numbers of adolescents receiving physical examinations for sports programs, music, church and other camp programs, school entry physicals) then possibly all the Tanner Stages would have been represented. The findings therefore for Hypotheses 3 and 4 might have changed. Until studies controlling the (1) accuracy

of Tanner Stage measurement and (2) types of participants are conducted, the Tanner Stage should still be assumed to effect the relationship between concerns if examined by a female and Age of the adolescent. In practice, the female examiner when seeing the male adolescent patient would relate the Concerns identified in the study to both the Age and Tanner Stage of the patient, until further studies with Tanner Stage are conducted.

Additional Findings

The participants who had previously been examined by female health care providers had slightly lower mean scores on Concerns than the participants never examined by females. However the difference between the two group mean scores was not significant. The finding suggests that the male adolescents previously examined by females had slightly less Concerns than the adolescents never examined by females.

An explanation for the finding might suggest that during the previous examinations by females, the female provider might have had a causal effect in reducing the adolescent concern. Another explanation may be that the adolescents examined previously by females became accustomed to the examiner being a female thereby slightly reducing the concern during the present study. Further investigation might be necessary to determine an explanation for the difference in adolescents examined previously by females and adolescents never examined by female health care providers.

Problems Encountered

In this section the problems encountered in the study are presented. The greatest problem was that the size of the study population was small (N = 45). The findings may not adequately represent male adolescents concerns although concerns were identified and related to age.

In addition there were no participants in Tanner Stage I and only one in Tanner Stage II. The majority of adolescents were in Tanner Stages III, IV or V. Had more participants been in Tanner Stages I and II then possibly the findings for Hypotheses 3 and 4 might have changed giving a more realistic variation of Concerns for Tanner Stage. Only two 13 year olds participated in the study so the possibility of finding adolescents in Tanner Stage I or II was reduced since the 13 year old would more likely be in Tanner Stage I or II than the 14, 15, 16, or 17 year old. Therefore the correlation coefficients would be expected to be low in Hypothesis 2, 3, and 4.

Another major problem was that Part B (Tanner Stage grid) of the instrument was unable to be pilot tested specifically for measuring the accuracy of the adolescents in choosing the items most descriptive of their physiological development. Such pilot testing would have required that the adolescent complete Part B, then have the physical examination with the health care provider Tanner Staging the adolescent. Then the provider-identified Tanner Stage would have been compared to the adolescent-identified Stage. Since part

of the study relied on the adolescent accurately choosing the items most characteristic of his development, accuracy was essential. However logistic problems prevented the accuracy test.

An additional problem with Part B of the instrument was that reliability testing was impossible because of more than one value assigned to each item. Statistical computation could not be done in such a case.

A problem with both parts of the instrument was that neither section was statistically tested for validity since no method was available. Therefore the low and negligible correlations between the variables could have resulted from the scales not measuring the intended Concerns and Tanner Stage.

An extraneous variable threatening the internal validity of the study was that at Center A the standardized procedures for administration of the instrument were altered by the female health care provider. Therefore the participants from Center A (N = 7) may have responded differently had the instrument been administered in the standardized format as at the other Centers. Nevertheless the findings from the study suggest implications for Nursing and other health professions.

Implications for Nursing and Other Health Professions

One of the major implications for female health care providers in Nursing and other health professions is that in the study the adolescent males did express concern in the areas of Body Image, Identity, Independence and Relatedness if a female might examine them.

Very few adolescents had low concern scores. The trend showed that as Age increased Concerns decreased and that there was no significant relationship between Tanner Stage and Concerns.

The major implication for nursing and other health providers is that there was no significant relationship between Concerns and Tanner Stage if Age was partialled out. However due to the limitations stated previously the female health care provider should look at Age and Tanner Stage together. The two variables should not be separated when estimating the nature of the adolescent Concerns in the study. Thus the female Nurse Practitioner or Clinician would observe the male adolescent patient age in addition to the Tanner Stage of development until further studies determine that Tanner Stage is not related to Concerns. The Clinician's background knowledge of specific concerns for Age and Tanner Stage from the study would then influence her perception of, clinical judgment used, and actions taken with the patient (King, 1971).

Specific implications in the area of Body Image Concerns are that the adolescents were most concerned about their bodies being touched by the examiner; however, the concern decreased with increasing age. Perhaps the female health care provider should initially state to the male adolescent that she will need to touch his body during the examination but that she will be careful to not hurt him. Additionally female examiners might refrain from over-touching the bodies of male adolescents. Women often touch other people as a gesture of showing care and sincerity, however the findings from the study population show that such touching is of

concern to the male adolescent participant, and may be more of a threat than seeing the body. Touching requires more personal contact than seeing which is a more distant encounter. Further study may now be needed to determine which areas of the body would cause concern if touched by the female examiner.

The findings suggest that the male adolescents expressed very little concern that the female examiner would have to see their body. Perhaps covering the nude body by draping is not as important to the adolescent males as it is to female patients.

The adolescents were concerned that the female examiner would not realize the tenderness of the scrotum and that they might have an erection during the examination. The concerns were not related to their Tanner Stage of physiological development as would be expected. However the concerns were inversely related to Age with concern decreasing as Age increased. The male adolescent patient might feel less concerned if the female examiner acknowledges the tenderness of the scrotum during the examination, and if she states that an erection is quite probable during the examination due to touching the penis. Chard (1976) supports such statements as being helpful to the male adolescent.

Specific findings in the area of Identity Concerns are that the adolescents were most concerned that they would be herded through so fast that they would not get a good physical examination. The concern was not significantly related to Age meaning that the concern was expressed regardless of Age, but the concern was inversely related to Tanner Stage. Perhaps previous experience with hurried,

mass physical examinations as often occurs for sports programs caused the adolescents to be concerned about the quality of such exams. Perhaps the implication is that as the adolescents become more developed physically their concern about getting a good physical examination decreases. Maybe the adolescents did not care about knowing their health status as their age increased. Possibly the female health care provider needs to determine the male adolescent value of health, then work to enhance the value.

The adolescents were concerned about (1) being treated as children, (2) being questioned about their habits such as drinking, smoking and drugs, (3) not being understood, (4) their manners and language not approved by the female examiner. The above concerns were not significantly related to Age, but were significantly related to Tanner Stage. Therefore the Concerns were higher in the less developed adolescents. Thus female health care providers might observe the Age and Tanner Stage of the adolescents and provide counsel appropriate to the level of understanding and need. Such counseling should not be biased in language, manners or habits except when the health of the adolescent is threatened.

Independence Concern findings show that the adolescents were most concerned that the female examiner might not take their word on things during the examination. The concern was not related to Tanner Stage of development but was significant and inversely related to Age. As Age increased the Concern decreased. Therefore female health care providers might expect younger male adolescents to be more concerned about their word not taken than older adolescents.

The female health care provider might thus exclude the parent so that the adolescent and she are alone while taking the history and conducting the physical examination, thereby increasing the adolescent awareness that his word is being taken. Additionally the professional female examiner would reassure the adolescent that the encounter between he and the examiner is confidential. If further information is necessary which the adolescent cannot remember, then the female examiner might ask permission from the young man to question the parent. Such measures might show the male patient that his word matters and is taken by her.

The adolescents expressed very little concern that the examination would be in the control of the female examiner with her telling them what to do. An explanation for the finding is difficult since the adolescents may have expected, through past experiences, that the examiner (male or female) would be in control of the health care situation. Female health care providers might further investigate why the male adolescents were not concerned about control of the examination since in many cases efforts are made to allow the patient some control, assuming that he wants it. Adolescent theorists (Blos, 1962 and Goethals, 1975) have assumed that young people in achieving independence from adults need to have control of all situations. However, the findings in the study show that control of all situations did not concern the participants.

The adolescents expressed concern that (1) they would not be allowed to play sports because of some little finding during the examination, (2) they were not given their choice of whether they

wanted a man or woman to examine them, (3) the female examiner might find something wrong with them and tell the parents of the adolescent, but not the adolescent. Since there was a significant inverse relationship between the above Concerns and Age, but not Tanner Stage, the female examiner might expect more Concern in the younger adolescents than the older adolescents. Often adolescent health care providers advocate telling the patient the findings as the examination progresses so that the adolescent knows what the provider is examining. However the data might suggest that providers additionally assure the patient when a finding is indeed insignificant.

The findings further suggest that in joint male and female provider offices, the adolescent might be given a choice of being examined by the male or female health care providers. Very often male and female examiners divide their work according to functional categories, not patient choices. Whenever possible the patient choice might be considered.

The findings additionally suggest that the male adolescents wanted to know if something was wrong with them and that they would be concerned if their parents were told, but they were not told. The concern was expressed more at the younger ages than older ages. Therefore female health care providers might want to be alert to the possibility that male adolescents may desire inclusion in the diagnosis and plan of care. Often the adolescent is "protected" from the findings by telling the diagnosis to only the parents. Such action may place a strain on the adolescent need for independence and control.

Specific findings in the area of Relatedness showed that the greatest concern was what the other guys would think if they knew a woman had examined them. The Relatedness Concerns were not significantly related to Age but were significant and inversely related to Tanner Stage. Therefore the Relatedness Concerns decreased with increasing Tanner Stage of physiological development. The less developed adolescents expressed more concern about what the other guys would think than the more developed adolescents. The implication may be that peer pressure and opinions are more of a powerful influence in the less developed adolescents than in the mature adolescents. However many health care providers have not realized that a male adolescent examined by a female health care provider may cause concern in the area of peer relationships. Therefore to reduce the possible concern female health care providers might schedule male adolescent examinations so that appointments of peers are spaced between other age groups. Additionally, male and female providers in joint practices might possibly divide their work so that the female health care provider examines female adolescents and the male provider examines the male adolescents.

Concern was expressed in the following Relatedness areas: (1) that the female might make a pass at the male adolescent, (2) embarrassment in asking a woman questions about venereal disease, for instance, (3) that the female examiner might question the male adolescent about his sexual relationships, (4) embarrassment whenever around women. The four Concerns decreased with increasing Tanner Stage but were not related to Age.

The implications are difficult to make for the concern that the female examiner might make a pass at the male adolescent. Even if this concern represented adolescent fantasy perhaps female health care providers have never realized that a male adolescent concern of this nature is possible. Based on the findings in the study female examiners might be alert to such a concern in their male adolescent patients especially when examining the genitalia. A business-like manner might then reduce the concern.

The implications for the concerns of embarrassment in asking questions about venereal disease for instance and being questioned about sexual relationships may be that female health care providers should broach the subject of venereal disease and sexual relationships with great care. A health care provider cannot simply avoid discussing areas of a sexual nature in the history and physical examination, merely because the areas pose embarrassment in the patient. The sexual history and status of patients is as important to health as the heart or lung history and status. Therefore the female health care provider might broach the subject by stating the above sentence, thus allowing the male adolescent to know <u>why</u> the sexual relationships need to be discussed. Then the adolescent may feel less concern when he has a question of a sexual nature. Additionally the female examiner might utilize the "ubiquity" approach with questions stated as "when did you . . .?" instead of "Have you ever . . .?" Such an approach is assumed to be less threatening when conducting the sexual history (Settlage, 1975).

The implications for male adolescent concern because of embarrassment whenever around women are again difficult to determine. Even though the Concern is not related to Age but inversely related to Tanner Stage, female health care providers (Nurse Practitioners, Nurse Clinicians, Physician Assistants, and physicians) need to determine how the concern can be reduced in the less developed male adolescent. Since many adolescents are seen by health care providers approximately once per year for physical examinations there is not a sufficient number of visits to establish progressing adolescent comfort in the relationship with the female examiner. Therefore reducing the Concern of embarrassment whenever around women may need further study. The recommendations for future study are presented in the following section.

Recommendations for Future Study

1. Future studies would need to reduce the number of items in Part A of the instrument so that the items causing low interitem correlations are deleted. Not only would this measure reduce the length of time to complete the instrument, but also the internal consistency of the scale would be increased.

2. A study using Part B of the instrument should be conducted to determine whether adolescents can accurately identify their own stage of development. Additionally such a study is needed to refine the scale in Part B of the instrument so that no more than one value is assigned to each item in the Tanner Stages. Then the reliability of the scale can be determined.

3. A similar study should be conducted using both Parts A and B of the instrument and additionally some other standardized measure of Concerns and Tanner Stages if such scales can be developed. Then the validity coefficient of the instrument can be computed.

4. Replication of the study is needed to determine the concerns of other male adolescents provided the information that their physical examination may be conducted by a female health care provider. The findings of such studies can then be compared so that generalizations can begin to be made.

5. A similar study is needed lowering the age for participation to possibly 11 or 12 since more Tanner Stage I adolescents might be easier found in the lower age group. Additionally the study should have an increased sample size with equal representation of Ages and Tanner Stages which would provide information from more people in an area little studied. The researcher should begin collecting data in early spring so that adolescents receiving summer camp physicals can also participate. Since the physical examinations were conducted primarily for sports entry in the present study, variation is needed in the type of adolescent participant.

6. Experimental studies are needed to determine how best to manage male adolescent concerns if examined by female health care providers. Such studies should be based on the findings from the present and other similar studies, for Concerns should be identified before they can be reduced.

7. Studies should additionally be conducted identifying the concerns of adult male patients. Since female health care providers

in many cases examine patients of all ages, the practicality of determining the concerns of all male patients seems significant.

8. Studies are needed to assess male perceptions of women as examiners. Such studies might also include other confounding variables such as relationships with mothers and sisters, socio-economic status, racial status which were not identified in the present study.

9. A study is needed to determine the differences in concerns of adolescent females examined by males and adolescent males examined by females.

10. Studies should be conducted to determine whether concerns expressed might be concerns regardless if the examiner is a man or woman.

11. A study is needed to determine whether male patients prefer male examiners and female patients prefer female examiners since many male physicians have assumed that all patients prefer the male examiner.

12. Other clinicians should utilize the instrument not only to further their own research, but also to help the adolescent understand his own Tanner Stage of development and future expected development. Such a device could be used much the same way as growth grids are used to explain infant development to parents.

With more females seeking roles as health care providers it seems likely that more studies will be conducted in the future to determine the effects of professional women in health care. Part of the effect of the female provider is on her patients, male or female.

However studies need to be conducted to determine more about the nature of such effects. For instance, what is the effect on male patients when they are examined by female health care providers? Is the effect any different when the patient is a female and the examiner is a male? Too often we have assumed without a research background that patients of both sexes prefer the male health care provider instead of female providers. Is this true for both sexes? Have we assumed that female patients prefer male examiners simply because they come back to the office? With female health care providers in the minority, how can we make such an assumption? These questions require further study and therefore the present endeavor assumes that there <u>are</u> concerns of males examined by females. The study provides a beginning knowledge base for the female-male health care provider effects on patients.

APPENDICES

APPENDIX A

Demographic Data

1. What is your age? _____

2. Birth Date: Month _____ Day _____ Year _____

3. Town or City of Residence: _____

4. What is the purpose of your visit here: _____

_____

5. Current Health Status: Do you have any illnesses or diseases which require you to see a Doctor or Nurse more than two or three times each year?

   Yes _____ No _____ If yes, list the names of the

   illnesses or diseases _____

6. Have you ever had a physical examination by a woman?

   Yes _____

   No _____

APPENDIX B

Letter to Adolescent and Parent and Consent Form

Michigan State University
School of Nursing
For: Master's Thesis
Investigator's Statement:

Dear Adolescent and Parents,

I am currently in the process of conducting a study to try to find out what would concern or worry male adolescents if they were going to have a physical examination by a woman. Since much study has already been done on girls being examined by male physicians, it is necessary that someone give boys an equal opportunity to say what their concerns are when they are examined by a female health care professional. As you are already probably aware, there are an increasing number of professional women who now give physical examinations to people of all age groups and sexes. The chances of men being examined by women is therefore greater. If a study can provide people in the health care professions with the type of concerns male adolescents have when they are examined by women, then this information can provide ways to better approach their worries or concerns.

This study involves the male adolescent privately filling out a questionnaire just before his physical examination. It will take about 10-15 minutes to complete. No names will be used so that all answers will be confidential. Further confidentiality will be provided by the adolescent placing the questionnaire (once completed) in an envelope. He will seal it himself before handing it back. I will then compile all the adolescents' questionnaires so that they will be analyzed by groups. Therefore your son's responses on the questionnaire will not be singled out when the data are analyzed.

The male adolescent's answers on the questionnaires will provide me with data to help find ways to help young men with their concerns when a woman examines them. Your agreement or disagreement to participate in this study does not alter or have anything to do with the quality of care he receives during the physical examination.

Thank you for your time and cooperation. If you have any questions feel free to call or write:

J.R. Mitchell
644 East Drive
Marshall, Michigan 49068

Area Code: 616-781-2515

Subject's Consenting Statement:

I voluntarily consent to my son's/ward's participation in this study. I have had an opportunity to ask questions, and I understand that the quality of health care received during his examination is not altered by my agreement to participate in this study.

Signature of Male Adolescent	Date
Signature of Parent/Guardian	Date
Signature of Witness (Does not have to be a Notary Public)	Date

APPENDIX C

Researcher Letter to the Adolescent

TO THE MALE ADOLESCENT

Today you are going to have a physical exam. We do not know if your examination will be conducted by a man or a woman. I am now asking you to participate in a research study being conducted to try to find out what concerns or worries young men have when they might have an examination by a woman. Many young men, such as you, are currently participating in this study. More and more women are now professionals in the health care fields. Therefore your chances of being examined today by a professional woman are very great. As you read the questionnaire handed to you try to imagine what you will feel like if a woman gives you your physical instead of a man. If researchers can find out what concerns you have, then they can try to find ways to reduce these concerns in all young men. Your opinions on this questionnaire therefore, are very important and your help in this research is very important.

When you fill out this questionnaire, please be very honest and give your true feelings--about things that worry you or concern you if a woman is to examine you.

So that you have privacy, try to find a seat in the waiting room where no one will be looking over your shoulder. Your questionnaire will not have your name on it, so no one will know how you have answered it--even the person who examines you. When you are finished, place the questionnaire in the envelope. Seal it carefully so that it remains private and then hand it to the receptionist. It will then be sent directly to me.

Your answers on the questionnaire will provide me with data to find ways to help young men with their concerns when a woman examines them. Your agreement or disagreement to participate in this study does not alter or have anything to do with the quality of care you receive during your physical examination today.

Please read the agreement-consent form first, then sign it if you agree to participate in this study. Then fill out the top of the questionnaire, read the directions, and go ahead and start. The questionnaire should probably take you about 10 or 15 minutes to complete. If you have any questions please ask the receptionist.

Thank you for your time and cooperation.

Judith R. Mitchell, R.N.
Family Nurse Clinician
Michigan State University
Graduate School of Nursing

APPENDIX D

The Instrument with Key for Scoring

1. What is your age? _____
2. Birth Date: Month _____ Day _____ Year _____
3. Town or City of Residence: _____
4. What is the purpose of your visit here? _____
5. Current Health Status: Do you have any illnesses or diseases which require you to see a Doctor or Nurse more than two or three times each year?

   Yes ___ No___ If yes, list the names of the illness or diseases

   _____
6. Have you ever had a physical examination by a woman? Yes ___ No ___

Part A Directions:

You have just been told that your physical today may be conducted by a professional woman. She may be a doctor or a nurse. She may be young or old. Place a check (✓) in the blank that sounds mostly the way you feel right now knowing this possibility. There are no right or wrong answers. How you answer depends on how you feel. These are your choices. Choose only one.

1. You strongly agree with the statement.
2. You agree with the statement.
3. You are undecided (or can't make up your mind) about the statement.
4. You disagree with the statement.
5. You strongly disagree with the statement.

For instance, here is an example of a statement:

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
It concerns me because I can't see women as people who give physicals. It should be men that do this.	✓	___	___	___	___

If you strongly agreed with this statement it would be marked like above. If you have any questions about how to fill out the rest of the statements, please ask now. If not, go ahead and finish the questionnaire.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. If she thinks my body is under-developed or over developed for my age, I would not be concerned. (B)	1	2	3	4	5
2. She might talk to me and treat me like a child, but this doesn't concern me. (Id)	1	2	3	4	5
3. It concerns me that she might find something wrong and tell my parents, but not me. (In)	5	4	3	2	1
4. She might make a pass at me, but this wouldn't really concern me. (R)	1	2	3	4	5
5. It concerns me that nobody asked me my choice of whether I wanted a man or a woman to give me my physical exam. (In)	5	4	3	2	1
6. She would have to see my body in order to examine me, but this doesn't concern me. (B)	1	2	3	4	5
7. I'm concerned that when she examines my scrotum (balls) she won't realize how tender they can be. (B)	5	4	3	2	1

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
8. She'll be in control of this examination, telling me what to do, but this does not concern me. (In)	1	2	3	4	5
9. It concerns me that she might want to know about my habits such as drinking, smoking and drugs. (Id)	5	4	3	2	1
10. I'm concerned that if she finds some little thing wrong with me she wouldn't let me play sports. (In)	5	4	3	2	1
11. I'm concerned about what the other guys would think if they knew a woman examined me. (R)	5	4	3	2	1
12. It concerns me because I have questions I'd like to ask her--say about V.D.--but I'm too embarrassed to ask a woman.(R)	5	4	3	2	1
13. She might not approve of my language and manners, but this doesn't concern me. (Id)	1	2	3	4	5
14. It concerns me that I might get an erection (hard-on) during her examination of me. (B)	5	4	3	2	1

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
15. I'm concerned that she'll herd us all through so fast that we won't get a good physical exam. (Id)	5	4	3	2	1
16. I would not be concerned if she doesn't take my word on things. (In)	1	2	3	4	5
17. If she asks me questions about my sexual relationships, I would not be concerned. (R)	1	2	3	4	5
18. I'm concerned because I get embarrassed very easily--when I'm around women. (R)	5	4	3	2	1
19. I'm concerned that she won't understant me or my feelings about things. (Id)	5	4	3	2	1
20. It concerns me that she would have to touch my body in order to examine me. (B)	5	4	3	2	1

21. Something that hasn't been mentioned that really concerns me if a woman examines is me _____

_____

Descriptive statements not scored.

_____

GO TO NEXT PAGE

PART B: Our bodies develop at different rates and at different ages. It is important for you to know your own developmental stage and also to know what growth you can expect as you get older. Therefore, please fill out this part of the questionnaire to the best of your knowledge. Try to pick out your current stage of growth. After you are finished with this questionnaire, feel free to ask the Doctor or Nurse who examines you questions which may concern you about your development.

Directions: Check (✓) all the statements which are most like you today. If some of the statements aren't like you, then leave them blank.

PUBIC (GROIN) HAIR				
The hair around my groin (crotch) is short, soft and fuzzy.	The hair around my groin (crotch) is darker, more coarse and curly.	The hair around my groin (crotch) is spreads almost to my legs.	The hair around the groin (crotch) has a few long straight hairs, and the rest is short and soft.	The hair around my groin (crotch) spreads down my legs.
I	III	IV	II	V

AXILLARY HAIR			FACIAL HAIR		
I don't have any hair under my arms.	I have a small amount of hair under my arms.	I have a lot of hair under my arms.	I have a few hairs on my face, but I don't need to shave.	I have to shave every day because of so much hair on my face now.	My face is soft, and I don't have any hair on it.
I, II, III	IV	V	III	IV, V	I, II

PENIS AND SCROTUM				
My penis and scrotum (balls) have been growing and my penis has developed a rim around the end of it.	My scrotum (balls) are beginning to turn dark reddish and the skin seems to have small ridges on it.	My penis is just beginning to grow longer and wider.	My penis and scrotum (balls) have not begun to grow yet.	My penis and scrotum (balls) are about the size of most adult men.
IV, V	II	III	I	V

VOICE			HEIGHT
My voice has not started to deepen yet.	My voice is beginning to be sometimes low and sometimes high. My voice cracks.	My voice stays low all the time now.	I've grown at least two inches in the last six months.
I, II	III	IV, V	IV

APPENDIX E

Pre-Pilot Instrument and Pilot Instrument with Key for Scoring

QUESTIONNAIRE

Pre-Pilot Test: Part A

If you found out that you may have to have a physical exam conducted by a woman, what would concern you? Please answer these questions with Yes or No. (Yes means it does concern you; No means it doesn't concern you.)

Identity:

1. It concerns me that she might want to know about me as a person, and I don't know if I want her to know about me.

   Yes _____ No _____

2. It concerns me that she might treat me like a case number, and I feel that I'm a person.

   Yes _____ No _____

3. I consider myself to be quite a mature person with ideas of my own, so I'm concerned that she might try to push her own ideas onto me, sort of nagging me.

   Yes _____ No _____

4. I believe that a person has a right to live any way he wishes and it concerns me that she'll probably try to tell me to quit my bad habits.

   Yes _____ No _____

5. I'm concerned about a lot of things that are happening to me as a person as well as my body also. I'm afraid she won't really care about these parts of me, the total me, physical and mental.

   Yes _____ No _____

6. I have my own personality and I'm concerned that we will have a personality clash--that we just won't get along.

   Yes _____ No _____

Body Image:

1. It concerns me that she might think my body is underdeveloped (or overdeveloped) and this is embarrassing.

   Yes _____ No _____

2. I really want to know if my body is as developed as it should be or not and it concerns me that if she's a woman, she wouldn't tell me because she'd be embarrassed.

   Yes _____ No _____

3. It concerns me that I might get an erection (hard-on) during the examination. I can't always control this part of my body.

   Yes _____ No _____

4. It concerns me that she would have to touch my body in order to examine me. I don't like to be touched by people.

   Yes _____ No _____

5. It also concerns me that she would have to see my body. I don't like people to see my body.

   Yes _____ No _____

6. I'd really like to get some praise for how well I'm taking care of my body. It concerns me because she probably wouldn't think of giving praise.

   Yes _____ No _____

7. Because she's a woman and doesn't know about men's bodies, I'm concerned that when she examines my scrotum (balls) she won't realize how tender they can be. She might hurt me.

   Yes _____ No _____

Independence:

1. It concerns me she might find something wrong with me and tell my parents, but not me.

   Yes _____ No _____

2. I like to be in control of what's happening to me so I'm concerned because she's the one who will be in control of this examination of me.

   Yes _____ No _____

3. She'll probably talk about a lot of things, and that concerns me because I don't feel like talking to adults usually.

   Yes _____ No _____

4. It concerns me that because she's a woman, she'll probably treat me like I am her child, with her being like a parent. I would rather be treated like any other patient--an adult.

   Yes _____ No _____

5. It concerns me that she might know what I'm thinking or feeling like during the examination, and I don't really want her to know. This is something I need to control--my thoughts.

   Yes _____ No _____

6. It concerns me because she'll probably tell my parents everything I say.

   Yes _____ No _____

Relatedness:

1. I'm really more afraid of having an exam done by a woman than a man.

   Yes _____ No _____

2. It concerns me that she might almost be my age. I'd rather have her older than 30.

   Yes _____ No _____

3. It concerns me that I won't know how to talk to her man to man to tell her things because she's a woman.

   Yes _____ No _____

4. It concerns me that I have all these questions I'd like to ask her--to get a woman's point of view--on sex and dating, for instance. But I'm afraid to ask her.

   Yes _____ No _____

5. I'm concerned that she might make a pass at me and then I wouldn't know what to do.

   Yes _____ No _____

6. I'm concerned that if the other guys knew a woman examined me they'd make fun of me.

   Yes _____ No _____

7. I'm concerned because I get ambarrassed very easily--about everything--when I'm around women or girls.

   Yes _____ No _____

Perception of Women as Examiners

1. It concerns me that she may be real busy and won't spend much time really checking my health.

   Yes _____ No _____

2. It concerns me because I really can't see women as people who give physical exams. It should be men that do this.

   Yes _____ No _____

3. It concerns me that I might have to have an exam by a woman. It would be better if women examined women and men examined men.

   Yes _____ No _____

Other:

1. Something that hasn't been mentioned that really concerns me if a woman examines me is

   _____

   _____

   _____

Pre-Pilot Test: Part B

Our bodies develop at different rates and at different ages. We feel it is important for you to know your own developmental stage and also to know what growth you can expect as you get older. Therefore, please fill out this form to the best of your knowledge. Try to pick out your correct stage of growth. Feel free to ask questions which may concern you about your development.

Circle the a, b, c, d, or e statement which is most like you. Circle only one letter.

(a) The hair around my groin (crotch) look just like the hair on my stomach.

Tanner I

(b) The hair around my groin (crotch) is darker in color than it used to be. It's also thicker and more curly and seems to be spreading. My penis seems bigger. My balls are getting big. I've noticed hair on my face; my voice is getting low.

Tanner III

(c) The hair around my groin is thick and dark and curly and spreads down my legs. My penis and scrotum (balls) are about the same size as adult men that I've seen. I have to shave. My voice stays low all the time. I have a lot of hair under my arms.

Tanner V

(d) The hair around my groin (crotch) has a few long straight hairs. The rest of the hair around my penis is short and fuzzy. My balls are getting larger, and the skin looks reddish.

Tanner II

(e) The hair around my groin has spread almost to my legs. My penis is wider and longer than it used to be. The tip of my penis seems to have a large rim around it. I have a little hair under my arms. I'm <u>really</u> growing tall.

Tanner IV

1. What is your age? _____
2. Birth Date: Month _____ Day _____ Year _____
3. Town or City of Residence: _____
4. What is the purpose of your visit here? _____
5. Current Health Status: Do you have any illnesses or diseases which require you to see a Doctor or Nurse more than two or three times each year?

   Yes ___ No___ If yes, list the names of the illness or diseases

   _____
6. Have you ever had a physical examination by a woman? Yes ___ No ___

Part A Directions:

You have just been told that your physical today may be conducted by a professional woman. She may be a doctor or a nurse. She may be young or old. Place a check (✓) in the blank that sounds mostly the way you feel right now knowing this possibility. There are no right or wrong answers. How you answer depends on how you feel. These are your choices. Choose only one.

1. You strongly agree with the statement.
2. You agree with the statement.
3. You are undecided (or can't make up your mind) about the statement.
4. You disagree with the statement.
5. You strongly disagree with the statement.

For instance, here is an example of a statement:

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
It concerns me because I can't see women as people who give physicals. It should be men that do this.	✓	___	___	___	___

If you strongly agreed with this statement it would be marked like above. If you have any questions about how to fill out the rest of the statements, please ask now. If not, go ahead and finish the questionnaire.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. It concerns me that she might think my body is underdeveloped or overdeveloped for my age, and this is embarrassing. (B)	5	4	3	2	1
2. It concerns me that I might get an erection (hard-on) during the examination. I can't always control this part of my body. (B)	5	4	3	2	1
3. It concerns me that she would have to <u>see</u> my body in order to examine me. I don't like people to see my body. (B)	5	4	3	2	1
4. It concerns me that she would have to <u>touch</u> my body in order to examine me. I don't like people to touch me. (B)	5	4	3	2	1
5. Because she's a woman and doesn't know about men's bodies, I'm concerned that when she examines my scrotum (balls) she won't realize how <u>tender</u> they can be. She might hurt me. (B)	5	4	3	2	1
6. I see myself as quite a mature person, but I'm concerned that she will see me as an immature child.(Id)	5	4	3	2	1

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
7. I have a personality of my own, and I'm concerned that because she's a woman, she won't understand me or my feelings about things. (Id)	5	4	3	2	1
8. I believe that a person has a right to live any way he wishes, and it concerns me that she won't approve of the way I live. (Id)	5	4	3	2	1
9. It concerns me that she might want to know about me as a person. I don't think I want her to know about me. (Id)	5	4	3	2	1
10. I'm concerned because I feel mixed up about a lot of things as a person right now. She'll probably only think of just examining me, not my feelings about things. (Id)	5	4	3	2	1
11. It concerns me that she might find something wrong with me and tell my parents, but not me. I think a man would tell me first, then my parents. (In)	5	4	3	2	1

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
12. I don't like adults telling me what to do. It concerns me because she'll be in control of this examination, telling me what to do. I will be helpless. (In)	5	4	3	2	1
13. It concerns me that she probably won't take my word on things. I think a man would. He'd trust me more. (In)	5	4	3	2	1
14. It concerns me because women like to talk a lot, and during the exam she probably will. I don't feel like talking to adults sometimes. (In)	5	4	3	2	1
15. Women worry about little things. I'm concerned because she might find some little thing wrong with me and then wouldn't let me play in sports. (In)	5	4	3	2	1
16. It concerns me because I don't think I can talk with her about my feelings like I could a man. How could a woman know how a young man feels? (R)	5	4	3	2	1

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
17. It concerns me because I have questions I'd like to ask her--say about V.D.--but I'm too embarrassed to ask a woman. (R)	5	4	3	2	1
18. I'm concerned because I get embarrassed very easily--about everything--when I'm around women or girls. (R)	5	4	3	2	1
19. I'm concerned that if the other guys knew a woman examined me, they'd make fun of me. (R)	5	4	3	2	1
20. I'm concerned that she might make a pass at me and then I wouldn't know what to do. (R)	5	4	3	2	1

21. Something that hasn't been mentioned that really concerns me if a woman examines me is _____

Descriptive statements in analysis

Part B

Our bodies develop at different rates and at different ages. We feel it is important for you to know your own developmental stage and also to know what growth you can expect as you get older. Therefore, please fill out this part of the questionnaire to the best of your knowledge. Try to pick out your current stage of growth.

After you are finished with this questionnaire, feel free to ask the Doctor or Nurse who examines you questions which may concern you about your development.

Directions: Circle the a, b, c, d, or e statement which is most like you today. Circle only one letter. Please be honest.

T_I (a) The hair around my groin (crotch) looks just like the hair on my stomach.

T_{III} (b) The hair around my groin (crotch) is darker in color than it used to be. It's also thicker and more curly and seems to be spreading. My penis seems bigger. My balls (scrotum) are getting big. I've noticed hair on my face; my voice is getting low.

T_V (c) The hair around my groin is thick and dark and curly and spreads down my legs. My penis and scrotum (balls) are about the same size as adult men that I've seen. I have to shave. My voice stays low all the time. I have a lot of hair under my arms.

T_{II} (d) The hair around my groin (crotch) has a few long straight hairs. The rest of the hair around my penis is short and fuzzy. My balls (scrotum) are getting larger, and the skin on them looks reddish.

T_{IV} (e) The hair around my groin has spread almost to my legs. My penis is wider and longer than it used to be. The tip of my penis seems to have a large rim around it. I have a little hair under my arms. I'm really growing tall.

TABLE 13.--Scores for Pilot Testing.

Age (Subject)	Subject's Tanner Stage	Scores				
		B Out of 25	Id Out of 25	In Out of 25	R Out of 25	Total Scores
16	V	9	11	10	9	39
14	III	22	19	21	21	83
14	V	19	12	21	15	67
14	III	15	11	14	11	51
14	II	14	9	8	18	49
16	V	10	15	12	12	49
14	V	19	20	13	16	68
15	V	10	15	15	16	56
14	III	12	12	10	16	50

APPENDIX F

Directions to the Receptionists

Michigan State University
School of Nursing
Graduate Office

Directions to the Receptionists

A. Criteria for Selecting the Participants for the Study:

1. Boys aged 13, 14, 15, 16, 17 may participate in this study.

2. The purpose for their office call is to be:

   (a) For a complete physical exam for sports, camp, entry into high school, etc.

3. The boys are basically healthy. In other words, they do not have any chronic illnesses such as diabetes, kidney disease, cancer, hypertension, etc.

4. The boys do not see the doctor very often (no more than three times per year).

B. Directions when the boy arrives: if the boy comes in alone:

1. Explanation to the boy before you do anything else:

   (a) Privately tell him that Dr. ___ has agreed to help with this study about young men who might have a physical exam by a female health care provider such as give name of female provider in your office.

   (b) Tell him that the researcher would like to know what might concern young men if they find that their physical exam may be conducted by a professional woman instead of a man.

   (c) Tell him that the study involves him filling out a questionnaire which takes about 10-15 minutes.

   (d) Let him know that he does this privately, does not write his name on the questionnaire and when he is done he seals the questionnaire in an envelope which is sent directly to me. No one else sees how he filled out the questionnaire, not even you, the doctor or name of female provider.

(e) Let him know that even if he does not want to participate in the study, his health care today will not be affected. In other words, do not pressure him into agreeing to participate. I do not want him to feel that he won't get a "good" physical exam unless he agrees.

(f) Ask him if he has any questions and if he is interested in participating. If so, then explain that it is necessary for him to sign the consent form.

2. Directions on what to give the boy after the explanation of the Study:

(a) Give him the letter entitled To The Adolescent.

(b) Give him the Consent Form. Allow him time to read these forms and ask him if he has any questions.

(c) If he signs the consent form, witness his signature and also sign your name. Then you keep the consent form.

(d) Give him the questionnaire, a pencil, and a self-addressed stamped envelope.

(e) Explain that the envelope is provided so that he can seal the questionnaire inside for privacy.

(f) Tell him the directions are on the questionnaire and that you will now leave him so that he has privacy.

(g) Ask him to bring the questionnaire, sealed in the envelope, to you when he is finished.

3. Directions after he has completed the questionnaire:

(a) As he hands you the envelope explain that it is now sent directly to me.

C. Directions when the boy arrives: if the boy comes in with a parent:

1. Privately tell the boy and the parent the same things as in B.1 above.

2. Follow the same procedure as in B.2 above except that in this case also:

(a) Give the parents the letter entitled "Dear Adolescent and Parents."

(b) Have the parent also sign the consent form if they agree to allow their son to participate.

(c) If both adolescent and parent sign the consent form, ask the parent to leave the room or area in the waiting room adjacent to their son, so that he can be given privacy.

D. General Instructions:

1. Please keep track of any boys who refused to participate by noting:

   (a) Their age.

   (b) Observe, if you can, any possible reasons for their refusal, i.e., were they too embarrassed? Did they seem disinterested? Did they not understand the study? etc.

   (c) Were they alone or with a parent?

2. When the boys hand you back the envelope with the finished questionnaire sealed inside, please drop it in the mail as you do other office mail.

3. Make sure the boy does not seal the consent form in the envelope. This form is not to be sent with the questionnaire, otherwise his confidentiality would be jeopardized.

4. If the boy's privacy cannot be guaranteed by filling the questionnaire out in the waiting room, please try to find an area or room where he can do this in private.

Thank you for your help and cooperation. If you have any questions, please call.

Judy Mitchell, RN, FNC
655 East Drive
Marshall, Michigan 49068
Phone: A.C. 616-781-2515

APPENDIX G

Physician Permission Letters

WALTER B. LONG, M.D., P.C.

PHONE 568-4481 HOMER, MICHIGAN 49245 Reg. No.

HOURS: By Appointment.

NAME DATE July 27, 1978

Rx I hereby give my permission for Judy Mitchell to conduct research in my office

Refill [ ]
Do Not Refill [ ]

M. D.

STATEMENT

PAULINO S. CHAN, M.D.
INTERNAL MEDICINE
105 N JEFFERSON STREET
MARSHALL, MICHIGAN 49068

TELEPHONE 781-2250

FOR PROFESSIONAL SERVICES

TO WHOM IT MAY CONCERN:

I give my persmission to Judy Mitchell to do her research in my office.

ALLEN D. DUMONT, M.D., F.A.A.P.
911 BROWN STREET
ANN ARBOR, MICHIGAN 48104

TELEPHONE 769-3702

August 3, 1978

To Whom it May Concern:

I give my express permission to Judy Mitchell, School of Nursing, Michigan State University, to distribute questionnaires to my patients. These will be distributed in the office only, to male patients age thirteen through seventeen. The purpose is to obtain information pertinent to a Masters Thesis.

Sincerely,

Allen D. Dumont

Allen D. Dumont, M.D.

APPENDIX H

Human Rights Protection

Human Rights Protection

Potential Risks to the Adolescents in the Sample:

There are no physical risks to those involved in this study. While there is the psychological risk of embarrassment in filling out the questionnaire, prior preparation to ensure the least embarrassment is provided by:

1. The letter to the adolescent expressing the sincerity of the research and concern for young men having physical exams by women;

2. Providing the adolescent the written freedom to discuss his concerns and physical development with the physician, nurse, or physician's assistant prior to and after filling out the questionnaire;

3. Providing privacy while filling out the questionnaire either in the examining room or corner of the waiting room;

4. Providing the freedom to refuse to participate in the study and this refusal not altering the quality of health care received;

5. Providing a stamped, addressed envelope in which the adolescent seals his completed questionnaire while still in privacy;

6. Providing the information that the adolescent is not to write his name on the questionnaire and so is not identified.

Consent Procedures: (Copy Enclosed)

Participation in the study is voluntary. Written consent is obtained by the adolescent and also his parents if available. The physician's office receptionist provides the adolescent with the letter from the researcher explaining the study and consent form.

He then either agrees to participate by signing the consent form, or he refuses.

All physicians sign a letter giving consent to the research being conducted in their offices.

Protecting Respondents:

The identity and responses of all participating adolescents remains confidential. The subject's name will never be discussed nor displayed with data. The subjects are assigned an identification letter and number (.e. A20, B31). The letter corresponds to the physician's office administering the questionnaires, and the number corresponds to the adolescent.

The participants are further protected by (1) providing privacy while filling out the questionnaire, (2) by providing written consent, (3) by providing data in aggregate rather than individual form.

Potential Benefits to Participants:

Participants can feel a greater freedom to discuss their concerns and physical development with the physician, nurse, or physician's assistant since the subject is already broached for them by the act of filling out the questionnaire. The greater benefit is to the group of adolescents as a whole, since this study provides background information on concerns of male adolescents if examined by female health care providers.

MICHIGAN STATE UNIVERSITY
SCHOOL OF NURSING

HUMAN SUBJECTS REVIEW COMMITTEE APPLICATION

Date form completed: 8/28/31

Please type; use supplemental sheets as needed. Submit three copies to LeAnn Slicer, A217 Life Science. Each copy should have all relevant materials, e.g., consent form(s), questionnaire, others, unless otherwise specified in this application form.

I. **Principal Investigator:** Judith R. Mitchell — Graduate Student
(name) (position)

644 East Dr.,Marshall,MI 49068 — 616-781-2515
(address) (telephone)

Associates: None

II. **Names of other persons responsible for performing or supervising procedures.**

Barbara Given — Patricia Salisbury

Bonnie Elmassian — Jacqueline Wright

Patricia Peek

III. **Title of proposal or activity:** "The Expressed Concerns of Male Adolescents When Their Physical Examination May Be Conducted By a Female Health Care Provider"

IV. **Beginning date of proposed activity:** July 21, 1978

V. **Anticipated completion date:** September 15, 1978

VI. **Is this activity related to a grant or contract?** Yes ___ No X. **If yes, complete A-I.**

A. Is it related to a training grant? Yes ___ No ___
B. Is it related to a fellowship? Yes ___ No ___
C. Has proposal been submitted? Yes ___ No ___
D. Has award been made? Yes ___ No ___
E. Name of Principal Investigator shown (or to be shown) on proposal: ___
F. Name of agency to which proposal was (or will be) submitted: ___

G. If continuation (or already awarded), what is the agency's grant or contract number? _____

H. Inclusive dates of grant or contract?
From _____, through _____.

I. Will activity be performed if funding is not received? Yes ___ No ___

VII. Checklist to be completed by investigator:

A. Will another organization or agency be involved (hospitals, Department of Public Health, others)? Yes X No ___
Name of other organization(s) or agency:

Physicians Private Offices

Name and titles of person(s) in agency from whom permission to do study must be obtained:

Robert Long, M.D., Homer, MI
Paulino Chan, M.D., Marshall, MI
Allen Dumont, M.D., Ann Arbor, MI

B. Will an investigational new drug (IND) be used? If yes, name, proposed dosage, status with Food and Drug Administration and IND number. Enclose one copy of available toxicity data. Yes ___ No X

C. Will other drugs be used? If yes, names and dosages. Yes ___ No X

D. Will a written consent form(s) be used? (Required in most cases.) Yes X No ___

1. If no, explain why a written consent form will not be used.

2. If no, is a statement attached describing what participants will be told? Participants must be informed of all elements of VII-E, below. *A written script of the verbal explanation must be attached to this request.* Yes ___ No ___

E. Does (Do) the consent form(s) include:

"Michigan State University" heading? Yes X No ___

Name, position, department and telephone number of investigator? Yes X No ___

Date? Yes ___ No X

Copy for subject? Yes ___ No X

Signature and date lines to be completed by subject (and legal guardian, if subject is a minor or is legally incompetent), and investigator? Yes X No ___

The following elements of consent expressed in lay terms:

Purpose--benefits to be expected of knowledge hoped to be gained? Yes X No ___

Procedures to be followed only for the purpose of this activity, and time involved? Yes X No ___

Nature and amount of risk, or substantial stress or discomfort involved? Yes X No ___

Appropriate alternate procedures that might be advantageous or available to subject? (Show N/A, not applicable, when there are none.) Yes X No ___

Costs the subject may immediately or ultimately be forced to bear and what reimbursement of costs or other compensation the subject will receive as the result of participation in this activity? Yes ___ No X

Voluntary nature of participation and freedom to withdraw at any point without penalty?	**Yes** X	**No** ___
Opportunity to ask questions before consenting?	**Yes** X	**No** ___
Assurance that subject's identity will remain confidential?	**Yes** X	**No** ___

Describe how, by whom, and where consent will be obtained.

Written consent will be obtained by the adolescent and his parents if available.Consent will be obtained by the physician's office receptionist when brought into the examining room.

VIII. Subjects

A. Approximate number and ages: Normal, patient, either.

Approximate Number: 50; Ages 13-17. Normally healthy with the purpose of their office visit to obtain a physical examination for sports, camp, or school entry.

B. Criteria for selection and exclusion.

Physically healthy -- no chronic illnesses.
Males
Age 13-17
Living in Michigan
Purpose of office visit: physical examination.

C. Source of subjects (including patients), and how they will be approached.

Private physician's patients who are visiting his office for the purpose of having a physical examination. Participants will be approached by receptionist explaining study, will be given letter with consent form, questionnaire, envelope.

D. Will subjects be paid or otherwise compensated? If so, what amount? And, what is the reason and payment?

No

E. Location where procedures will be carried out, e.g., patient's bedside, conference room, etc.

Physicians Office -- examining rooms or waiting room.

IX. Confidentiality and Anonymity

A. Steps to ensure that participation by subject will be kept confidential.

1) Assigning an ID number -- no names.
2) Envelope for sealing questionnaire inside.
3) Providing privacy while filling out questionnaire.
4) Sending consent form separetely to researchers, not along with questionnaire.
5) Data in aggregate form.

B. Provisions to ensure anonymity of documents and data.

ID number assignment.
Sending questionnaire and consent form separately.

C. Provisions for controls over access to documents and data.

Questionnaire data accessible only to researcher and Thesis Committee.

X. **What publications might be helpful to the committee in consideration of this application? (Answer only if these might expedite review.)**

XI. **Outline of Activity. (Circle *option* you will use in responding.)**

First Option: **Provide answers in spaces following A-H below (add sheets, when needed).**

Second Option: **Provide answers in attached summary statement.**

A. Background or rationale for this activity.

Based on my experience in conducting physical exams on male adolescents who start to tremble during the examination or who refuse an examination altogether if they know the exam will be conducted by a female. In addition finding no research or literature pertinent to examination of males by females.

B. Concise statement of objectives, including therapeutic intent, if any.

Objective is to determine concerns of male adolescents when provided the information that their examination may be conducted by a female. Further objectives are to determine if these concerns are related to age, or Tanner Stage of development and what is the relationship between Tanner Stage, Age, and Concerns?

C. Potential significance of the results, e.g., to patient, to society, to nursing, etc.

This study can provide nursing with background information on concerns of male adolescents when examined by a female. Knowing these concerns nursing can then provide treatments (by using further research) to reduce these concerns.

D. Review of methods, materials, experimental design, including medications if applicable. *Attach a copy of all instruments.*

See proposal.

E. **Identify alternate procedures, if any, not proposed for this activity that might be advantageous to the subject.**

F. **If any deception (withholding complete information) is required for the validity of this activity, explain why this is necessary and attach debriefing statement.**

No deceptions.

G. **Potential benefit to the individual or benefits in general, including the relation of the project to the care of the subject, if the subject is a patient.**

He will be allowed more freedom to discuss his physical development and any concerns he may have about this with the M.D., nurse, or P.A. since the subject will have already been broached by filling out the questionnaire.

H. **Nature and degree of risk (include side effects), or substantial stress or discomfort involved. (Risk refers to all risks--physical, psychological, social, legal, etc.) Include an assessment of the likelihood and seriousness of such risks.**

There will be no physical risks. There will be a psychological risk of embarrassment for some subjects. This will be more likely to involve younger subjects.

1. **What safety precautions or counter-measures are planned to minimize risks in order to protect the rights and welfare of the individuals?**
   a) Letter to adolescent explaining sincere concern for young men when examined by females. b) Provision in writing for permission to ask questions. c) Written consent form. d) Providing privacy and confidentiality. e) Freedom to refuse to participate.
2. **Follow-up planned for procedures and possible adverse effects.**

   None

3. **Arrangements for financial responsibility for adverse effects.**

   None

XII. **Briefly outline the qualifications of the responsible investigator(s).**

I have been practicing nursing for the past 12 years, and now in the Master's program I have as my cognate -- Adolescent Health. Throughout my past experience and also in the program I have conducted hundreds of physical examinations of adolescents both male and female.

APPROVAL BY THE COMMITTEE DOES NOT CONSTITUTE ANY ACCEPTANCE OR RESPONSIBILITY FOR THE CONDUCT OF THE INVESTIGATION. RESPONSIBILITY FOR CONDUCTING THE INVESTIGATION MUST REMAIN WITH THE INVESTIGATOR(S). THE COMMITTEE RESERVES THE RIGHT TO REVIEW AND/OR WITHDRAW ITS APPROVAL AT ANY TIME.

Judith R. Mitchell	Judith R. Mitchell	2/22/77
Name of Principal Investigator	Signature	Date
Isabel Payne	Isabel Payne	2/11/77
Director, School of Nursing OR Assistant Director, Graduate Program	Signature	Date
Barbara Given	Barbara Given	
Advisor	Signature	Date

Approved by the Graduate Advisory Committee 2/18/77.

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BIBLIOGRAPHY

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