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A Social Work Assessment of Interventions with the Chronic Obstructive Pulmonary Disease Population with Regards to Intimacy

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**A SOCIAL WORK ASSESSMENT OF INTERVENTIONS WITH
THE CHRONIC OBSTRUCTIVE PULMONARY DISEASE
POPULATION WITH REGARDS TO INTIMACY**

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Submitted to:

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ABSTRACT

Social work by nature has always been a hands on type of profession. With the explosion of new technology, social workers are being called upon to utilize technology to intervene with clients. Telecommunication is technology which can bring programs and images of people from one place to another with the use of television screens and phone lines.

This study explored the effectiveness of the utilization of interactive video within a classroom setting for the purpose of social work intervention. The study examined the impact social work intervention has upon a sample of individuals diagnosed with chronic obstructive pulmonary disease participating in an educational program through the use of interactive video.

Data suggests most participants appreciated an on-site presenter, however; it was not a determinant in if they would participate in the program. All participants found some level of satisfaction with interactive video.

This study was the first of its kind in terms of social work intervention. Utilization of interactive video by social work is young and in need of further exploratory research.

Thank you to my husband David and my children Andrew and Alex. They believed in my ability to accomplish a dream. Without their patience and love this project would never have begun. .

Thank you to Allen McSweeney who believed in my abilities to challenge myself by exploring the world of research and jumping out of my comfort zone.

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CHAPTER 1 INTRODUCTION

In the initial development of telecommunication large metropolis hospitals were the only institutions of their kind able to manage the immense cost of utilization. With ongoing development and refinement of this technology, cost decreased and telecommunication soon was attempted by the rural hospital communities. Rural hospitals are utilizing telecommunication to provide services to their regional areas. Professional training and educational programs are now very popular services provided through this technology.

Due to the closing of many smaller community hospitals, it is very common for rural hospitals to provide services to large portions of their states. For example, Munson Medical Center in Traverse City, Michigan is a regional referral center serving over twenty-six counties to the northern portion of Michigan. Individuals who utilize the services provided by this hospital may drive hundreds of miles one way from their homes to access the hospital. Telecommunication is a technology which can bring services to individuals from the hospital into their own communities.

As programs for presentation through telecommunication continue to expand, social workers are now being asked to participate in the educational process. Social Workers are providing educational programs aimed at intervention to vast audiences by way of telecommunication or video broadcasting over a television screen. Social workers need to evaluate the outcomes of non-in person contact with our clients or audience, and what the impact will be long term.

A. PROBLEM STATEMENT

This study explores the effectiveness of the utilization of interactive video within a classroom setting for the purpose of social work intervention. Social work by nature has always been a hands on type of profession. Some examples include clinicians in the field assisting individuals, couples, and groups. Much of our professional education develops and strengthens our skills in nonverbal communication and body language. With the surge of interactive video technology, usage of our skills will need to adapt to the changes. As social workers however; we should be cautious of what the consequences and effects upon our clients this change will bring.

Telecommunication is a very sophisticated process of the utilization of phone lines to transmit and broadcast an image from one site to another. It is a newer technology in terms of our history. Twenty-five years ago the technology was very costly, and had poor viewing capability. At that time, expensive analog signals were sent with poor viewing resolution on the receiving television screen (Puskin, 1992). Due to the cost, which exceeded over 100,000.00 dollars to employ such a service, it was not a practical means to provide information.

Telecommunication is technology which can bring programs and images of people from one place to another with the use of television screens and phone lines. For example, this study examined individuals with chronic obstructive pulmonary disease (COPD) who were attending a pulmonary rehabilitation class in northern Michigan. The transmitting site had one group in person at a local hospital. The other four receiving sites were in surrounding counties at other affiliate hospitals. With the use of telecommunication the presenter, who was in one location with one group, could interact live with all five groups simultaneously.

Today the cost-reducing technology utilizes compressed analog images into digital signals and forwards it through telephone lines (Puskin, 1992). Total cost today is approximately 30,000.00 dollars compared to the more expensive earlier cost of over 100,000.00 dollars. As these costs continue to decline the use of telecommunication is more accessible to a variety of customers (Puskin, 1992).

The literature reported on chronic illness groups using telecommunication as a form of intervention has received little investigation. Extensive review and inquiry has not located any information on the impact of this technology on individuals with chronic obstructive pulmonary disease, or chronic illness in general. Most research has been focused on satisfaction of the quality of the equipment and if individuals would use this method of presentation again if offered. While most studies deployed favorable results, none were located which examined the long term benefits or effects of this type of methodology.

As telecommunication grows in accessibility, geographically diverse individuals can have access to these concepts at an exploding rate. Previous studies have examined the benefits of the utilization of telecommunication. Some of these benefits included decreased travel cost, more accessible information and, reduced distance from home (Bashshur, 1978).

A study measuring satisfaction of distance education of nursing students identified the concerns of their respondents to more practical needs such as library access, the physical environment of the room, and operational costs (Billings, 1994). Studies were not located which examined practice patterns of nursing students with their counterparts of nurses who had on-site education.

The limited information on the benefit to individuals who receive information from telecommunication is certainly a concern. If the future calls for social workers to provide

information and intervention via a video monitor or television rather than face-to-face contact, we must support the need of research to examine the effects upon our clients. The only certitude is the ways in which social workers practice, will be changed by the addition of the advancement of telecommunication technology (Landers, 1996). If the field of social work is to embrace and participate in this method of intervention, it is our responsibility to have input into the issues of effectiveness and impact upon clients. Clinicians can explore issues through research and incorporate in the training and education of social workers the professional utilization of this method of technology as a way to intervene with clients.

In order to encourage schools of social work to educate professionals in the utilization of this technology as a method of practice, there must be adequate information available acknowledging the benefit present for our clients. Without this information the profession only follows a pattern, as a field trained in advocacy, there is need of involvement and input.

Social workers in rural parts of Oregon and Texas use interactive telecommunications to assist with photos of children seeking adoptive families (Landers, 1996). Also in Oregon clinical social workers interact via interactive video to consult on cases, manage medication, attend legal commitment hearings, and assist with crisis response (Landers, 1996).

Social work research with regards to the effects of interactive telecommunication utilization on individuals is very limited. Therefore, the lack of research on this topic prompted the efforts of this study. This study was designed to subscribe to the exploration of the impact and effect that telecommunication has on participants.

B. RESEARCH QUESTION

The present study addresses the following research question.

1. For people with chronic obstructive pulmonary disease (COPD) is there a difference in effect between traditional classroom vs. distance learning class with regards to the subject of intimacy.

From this primary research question follow five sub-hypothesis.

C. HYPOTHESIS

- 1. Without this technology would there have been other opportunities to have pursued this information?**
- 2. Has there been a change in participants perception of their sexual activity?**
- 3. Has there been a change in participants perception of intimate expression of relationships due to this intervention?**
- 4. Has their comfort level discussing the topic of intimacy changed?**
- 5. How do the demographic factors such as age, education, gender, and perceived severity of illness affect the impact of the method utilized?**

D. STUDY LIMITATIONS

This exploration was limited to the members of the pulmonary rehabilitation course through Munson Medical Center in Traverse City, Michigan and the surrounding affiliate hospitals of this institution: Kalkaska Memorial, Leelanau Memorial, Paul Oliver, and Westshore Hospital. All participants had been diagnosed with chronic obstructive pulmonary disease by a practicing physician and recommended to the pulmonary rehabilitation course. The social work intervention concerning the topic of intimacy was but one class in a continuum of six sessions.

Further limitations include the small sample size examined for this study. Participants totaled under thirty and group size comparison between on-site and off-site locations was not

equal. Participants were voluntary and referred to the group by various physicians. Members examined for the purposes of this exploration lacked in ethnicity as all were male or female Caucasians.

Information obtained was self-reported by participants through questions on a survey and individual comments. The survey was distributed by the researcher and follow-up phone contact was solicited by the researcher as well. There was no control for individual characteristics and personal experiences of participants other than their diagnosis of chronic obstructive pulmonary disease.

Another weakness of this study is the investigator was also the presenter of the Intimacy program. It is possible respondents would not be comfortable with providing the presenter with their thoughts about the program. Individuals may respond the way they perceive the presenter would want them to.

While there are plans to compare the results of this information with other studies exploring social work and telecommunication, there are no plans to compare information with other institutions.

The purpose of this study is to begin baseline data for further encouragement of the need of ongoing research. The solid knowledge of the impact social workers can have over interactive video is a young and necessary area. The data and tool utilized within the realms of this study will be available to other professionals for replication.

E. DEFINITION OF TERMS

Telecommunication: a method of technology that brings programs and images of people from one place to another with the use of television screens and phone lines.

Interactive video: another term used for telecommunication which clarifies this technology being simultaneous between groups.

Chronic Obstructive Pulmonary Disease: a disease that effects the respiratory tract.

COPD: abbreviation for chronic obstructive pulmonary disease.

Intimacy: the degree or level of closeness in a relationship between individuals.

Pulmonary Rehabilitation Program: a series of educational classes provided to individuals with COPD to educate on this illness. See appendix for complete series.

Sexual Activity: the act of sexual intercourse or any sexual act between partners.

CHAPTER TWO: Literature Review

A. INTRODUCTION

Social work is a field which has been present and evolving for decades. Grass roots social work is always focused on the role of advocacy for the needs of the individual and a voice for the vulnerable. Social work can be proud of the role of the conscience of our society. Looking back it is easy to trace the role of social work. The future holds challenges yet to be faced by our profession. Our society has never been touched by sophisticated technology as it is at this time. Interest must be aroused as to what the future holds for the profession of social work touched by this technology (Landers, 1996). The use of this technology will almost certainly have an impact on the way social workers practice (Landers, 1996).

The Federal Office of Rural Health Policy was created in 1987 to work with the Department of health and Human Services and other state and federal entities to address and generate solutions to the difficulties concerning rural communication (Puskin, 1992). This office was responsible for the surge towards telecommunication services to rural areas with a focus on health care and related topics (Puskin, 1992).

B. EARLY TELECOMMUNICATION

Early on, telecommunication utilization was very costly and the technology employed was flawed. The purpose of telecommunication is to transmit information, not people. With this in mind, it is easy to understand a few of the first technical problems experienced by this method. Over twenty years ago technology consisted of analog signals with poor resolution to the receiver. This method was very costly to the provider and receiver (Puskin, 1992). With

advancements in technology the cost of such efforts continues to decrease. Now analog signals are compressed into digital signals transmitted by way of telephone wires. When passed through these wires, the signal is then transformed into an analog signal at the receiving site. With this method the signal received improves the quality of resolution and reception(Puskin, 1992).

Ongoing efforts to improve technology and the public's willingness to embrace this new way of interaction with others drove continued development and research (Bashshur, 1978). Improved understanding of the technology and greater comfort participating with the form of interaction has continued to increase the demand for telecommunication (Telemedicine Network, 1994-1995).

C. UTILIZATION OF TELECOMMUNICATION/INTERACTIVE VIDEO

The biggest utilization of telecommunication appears to be in the field of educational distance learning and accessibility to medical intervention. The goal of interactive video is to break down the barriers between client and provider with regards to distance and time (Bashshur, 1978). Early on only larger scale universities and hospitals could utilize this method of intervention due to cost (Puskin, 1992). As the utilization of interactive video grew, the focus to outreach to outlying rural areas developed. As the field of social work is involved in areas of community service and issues concerning physical and emotional health, exposure to this technique of intervention was inevitable and necessary.

The prediction by a writer of the National Association of Social Worker news is that the going trend will be for social workers to become even more called upon to utilize advancing technology for the purpose of client interviews, case management, crisis intervention, legal commitment hearings, and hospital admission and discharge planning (Landers, 1996). Social workers in larger metropolitan areas are already adjusting to this trend. With the utilization of

technology to assist us with often sensitive areas of our clients lives, we must be concerned with regards to the impact of this technology on the quality of our interventions. As social workers we must also be concerned as to how we are viewed as professionals by licensing commissions responsible for funding telecommunication projects. For example, The Health Care financing Administration, overseeing the Georgia project (this involved one on one consultation with a client and the members of the medical team) would only reimburse for physicians using the system, not social workers (Landers, 1996). Another concern of our profession includes individual state licensing laws. Each state regulates licenser or certification of social workers differently, if telecommunication was to involve individuals in other states, such as those participating with adoptions, barriers may be faced by the state licensing system (Landers, 1996). These barriers may restrict the worker from consulting in another state.

Telecommunication will continue to develop. Insurance companies and HMO's are excited with the prospect that cost can be reduced if more individuals can be served at once or in a less expensive format (Linder, 1995). The rational being if more individuals can be reached in outlying areas as well as larger urban areas, prevention is possible, stopping unnecessary, costly admissions to hospitals and institutions (Linder, 1995). This trend which on the surface appears to be dollar driven certainly attaches itself to the progression of a health care arena being people or caring focused to the more popular business focus.

D. RESEARCH ON TELECOMMUNICATION

Early research was focused on telemedicine to rural areas. In the study conducted by Rashid Bashshur from the Department of Medical Care Organization, School of Public Health, at the University of Michigan, Ann Arbor , Michigan serious consideration was given to the recipients of this form of delivery of service. The study was conducted in west Central Maine,

Franklin County. this county was considered rural and remote and shared the concerns of health care delivery as does similar rural communities. The research objectives included: (1) state the Rural Health Associates (RHA) experience with regards to its technological and organizational innovations; (2) explore community and provider approval or and response to the innovative arrangements, and, (3) to analyze specific components of the impact of telecommunications technology on the delivery of health care (Bashshur, 1978).

The objectives were accomplished by a survey distributed to a cross-section probability sample of non institutionalized residents of Franklin County and an extensive survey of leaders in the community who had local political and social influence as well as active roles in the development of RHA (Bashshur, 1978). The physicians, non-MD providers, managerial and service staff of RHA also were included as well as users of interactive television compared to nonusers of the service (Bashshur, 1978).

The results of the study suggest although individuals prefer the face to face consult and contact with their physician, they were willing to embark on the utilization of interactive video if it did not mean complete abandonment of former one on one contact. Information also suggested the more one became familiar with the technology, the more apt they were to continue efforts to utilize the procedure (Bashshur, 1978).

The Eastern Montana Telemedicine Network originally initiated a cooperative effort with health care providers to examine the potentials of utilization or interactive videoconferencing possibilities for the purpose of providing medical and mental health consultations throughout their region. The goal was to provide high quality service and save time for physicians and recipients in travel and distance (Eastern Montana Telemedicine Network Summary 1994-95). Additional goals included that of higher education and

tele-business and administrative services regionally and nationally. The benefit of these goals included financial growth for all participants in the network (Eastern Montana Telemedicine Network, 1994-95). The following clinical services were provided: medication review, follow-up visits to monitor patients progress discharge planning, individual and family therapy, emergency consultation, and patient care conferences.

Physicians were able to obtain consultations of specialists for their patients without sending individuals out of their home communities. Physicians also utilized higher education credits at a high rate, although the summary did not list how many individuals failed to utilize the service or why.

Most of this literature was again focused on the cost saving measures of the procedure. All speculation regarding the future focused on continuing advancement of the technology and the analogy of supply and demand: the more the customer is comfortable with a tool, the more they will utilize the product (Eastern Montana Telemedicine Network Summary, 1994-95).

Availability of a comparable study specific to social work intervention was not found. The National Association of Social Workers News journal of April, 1996 by Susan Landers is titled High-Tech Brings Rapid, Radical Change. In this article Ms. Landers conveys information regarding the impact of a change of social work practice: "The only certainty is that technology will--and probably already has changed the way social workers practice". The focus of this article is the impact upon social workers as clinicians.

After extensive literature review there was no information located which addressed the impact this technology has on clients over a long term period. Certainly, if social work as a profession embraces this intervention style, demonstration of a commitment for response

through exploration and research is essential to examine the effects of this technology on our clients.

E. RESEARCH ON COPD AND INTIMACY

Edward Brecher and the editors of consumer reports books examined individuals with chronic illness and sex drive (Casaburi/OPetty, 1993). Self-report questions were obtained exploring levels of sexual drive and function. Intra personal factors of self-esteem and anxiety were considered but the focus remained for the purpose of this study on how these factors impacted sexual desire (Casaburi/Petty, 1993).

Although scientific data and research was located with regards to sexuality and sexual desire with a chronic illness, extensive reviews did not locate any research with regards to COPD and intimacy. Further more no information was located with regards to intervention by a social worker addressing COPD and intimacy through the use of telecommunication.

G. SUMMARIZATION OF LITERATURE REVIEW

A widespread literature review was unable to ascertain information specific social work intervention by way of telecommunication with regards to intimacy with individuals diagnosed with chronic obstructive pulmonary disease. There were no studies located studying long term effects of social work intervention by way of telecommunication with clients.

A widespread literature review was able to determine definite trends in methodologies of interventions. Telephone support groups, computer interaction through the Internet and chat rooms continue to increase in utilization and participation along with telecommunication. Technology is quickly becoming a tool of intervention and out-reach.

Although social workers are being requested to embrace this technology, we have yet to design and implore its use within our professional training and curriculum. This study is a

baseline to obtain the attention of our field to the necessity of information and input from our clients on the effectiveness and impact this style of intervention employs. Social work foundation speaks to the conditions of self-determination which heightens what is in the best interest of our clients. In order to embrace technology as a profession we must have evidence to believe it is effective.

CHAPTER THREE:METHODS

This is an exploratory, descriptive study examining the impact social work intervention has upon a sample of individuals diagnosed with chronic obstructive pulmonary disease participating in an educational program through the use of interactive video. Participants attitude and satisfaction with the methodology utilized as well as behavior change and knowledge of the topic are questions to be explored. In an attempt to answer these questions, this study consists of two phases. The initial phase involves a presentation to COPD patients/clients regarding the topic of intimacy. Intimacy was discussed by a social worker to a group of individuals with chronic obstructive pulmonary disease. This topic was the fifth in a series of six presentations which take place on a weekly basis.

A.PULMONARY REHABILITATION PROGRAM:

The pulmonary rehabilitation program at Munson Medical Center was initiated in January of 1996. In November of 1995 the Medical Social Work Director was approached by the Patient Education Department to become involved in the program. Social work was requested to present the topic of sexuality (which was changed prior to the start of the program to intimacy). The social work department decided intimacy would cover a broader range of topic than sexuality. Sexuality could then become a portion of a larger issue. This author was this studies primary investigator and would be the presenter in the pulmonary rehabilitation program.

The program would be offered weekly in a series of six sessions. These sessions would be offered throughout the year. Classes would be held from 12:30pm-2:00pm with the exception

of one evening series held in the late summer. Evening series classes would be held from 6:00pm-8:00pm and be offered in five sessions twice per/week on Mondays and Thursdays. (see appendix D).

The primary participating group was on-site at Munson Medical Center with the investigator. The other four sites, Kalkaska Memorial Hospital, Leelanau Memorial Hospital, Paul Oliver Memorial Hospital, and Westshore Hospital simultaneously participated with the on-site class through interactive video. Off-site areas were provided with a technical assistant to serve as a facilitator should they experience problems with technical equipment. These off-site facilitators would also distribute any handouts or materials.

B. SERIES IN THE PROGRAM

Each class has a presenter who spoke to a relevant topic to chronic obstructive pulmonary disease, which included:

<i>Class 1- Lung Anatomy and Physiology</i>	<i>Physician</i>
<i>Lung Diseases</i>	
<i>Class 2-Nutrition and Lung Disease</i>	<i>Dietitian</i>
<i>Breathing Exercises</i>	<i>Respiratory therapist</i>
<i>Panic Control</i>	
<i>Class3-Pulmonary Hygiene</i>	
<i>Practice Breathing Skills with Activity</i>	<i>Respiratory therapist</i>
<i>Class4-Building Strength and Endurance</i>	<i>Exercise specialist</i>
<i>Energy Conservation</i>	<i>Occupational therapist</i>
<i>Class5-Psychosocial Aspects of Chronic Illness</i>	<i>Registered nurse</i>
<i>Intimacy</i>	<i>Medical social worker</i>

<i>Community resources</i>	<i>American Lung Association</i>
<i>Class6-Knowing Your Medication</i>	<i>Pharmacist</i>
<i>Use of Breathing Devices</i>	<i>Respiratory therapist</i>
<i>Travel</i>	<i>Registered Nurse</i>

Every class at the on-site location also had a patient education nurse who worked the interactive video equipment. This nurse also serves as the coordinator of the pulmonary rehabilitation program. The scheduled series of classes cover topics suggested by JACO to meet licenser of a program offered by a hospital. Each participant was referred by a physician and each participant pays a fee of 35.00 for the program or submits coverage through their medical insurance provider.

Prior to the initial start up of the series each presenter had to be trained in the use of the interactive video equipment and a brief training on how to present a topic through the use of interactive video. This information was broken down into two, two hour training programs taught at the primary hospital.

C. CURRICULUM

Class 5- Intimacy

The primary investigator for this study was the presenter for the topic intimacy. The presenter is a member of the medical social work department at Munson Medical Center. An outline was developed by the presenter for the presentation on intimacy (see appendix C). From this outline issues to be covered in the presentation would include: discussion on intimacy as to a broad definition, communication techniques, self-awareness, sexuality with chronic obstructive pulmonary disease, and problems identified by the COPD population.

Intimacy for the purposes of this class is presented in a broad fashion. Discussion takes place as to the importance of all of us needing closeness to feel good about ourselves. Also various degrees of intimacy are discussed, those including, friends, spouse, partners, acquaintances, children, siblings, and colleagues. The depth of the relationship will define our boundaries of the level of intimacy or closeness experienced between individuals.

Discussion surrounding communication includes verbal and nonverbal communication, listening skills, self-awareness skills, and the ability to articulate ones needs. Issues surrounding causes of communication breakdown, are also discussed..

Sexuality for the purposes of this presentation is focused on the implications of chronic obstructive pulmonary disease. Since COPD effects patterns of breathing there are times when an exacerbation of the illness causes problems with labored breathing resulting in limitations in mobility and functioning. With these limitations individuals may develop low self-esteem and a distorted sense of body image. If this occurs they may not feel sexually attractive and avoid sexual pleasure and expressions of physical affection. This can lead to the isolation so often felt by those with chronic obstructive pulmonary disease (Kravetz, 1986). Therefore it is the richness of intimacy which is suggested with or without sexual intercourse. Intimacy is important to bridge individuals with COPD back from their isolation (Kravetz, 1986).

Concrete suggestions are also discussed with regards to assisting attempts to continue a level of sexual pleasure. Some of these suggestions include: the use of oxygen during sexual activity, pre-medication to open airways and increase lung function, alternate positions which may prove more comfortable for the person with COPD, and need of communication as to what feels good and what does not feel good during sexual activity (Cooper, 1986).

Problems identified by individuals with chronic obstructive pulmonary disease is the last topic discussed by the presenter. Typical problems were discovered during a thorough literature review. They include: depression, anxiety, social supports, difficult treatment regimes, limitations in functioning, pressure to give up smoking by family members and medical team, financial impact of chronic illness, and issues with regards to quality of life and advance directives. The class ends with time for questions. Any questions that can not be answered due to time factors of the program are answered after the presentation or by telephone by the presenter. The environment of the class was open with room for discussion and questions. The presentation was allowed forty minutes.

In an attempt to answer the research question and hypotheses developed from the primary question, the tool utilized to obtain information was a survey. The survey is formatted by the presenter from the information presented on the topic of intimacy. Questions were developed with regards to satisfaction of the methodology utilized (telecommunication), knowledge of the information provided, and behavior change due to the information presented.

D. INSTRUMENT

Survey (see appendix B)

The instrument was constructed to address content of the intimacy lecture as well as solicit response to the use of interactive video technique. The instrument utilized for this study was developed by the investigator. Four of the questions were borrowed from previous literature (Video Conference Evaluation). A pilot test was instituted in September, 1996 to aid in the further construction of the instrument in terms of wording and the various scales used.

The beginning of the survey requested demographic information with three questions related to gender, age, and educational background. Five questions on the survey solicited

answers from the participants with regards to behavioral change and motivation or desire to effect change surrounding issues of intimacy and their chronic obstructive pulmonary disease. Five questions requested information with regards to each participants level of knowledge and understanding of COPD and intimacy, and nine questions addressed the user satisfaction with regard to method of instruction.

A cover letter (see appendix A) attached to the survey as well as an oral explanation at the start of the presentation addressed the reason behind the survey and confidentiality of all answers provided by the participants. Any answers offered by the participants would only be reviewed by the primary investigator. Each participants name and phone number was requested on the survey in order to allow a follow-up contact, by the primary investigator, four to six weeks following the presentation for the purpose of soliciting post test information. This was described in detail by the presenter. The post test survey would be the same survey distributed to each individual following the original presentation on intimacy.

The survey was distributed to all participants with chronic obstructive pulmonary disease after the presentation on intimacy. Surveys were collected prior to individuals leaving that day. Off-site class surveys were forwarded to the investigator by the off-site facilitators. Participants were encouraged to place surveys in the envelopes provided to ensure confidentiality of all answers.

The second phase of the study was a follow-up phone contact by the primary investigator to each individual who participated and completed an initial survey following the presentation on intimacy. This follow-up phone contact occurred four to six weeks after the intimacy presentation. At the time of the call, the investigator read the questions over the phone from the same tool originally given. Qualitative exploration by interviewing the participants was also

possible at the time of the follow-up phone contact. Each individual was asked without the assistance of telecommunication technology, would there have been other opportunities to pursue this information, and did the utilization of interactive video improve their quality and level of access to health care.

Discussion commenced during the phone contact as to each individual's perception of the stage or severity of their chronic obstructive pulmonary disease. Comments were requested from all participants regarding any questions or suggestions they may have for further improvements of the program.

The study will solicit information for comparison of traditional instruction with the instructor present in person with participants and nontraditional instruction, individuals receiving information by way of telecommunication with the instructor not present in their location.

E. SAMPLE

The sample population included a convenience sample. Random sampling could not be utilized as participants in the program were referred by a physician and the numbers were too small to select only a few from each class. The survey was targeted at only individuals with COPD attending the class. Support individuals who may be accompanying the participants were not included in the survey. Also those not included in the survey were the referring physicians and the off-site facilitators.

The study's primary investigator, a medical social worker at the primary hospital, completed class instruction on the topic of intimacy and was responsible for distribution of surveys and follow-up phone contacts. Prior to each intimacy class the investigator would advise participants of the reason for the survey.

The pulmonary rehabilitation program, as earlier described, consists of six sessions. The class addressing the topic of intimacy is the fifth in the series with the exception of the August program when it is number four. This occurs for the convenience of the other presenters during the summer months and informational content is not changed. The class is forty minutes in length. Evaluations completed by participants of the over-all program indicate a desire to lengthen class time for the intimacy class. Per this request from participants, the intimacy class will be extended to ninety minutes. For the purposes of consistency effecting this study, all classes were planned to be for forty minutes. Surveys will be distributed to four series of classes, including the pilot test, for the purpose of data collection. These classes occur in September, October and December of 1996 and January of 1997.

Each class size will be variable depending upon the number of those registered to attend for each particular series. All programs have an on-site class as well as at least one off-site area.

A survey with a cover letter is distributed to each participant with a diagnosis of chronic obstructive pulmonary disease immediately following the presentation. Each survey includes the solicitation of each participants name and phone number with an explanation regarding sensitivity to confidentiality of response. Only the investigator will review the information. The investigator will explain the purpose of the name and phone number. This is to allow a follow-up phone contact by the investigator four to six weeks after the presentation. At that time the same survey will then be presented again to each participant.

Survey's presented following the class include an addressed envelope that each participant can seal their responses in to suggest the feeling of privacy. The investigator will collect on-site surveys and technical facilitators collect off-site surveys after participants have

sealed them in attached envelopes. Surveys will then be forwarded by interoffice mail to the investigator.

F. VALIDITY AND RELIABILITY

This study attempts to measure and compare participants level of satisfaction with utilized method of instruction, behavioral changes which occur due to content of presentation, and knowledge of the content of the presentation. These results will be compared between traditional class setup (on-site), vs. nontraditional class setup (interactive video recipient). This measurement will be completed by collecting the data from the instrument utilized (the survey) and analyzing data with the assistance of the SPSS program. The tool uses nominal and ordinal measurement, and solicits qualitative as well as quantitative information. All attempts have been made to be mutually exclusive, and exhaustive in terms of wording of questions with nominal data. Ordinal data is classified and ranked.

The test-retest method is utilized to predict reliability. The post-test will be given four to six weeks after the presentation to avoid memory recall or individuals reciting from memory previous answers to tests. More distance between tests may make it possible to measure the effects of real change, which may occur if given enough time after the initial test. Much of the information solicited from participants is based on their attitudes with regards to the topic of intimacy, their illness, and personal life experience. These experiences are discussed by the participant and the investigator, responses are collected, and then interpreted into data. Since the primary investigator is also the recipient of data collection it is possible participants may show consumer bias and tell the investigator what it is they think they want to hear.

Other possible areas of measurement error include constant error as there are no controls for demographic factors of the individuals participating. With the utilization of the test-retest

method unknown and uncontrollable outside influences are possible. External factors, such as noise level or distractions may also play a role in measurement error. Although each class site will be constant for each presentation, one cannot predict the quality of the telecommunication technology from session to session.

The purpose of this study is to begin to explore the effects telecommunication has upon its recipients. Questions by utilization of a survey are designed to solicit specific information with regards to each participants satisfaction of method of instruction utilized, behavioral changes due to information presented, and knowledge of the topic presented. It is with further intent this study will attempt to compare these findings between traditional and nontraditional classes. Through data collection and participant interviews, information can be obtained to attempt to determine if social work intervention through the use of interactive telecommunication is as effective with participants as traditional in person intervention. It is the intent of this study to begin to explore the impact and effect telecommunication intervention has on our client population and to trigger thought and consideration to further research.

CHAPTER FOUR

DATA ANALYSES AND RESULTS

Analyses began with an examination of the demographic factors and information pertinent to the research question, and sub-hypothesis. These pertinent questions included those related to the satisfaction with the methodology utilized, that being interactive video, and any perception in change of expression of intimacy by the participant. Qualitative data examined further the participants knowledge of the information presented and also gave the investigator information regarding the participants understanding of the stage or severity of their illness.

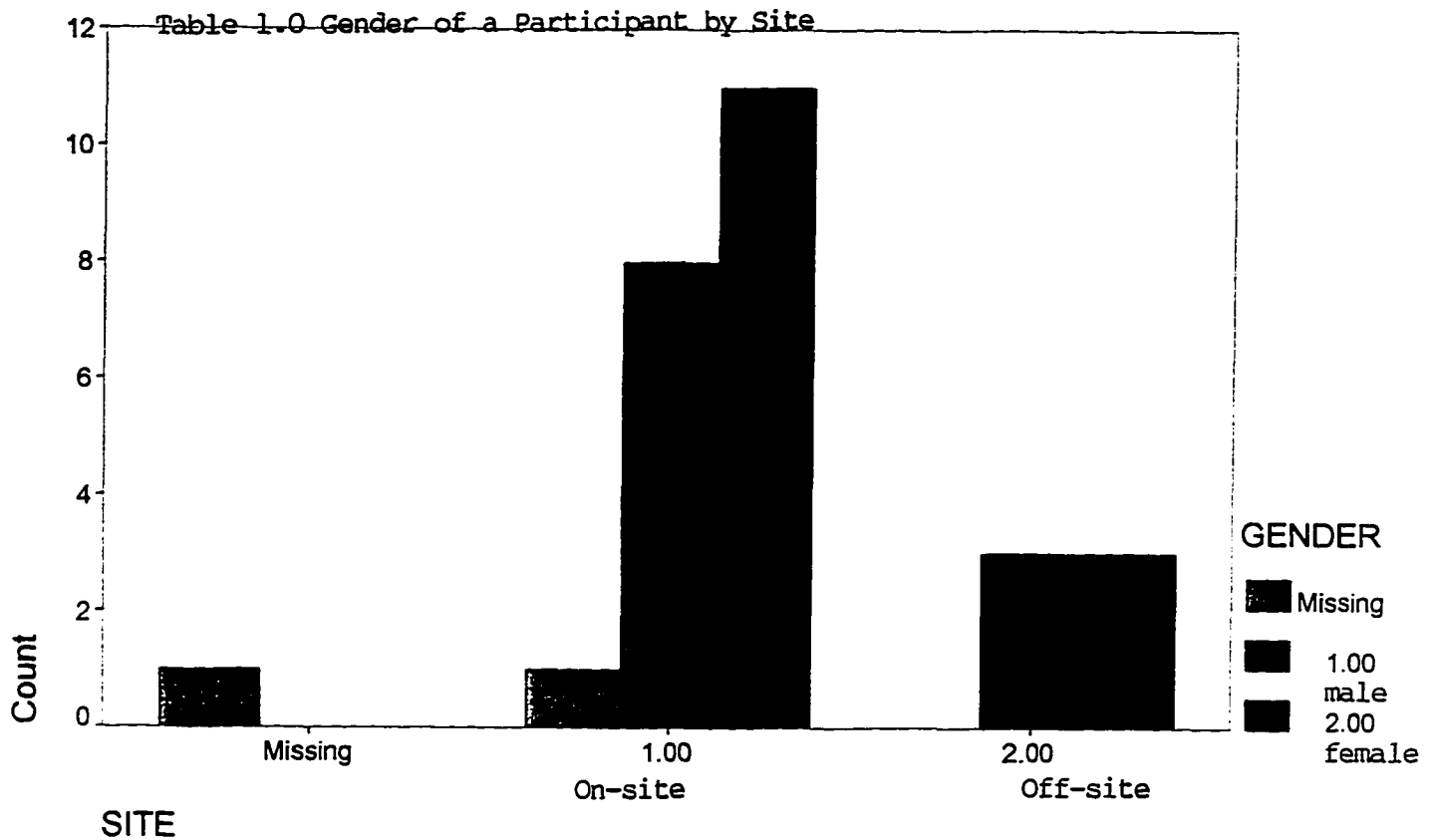
Demographics

Group Demographics

Thirty-five individuals participated in the Better Breathing series Intimacy class between September, 1996 and February 1997. A class was held in the months of September, 1996, October, 1996, December, 1996, and February, 1997. Of the thirty-five participants, twenty-six were willing to engage in the survey and follow-up phone contact made by this investigator.

Twenty of the individuals were on-site with the investigator in-person during the presentation. Six individuals participated in the presentation through the use of interactive video at one of the off-site locations. The combined participants are equivalent to forty-four percent (44%) male and fifty-six percent (56%) female (see graph 1.0).

Table 1.0 gender of a participant by site.

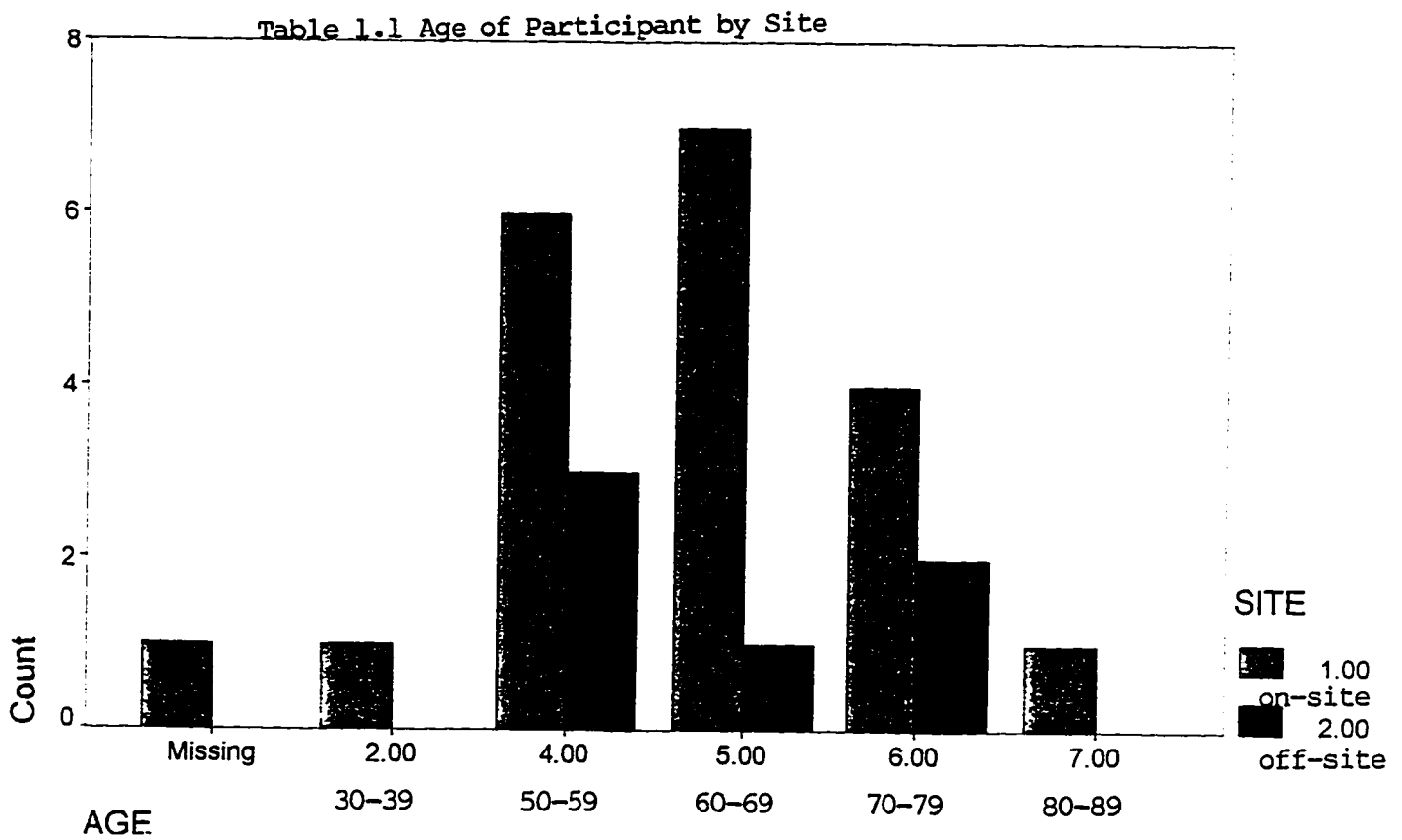


The age of the participants varied. On-site individuals ranged in age of thirty to eighty-nine (see graph 1.1). Off-site individuals ranged in age of fifty to seventy-nine (see graph 1.1). Participants combined between sites were four percent (4%) thirty-thirty nine, thirty-six percent (36%) fifty-fifty nine, thirty-two percent (32%) sixty-sixy nine, twenty-four percent (24%) seventy-seventy nine, and four percent (4%) eighty-eighty nine.

The educational background included on-site and off-site individuals divided into categories. On-site participants included: one missing, one individual K-9, ten individuals completing high-school, one individual receiving an associates degree, five individuals having one to four years of college, and two participants received a masters degree. Off-site data displayed three participants completing high-school and three participants completing one to

four years of college. The two participants who identified a masters degree indicated their degree to be that of a Masters in Social Work. The associates degree and majors or minors pursued in one to four years of college were not identified.

Table 1.1 age of a participant by site.



Satisfaction of Methodology

Satisfaction of Methodology of Instruction by Site

Quantitative and well as qualitative data were analyzed with regards to each participants feelings related to the methodology utilized to provide education with regards to the topic of intimacy with the COPD population.

Interaction by Site

Participants were asked their feelings with regards to the use of interactive video and if they felt participants at differing sites interacted with each other (see table 1.2. 1=never to 5=always).

Table 1.2 site by interaction



Of the on-site participants, six did not respond, one felt interaction happened rarely, eight answered somewhat, two answered often, and three answered always. Three off-site participants did not respond, two answered somewhat, and one answered interaction always occurred between sites. There was no difference in response with post test information.

Interaction of Individuals within the Classroom

Data does suggest various thoughts with regards to degree of interaction between individuals confined within each site. This does not include interaction between sites.

Table 1.3 Comparison of site by interaction in each classroom setting on-site vs. off-site

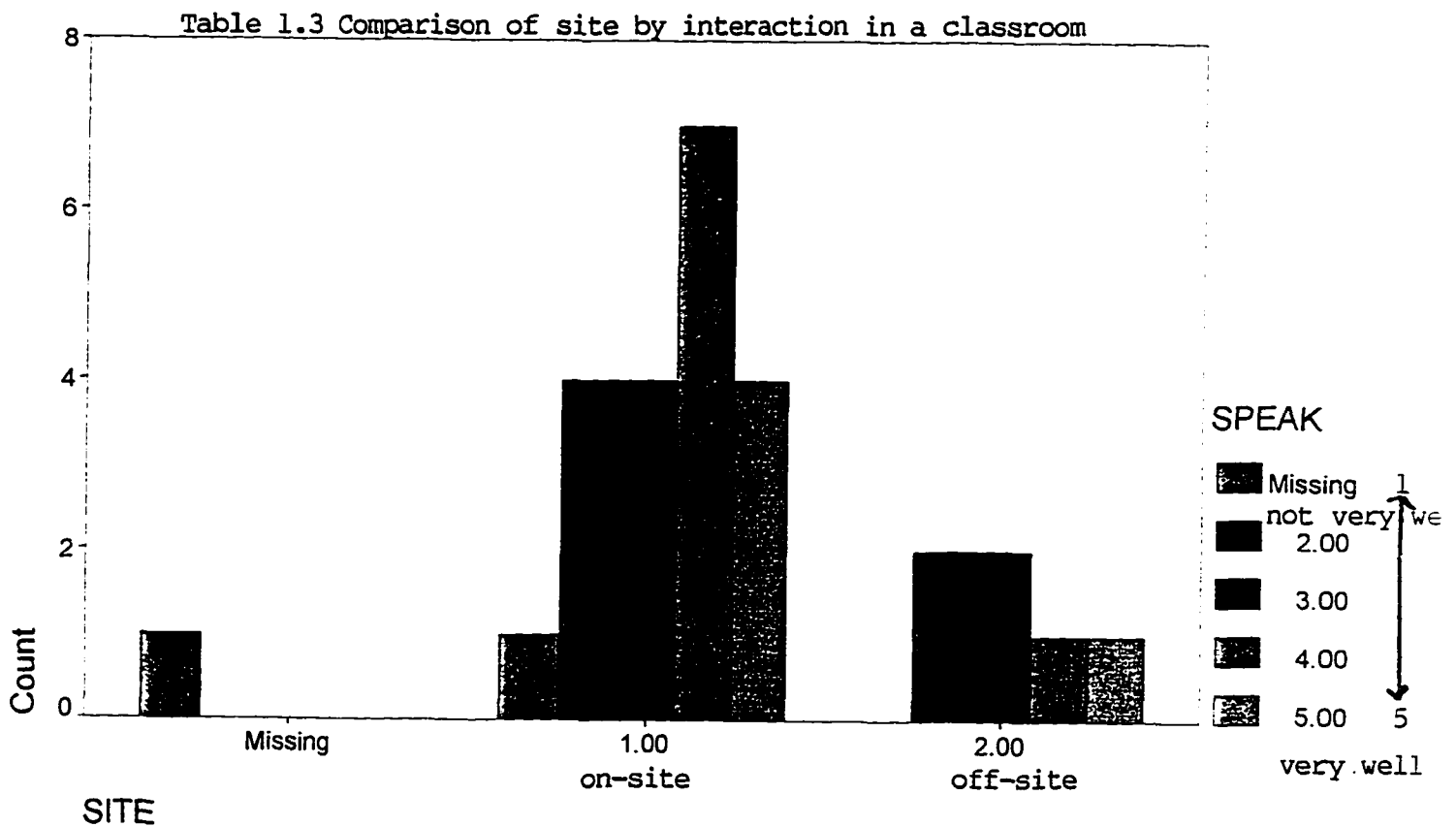


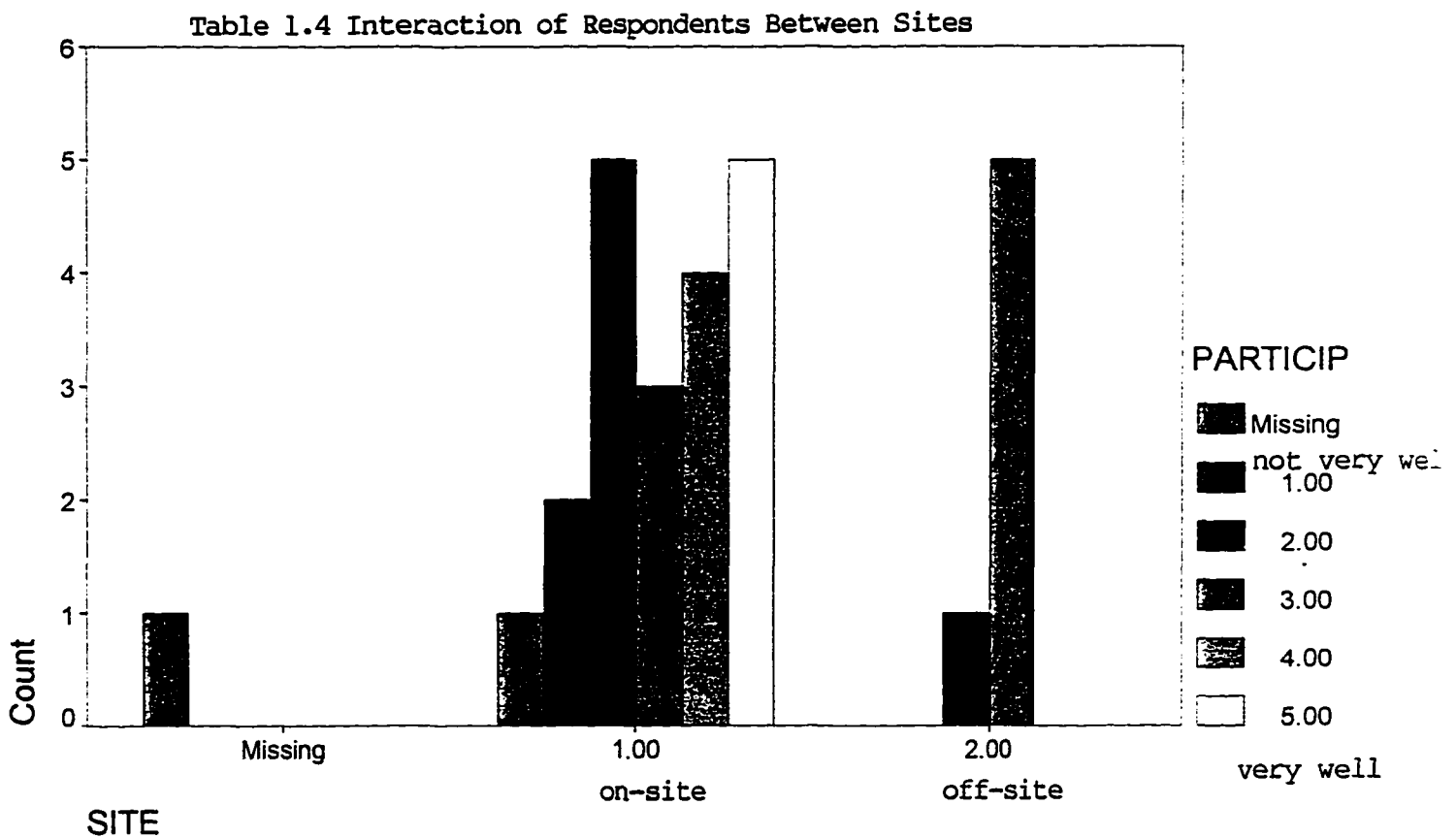
Table 1.3 (1=not very well to 5=very well) provides a breakdown of respondents answers with regards to how participants experienced interaction between individuals within their own

classroom setting. No significant findings are noted. There is no change with post test information.

Participation by Site

Respondents rated their experience with regards to how well individuals interacted between on-site and off-site locations with the use of a scale of 1–5 (one the lowest and five the highest).

Table 1.4 Comparison of On-site vs. Off-site respondents and interaction between locations



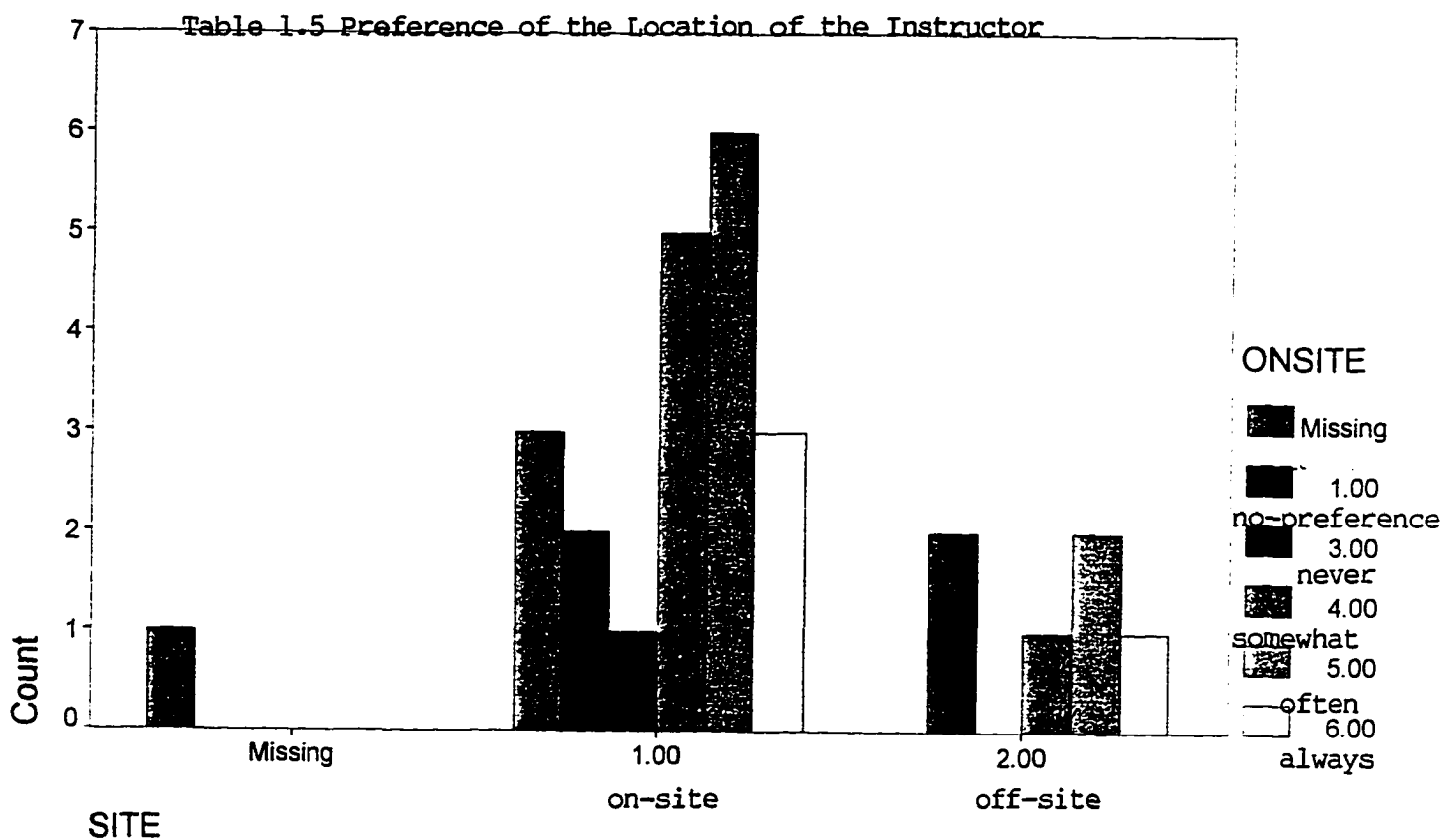
One participant did not respond and there appeared to be various feelings with regards to the level of interaction between sites. Five of the six off-site individuals rated interaction as a

three which would be at least some of the time. On-site individuals were more varied in response. There was no change with post test information.

On-site classroom Instructor

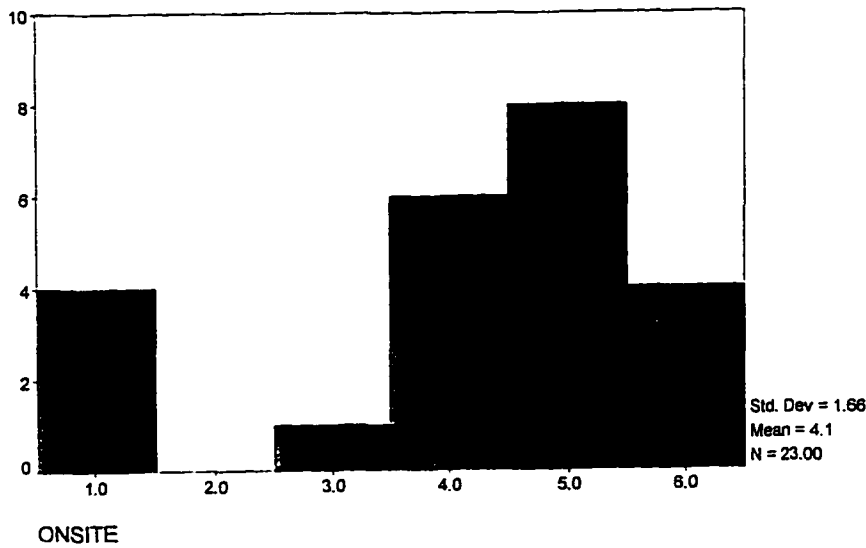
Table 1.5 (1=no preference to 6=always) provides a breakdown of each individuals preference with regards to thoughts regarding the location of the instructor.

Table 1.5 preference of the location of the instructor by site



The data does not suggest a correlation or significance between sites. Combined site and off-site data as shown in the histogram in table 1.6 (1=no preference to 6=always) does show a mean score of 4.1 suggesting a combined preference of the location of the instructor being of somewhat importance. There is no change with post test information.

Table 1.6 Histogram of Location of Instructor with Combined Sites



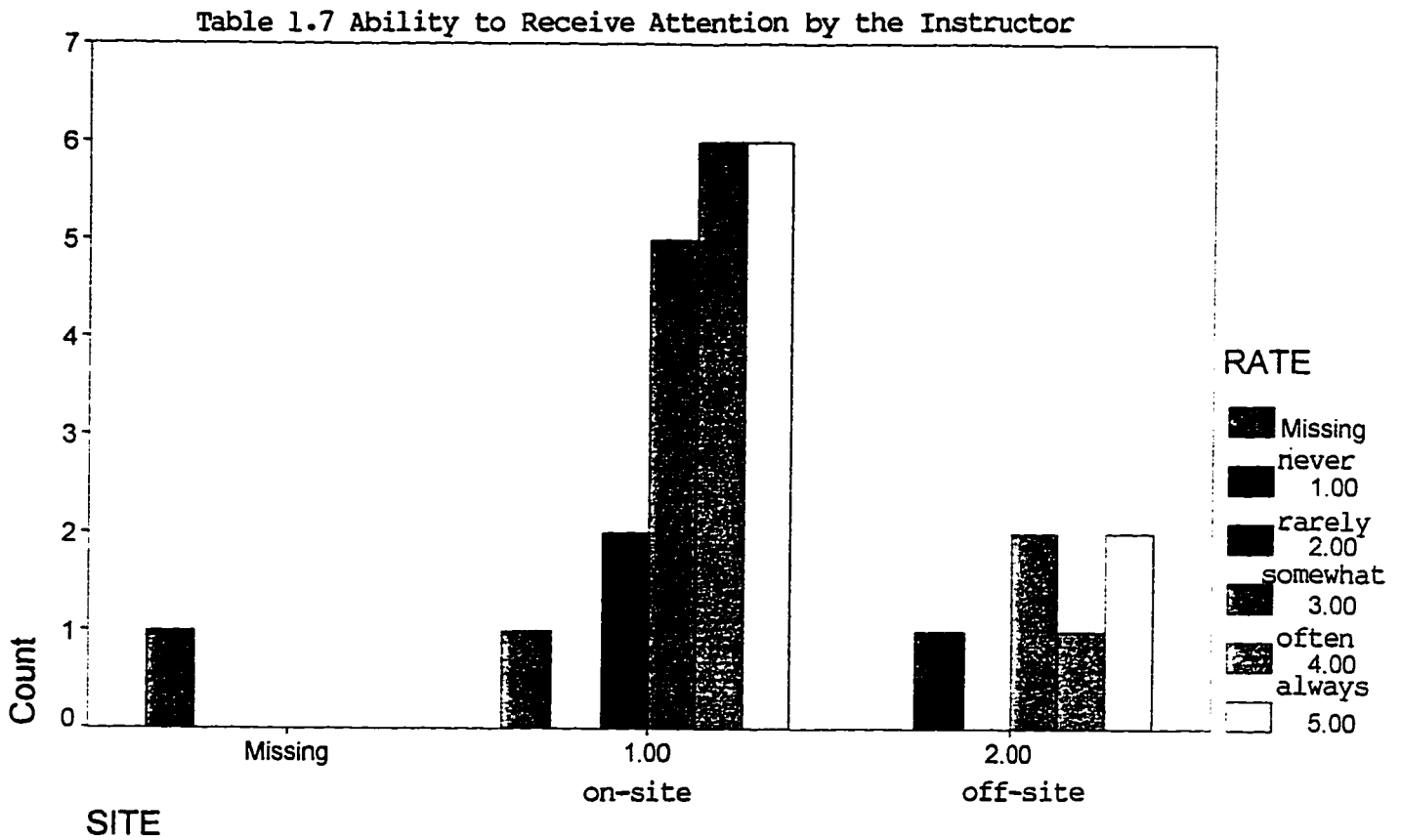
Ability of Instructor to Provide Attention

Examination between sites and the ability of the instructor to provide attention to participants is displayed in table 1.7 (1=never to 5=always). Although earlier data suggested individuals somewhat enjoyed the on-site location of the instructor, most respondents indicated they were able to receive some attention. It is important to note that one off-site respondent did not feel they were ever able to have the attention of the instructor although the reason is not clarified.

Qualitative data provided information that off-site respondents would not have otherwise been able to obtain the information provided if the interactive video was not available to them. This information was consistent with every follow-up phone contact to each off-site participant. One reason reported for this was the lack of transportation available to come to the on-site location. Some individuals shared that due to the severity of their illness, lengthy travel was not

comfortable, and interactive video allowed them to drive shorter distances. Shorter distance in travel allowed their participation in the Better Breathing Program.

Table 1.7 Ability to Receive Attention by the Instructor by Site



Behavior Change

Discussion of Lifestyle Change

Report of subjects response with regards to the degree of comfort in discussing lifestyle changes due to their illness with a friend or partner reflected ninety-six percent (96%) of the

participants discussed this issue to some degree. Four percent (4%) of the participants never discussed their feelings related to lifestyle changes due to their illness with an identified person.

Tables 1.8 (1=never to 5=always) and 1.8a (1=never to 5=always) show pre and post test data comparing by site changes in the levels of degrees of discussion six weeks following the presentation. The previous missing data from the first test may account for some of the post test changes, however, levels of degrees of discussion did change although data did not suggest a significance or correlation.

Qualitative data provided some insight as individuals identified the Better Breathing class as an area to discuss their feelings with individuals related to lifestyle changes. Once the group was finished these individuals related they had no-one available to speak with.

Table 1.8 Degree of Comfort Discussing the Topic of Intimacy

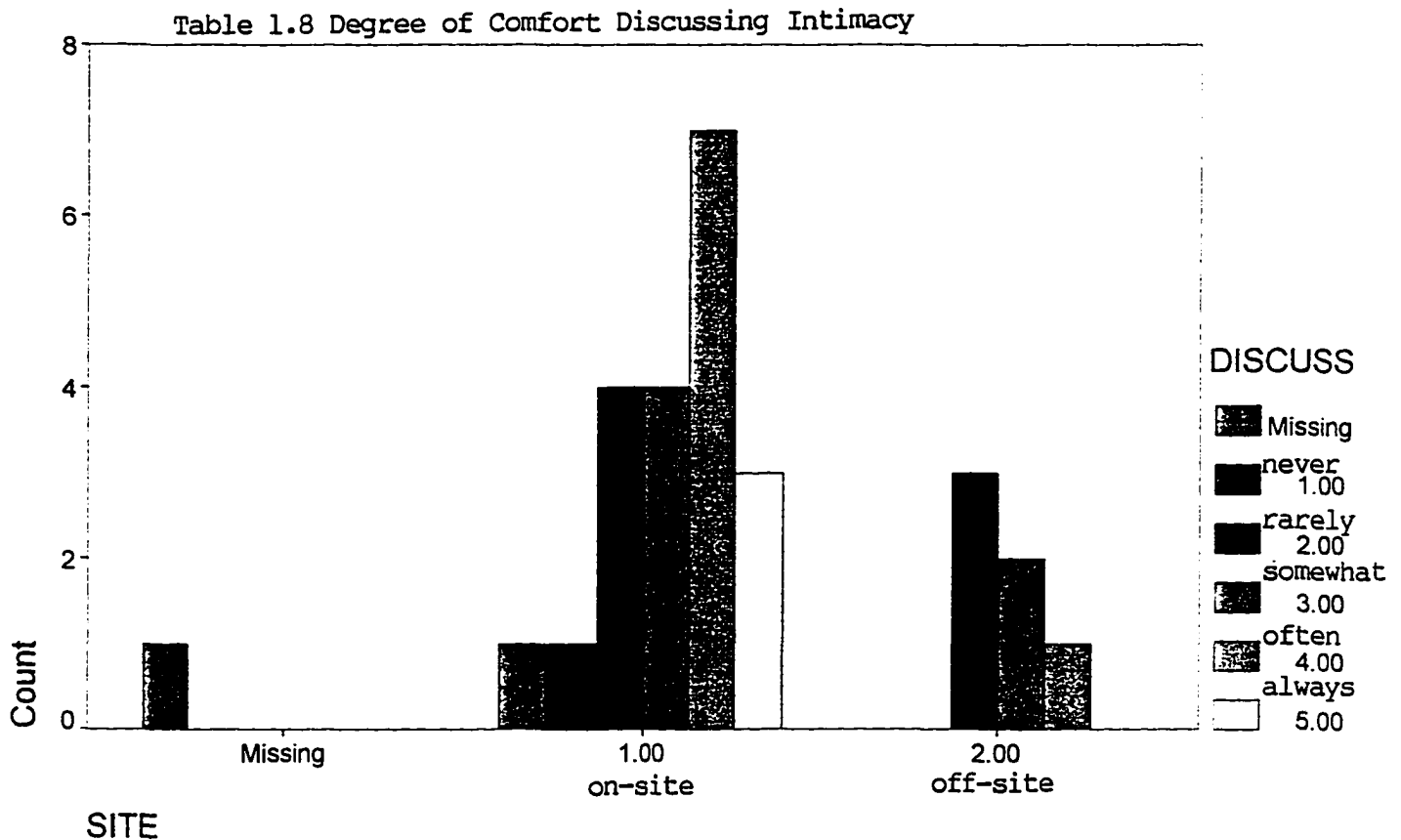
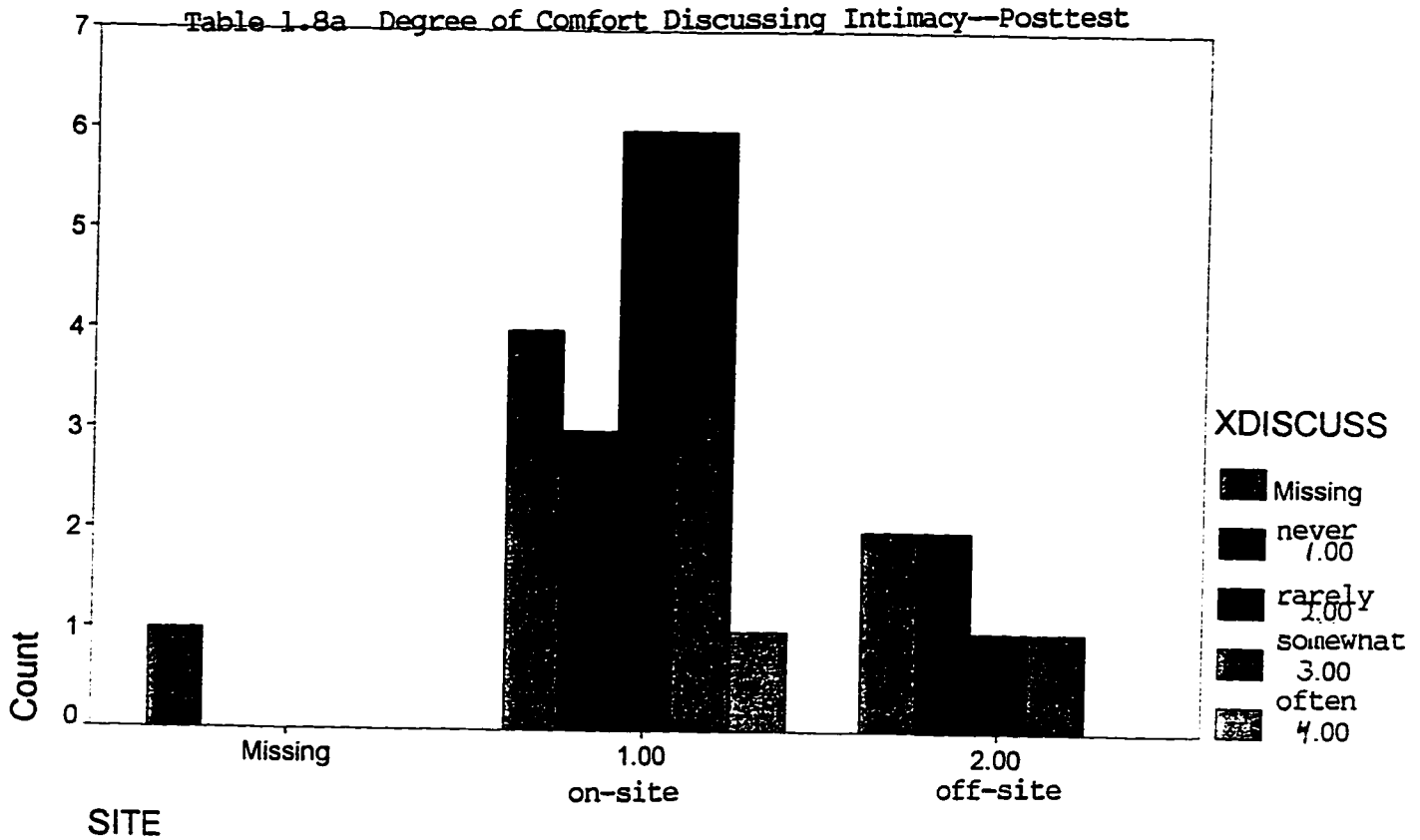


Table 1.8a Degree of Comfort Discussing the Topic of Intimacy Post-Test



Sharing Information

Participants willing to respond with regards to level of comfort sharing experiences or questions related to the topic of intimacy are listed in table 1.9 and 1.9a. Table 1.9 (1=never to 5=always) is pre test information and table 1.9a (1=never to 5=always) is information solicited six weeks after the presentation. There is no correlation between the sites or no significance in the data presented. The graphs do display some changes in degrees of sharing information pre and post test.

During follow-up phone interviews several participants reported they were isolated from a support system. This information identifies one reason for not sharing intimate discussion due

to the lack of a partner, significant other, or friend. Most participants who had an identified partner, significant other, or friend related some level of comfort discussing the topic of intimacy.

Table 1.9 Sharing the Topic of Intimacy by site (pretest)

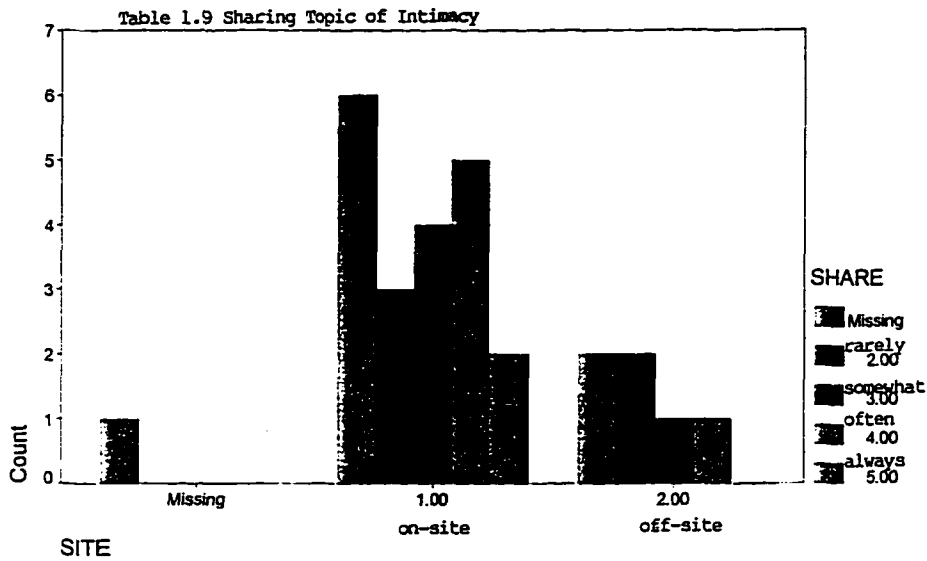
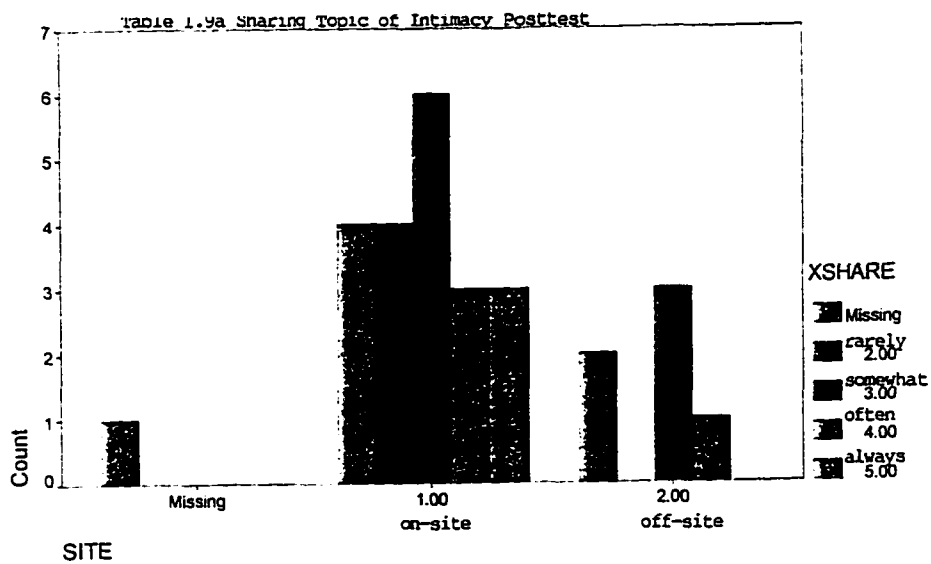


Table 1.9a Sharing the Topic of Intimacy by Site (post test).



Ninety-two percent (92%) of the participants related spending some amount of time with an identified partner being intimate other than sexual intercourse. Eight percent (8%) of respondents reported not spending any time being intimate with their partners other than sexual activity.

Post test information during phone interviews with participants suggested some individuals to have no partner and related having no intimate contact. Information was suggestive of a few individuals not having anyone available to have any amount of intimate contact.

Two off-site respondents reported beginning marital therapy after the intimacy program, and one on-site individual shared they were seeking counseling with a Certified Sex Therapist. All participants stated that upon initial contact with their physicians they were not able to remember any conversation related to how the diagnosis of COPD and possible symptoms may impact their ability to be sexually active and intimate with their partners.

All participants were unable to answer at what stage their COPD was when interviewed by this investigator. Most respondents did not feel they would request this information from their physician. All felt symptom control to be of utmost importance. None of the participants in this study had completed an Advance Directive, although all felt they had specific desires of what degree of treatment they would want done to them in the event of a life-threatening situation.

Information obtained in the follow-up phone contact with participants was significant in terms of what variables had impact on an individuals ability to socialize. Individuals were able

to identify depression, difficult medication regimes, limitations in functioning, and anxiety as variables which had impact on their ability to socialize.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

Summary and Discussion of Findings

This study was a baseline exploration of individuals with a diagnosis of COPD and the difference in effect between traditional classroom vs. distance learning classroom settings with regards to the subject of intimacy. The study was conducted for the purpose of baseline information on the perception of individuals thoughts with regards to interactive video as a tool of methodology for educational programs by a social worker.

Examination of selected variables contributing to data collection with regards to this methodology and the impact of its use between on-site and off-site classrooms did not show a significant difference in comparison. Data suggested an acceptance of participants with regards to the use of interactive video and even stated that without this methodology the information presented would not have been accessible for some individuals.

Although most participants felt that having a presenter on-site was better appreciated it was not a determinant in if they would participate in the program. Most individuals felt they received attention from the instructor and could interact with their own classroom as well as interactively with other sites.

The mechanics of the technology such as clarity and response time was felt to be good and did not have an impact on the presentation. One individual related difficulty hearing the presenter over the interactive video.

To further analyze the data this author explored each hypothesis and the information reported by participants. The following information was obtained with regards to each sub-hypothesis.

Hypothesis 1: Without this technology would there have been opportunities to have pursued this information?

Each off-site individual was asked to comment on the availability of the program. Each participant related if the program had not been available to them in their own community over interactive video they would not have been able to participate. Reasons for this included: severity of illness and discomfort with lengthy travel, no transportation outside of their own area, and difficulty with gas mileage to attend on a weekly basis.

Hypothesis 2: Has there been a change in participants perception of their sexual activity?

Some respondents during the phone contact shared they were more comfortable discussing difficulties in their current relationships with regards to sexual activity and intimacy alone with this author. They did not feel the interactive video was a hindrance but rather a group setting was too threatening to discuss such personal information. Two individuals at off-site locations requested this investigator contact them to discuss this topic in more detail on their return surveys. One respondent stated sexual difficulties were not related to her COPD status but rather to her husbands health problems. The program had heightened their awareness of their own sexual difficulties and had stimulated the topic of exploration of other intimate expression.

Hypothesis 3: Has there been a change in participants perception of intimate expression of relationships due to this intervention?

Follow-up interviews showed all participants as being able to provide ways to express themselves intimately with a partner or friend other than sexual activity. Examples of intimate expression reported by both on and off-site participants included: talking, touching, laughing, going for a walk together, kissing, and hugging.

Several of the respondents who were unable to identify anyone as a source of support were referred to the Better Breathing Support Group and had decided to pursue this option.

Hypothesis 4: Has their comfort level discussing the topic of intimacy changed?

The difficulty most encountered in terms of discussing the topic of intimacy was reported by individuals as not having anyone to talk with. Individuals who reported through phone contact as being widowed or without a partner identified isolation as their primary problem in terms of discussing intimacy rather than the difficulty of the subject or content.

Discussion with individuals revealed that the Better Breathing Program was the identified group participants could converse with regarding concerns and issues. Once the series was completed several respondents reported an increase in isolation as the program was their identified support.

Hypothesis 5: How do the demographic factors such as age, education, gender, and perceived severity of illness affect the impact of the method utilized?

Within this study there did not appear to be a significant relationship between these factors and the method utilized. All participants had some level of satisfaction with the technology.

Having a facilitator present at off-site locations was important to individuals and allowed them to feel better included and attended to. The presence of the facilitators at off-site locations gave participants a sense of security when requesting information. The facilitators were also in a

position to encourage participation of off-site participants. If there were mechanical difficulties with the interactive video technology, such as volume, reception, these facilitators would trouble shoot and correct the difficulty promptly.

One individual who was isolated geographically and was experiencing financial difficulties related no funds to obtain propane for heating. This investigator was able to intervene and obtain resources for this individual to purchase propane.

One respondent identified traveling with oxygen as a difficulty and related which equipment company was willing to assist with travel plans. The ability to get out and travel decreased this individuals sense of isolation.

Input revealed addition of information on other diagnosed illness would address other reasons why lifestyles had changed and socialization might be difficult. Two respondents shared a diagnosis of Bipolar Disorder as well as that of COPD.

. All respondents were able to identify at least one way to decrease depression and anxiety, some could articulate two ways, none were able to identify three ways.

All participants related to utilizing one form of activity to decrease their anxiety. Some of these interventions included: relaxation, deep breathing, compliant use of medication, discussion with their physician, or a diversional activity.

Individuals who felt depressed or were being treated for depression were provided with resources i.e.: support groups, referrals for treatment, or encouragement for seeking treatment.

The intent of this studies' initial and ongoing concern was the impact of newer technology used to provide information to clients and the long-term effects it may have with clients. Social workers are trained in various styles of intervention based on theoretical

approach. As social workers use this technology to provide educational information to clients data suggesting its impact is needed.

The sample population for this study was too small to provide statistically significant data. This study was initiated as a baseline foundation encouraging further exploration of larger groups over longer periods of time to examine the impact of interactive video as a tool for information delivery.

Recommendations

Program Improvements

Follow-up interviews suggested that the length of the program on the topic of intimacy be longer to cover more information and allow un rushed discussion. This data suggested improvements with the Intimacy program within the Better Breathing Series. A longer program was requested with more time to discuss Intimacy and Psychosocial stressors by participants. Early information was shared with hospital personnel and these changes have already taken place. The Intimacy program has now been expanded to ninety minutes and will include Intimacy as well as Psychosocial Stressors. This information will be presented by a social worker.

The facilitators at off-site locations are imperative for participants to feel welcome and included. When facilitators were not available during the program or left prior to the end of the program individual's group participation decreased. The presence of the facilitators at off-site locations was planned in order to support this methodology. The intent was for the facilitators to encourage participation of off-site participants.

The ability for the presenter to obtain feedback and response to surveys dropped dramatically without the encouragement and assistance of the off-site facilitators. It is a recommendation of this study that facilitators be trained in assisting participants with concerns they may have and providing a sense of security to individuals which will increase their level of participation.

One client was unable to hear the presentation over interactive video. The hospital has now included different microphone capabilities which have enhanced the ability of off-site individuals to hear the presentation.

All classes will also be videotaped so that if any participants are not able to come to the presentation they will be able to obtain a copy of the video for their later viewing. If participants are unable to attend a certain series within the program they are also invited to attend that specific session during the next series of classes.

Classes are now provided to presenters with ideas to improve interaction and inclusion between sites. A different seating format was selected due to expressed client concern in hopes of better appearance and feeling of inclusion. Ongoing evaluation by hospital education departments will continue to explore this area of concern.

Further Research

This study was the first of its kind with the topic and population surveyed. It is recommended that further research in this area occur. It is the intent of this investigator to continue surveying participants of the Better Breathing Series--Intimacy and Psychosocial issues session in hopes of better understanding the impact on a greater number of participants over a longer period of time. In research to follow it is suggested a longer window of time elapse between the survey immediately following the presentation and the follow up phone contact.

After a six week period of time it appeared several respondents were still able to remember their past response to questions and articulate answers to questions as “same as before”. Later studies will allow for an eight (8) to twelve (12) week period of time between tests.

Other serious issues which arose in terms of this study included each individuals lack of knowledge related to the severity of their illness. The participants who took part in this study did not share an understanding of the stage of their COPD. It should be noted that several respondents articulated the desire to not be told the level of severity of their illness by their treating physician. None of the participants in this study had completed or thought about completing an Advance Directive.

Future research could explore the possible reasons for this concern. Physicians input in terms of what they share with clients with regards to the stage of their COPD could be compared to that of each patients understanding of their disease process.

It appears that the Better Breathing Series at least for off-site individuals may serve as a support network that once completed has an effect of decreasing socialization and support. It would be of interest to explore ways to increase support networks in these geographically isolated outlying areas.

Summary

In summary the utilization of interactive video as a means to provide educational information is young and in need of further exploratory research. Social workers need to be concerned with regards to the impact this technology has on our client population.

Research and impute with regards to findings is imperative to allow beneficial assistance to client populations. Academic institutions need to address the changing styles of intervention within the arena of social work. Introduction and training in the utilization of interactive video

as a tool of providing information is needed for social work students. Social workers must continue to evaluate their practice in order to ensure the needs of our clients are met.

Our clients seem willing to embrace technology in hopes of increasing their fulfillment and quality of life. It is up to the profession of social work to ensure our training continues to allow us to succeed in meeting the needs of those we serve.

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APPENDIX A:
COVER LETTER

Welcome to the pulmonary rehabilitation program. This session of the program addresses the topic of intimacy. The quality of life we experience is greatly influenced by the caliber of relationships within our lives.

Meeting your needs is of the utmost importance to us. One way to determine the programs effectiveness in meeting your needs is to solicit your responses to a series of questions. These questions will be presented after your participation in the class. Your understanding of the material and satisfaction of the program will then be measured by another series of questions obtained by a follow-up phone contact within four to six weeks following the completion of the program.

Please take time to complete the attached survey. Your answers will be kept confidential.

Your name and phone number is requested so that I may contact you with the follow-up questions.

Thank you for your participation.

Sincerely,

Beverly Rushlow
Medical Social Work Dept.
Munson Medical Center
616-935-6380

APPENDIX B:

SURVEY

1) Gender Name _____
1)Male _____ 2)Female _____ Phone _____

2)Age
1)18-29 _____ 3)40-49 _____ 5)60-69 _____ 7)80-89 _____
2)30-39 _____ 4)50-59 _____ 6)70-79 _____ 8)90+ _____

3)Education (check last completed)
1)K-9 _____ 3)12 _____ 5)college 1-4 years _____ 7)doctorate _____
2)10-11 _____ 4)associates _____ 6)masters _____

4)Did your site have opportunities to interact with the person or people at the other site(s)?
1)never _____ 2)rarely _____ 3)somewhat _____ 4)often _____ 5)always _____

5)How well do you feel participants speak with one another in the classroom?(circle the number that represents your feelings).*

not very well very well
1 2 3 4 5

6)How well do you feel participants speak with one another over interactive video in the classroom?(circle the number that represents your feelings).*

not very well very well
1 2 3 4 5

7)How important is it to you to have on-site classes with an instructor?

1)no-preference _____ 2)never _____ 3)rarely _____ 4)somewhat _____
5)often _____ 6)always _____

8)How did learning new information in this fashion compare to in-person, in-class presentations? (comments).*

not very well very well
1 2 3 4 5

9)How would you rate your ability to receive attention from the instructor.

1)never _____ 2)rarely _____ 3)somewhat _____ 4)often _____ 5)always _____

10)Did the following have an impact on your instructors presentation?

1)location of instructor _____ 3)classroom set up _____ 5)noise _____
2)interactive video _____ 4)ability to hear speaker _____ 6)other _____

20) Other than sexual intercourse, how might one express themselves intimately?

1. _____ 2. _____ 3. _____

Any additional comments or suggestions?

Thank you for participating.

*=Knowledge Network Explorer (Pacific Bell)
<http://www.kn.pacbell.com/index.html>

APPENDIX C:
OUTLINE FOR INTIMACY CLASS

BETTER BREATHING CLASS V INTIMACY

Medical Social Work

I. INTIMACY

- A. Definition**
- B. Relationships**
show handout

II. COMMUNICATION

- A. Effective communication**
- B. Verbal/nonverbal**
- C. self-awareness**
- D. The art of listening**

III. SEXUALITY

- A. Breaking the ice and continuum of intimacy**
- B. Expanding the sexual repertoire**
- C. Attitude/positive self-talk**
- D. Asking for what you need--communication continues**

IV. PROBLEMS IDENTIFIED BY CHRONIC PULMONARY ILLNESS POPULATION

- A. Identified problems special to this population**
- B. Strategies of intervention-summary**

V. QUESTION PERIOD

APPENDIX D:
BETTER BREATHING SERIES 1996-97

BETTER BREATHING SERIES 1996

- Class 1 - Lung Anatomy And Physiology
Lung Disease
- Class 2 - Nutrition And Lung Disease
Breathing Exercises
Panic Control
- Class 3 - Pulmonary Hygiene
Practice Breathing Skills With Activity
- Class 4 - Building Strength and Endurance
Energy Conservation
- Class 5 - Psychosocial Aspects of Chronic Illness
Intimacy
Community Resources
- Class 6 - Knowing Your Medication
Use of Breathing Devices
Travel

BETTER BREATHING SERIES 1997

Class 1-	Lungs Anatomy and Physiology Lung Disease	Physician
Class 2-	Knowing Your Medications Use of Breathing Devices	Pharmacist Respiratory Therapist
Class 3-	Breathing Exercises Panic Control Travel Pulmonary Hygiene	Respiratory Therapist
Class 4-	Psychosocial Aspects of a Chronic Illness Intimacy	Medical Social Worker
Class 5-	Practicing Breathing Skills Stress and Relaxation	Respiratory Therapist Registered Nurse
Class 6-	Nutrition and Lung Disease Community Resources	Dietitian American Lung Association
Class 7-	Energy Conservation Building Strength and Endurance	Occupational Therapist Exercise Specialist