Women's Experiences Using Music as a Coping Strategy During Labour

by

Diane Clare

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WOMEN'S EXPERIENCES USING MUSIC AS A COPING STRATEGY DURING LABOUR

BY

DIANE CLARE

A Thesis submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements for the degree of

MASTER OF EDUCATION

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Perhaps the greatest appreciation is directed to the special women who allowed me the privilege of sharing this most personal and miraculous childbirth event.

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Dedication

This master's thesis is dedicated to Simone and Allan Clare, my mother and father, who are inspirational, possess great intelligence, and have the rare ability to use these gifts wisely.

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Abstract

Childbirth is a major event in the life of a woman. Understanding a woman's labour process as well as her experience with coping is of paramount importance. This study's purpose was to explore and describe women's experiences using music as a coping strategy during labour. The experience of childbirth generally and with music use during labour specifically was addressed.

Six women, who volunteered in their childbirth education classes, were provided with personal preference music and equipment during labour. Telephone interviews, using an interview guide and a Lickert scale, were carried out at the women's convenience in the postpartum period. The interview narratives were transcribed and content analysis methodology was utilized. Identification of themes and categories was completed. Results from the findings include the following:

1. Women in this study who volunteer to use music during labour have used music for previous painful experiences.

2. Women in this study who find music use during labour to be a helpful coping strategy have identified using music for coping with previous painful events.

3. Women in this study who find music use during labour to be a helpful coping strategy have had formal musical instrument lessons and/or play an instrument.

4. Women in this study who volunteer to use music during labour as a coping strategy have spouses who have a keen interest in music generally.

5A. Women in this study who use music during labour and one woman who did not report more negative than positive aspects of the labour experience generally.

5B. One woman who used music during labour with a home birth reported more positive than negative aspects of the labour experience.

6. Women in this study who use music during labour and one woman who did not report more positive than negative aspects of their coping ability during labour.

7. Women in this study use coping strategies during labour that they have used previously to cope with painful events.

This study's research foundation, design, findings, suggestions for research, implications for labour care practice and recommendations for childbirth education are discussed. The conceptual framework of Roy's Adaptation Model provided a global structure for this study.

Chapter One

INTRODUCTION

> Of all of life choices, none are more important to society, none has more far reaching consequences, none represents a more complete blending of social, biological, and emotional forces than bringing another life into the world.
>
> Victor Fuchs (1983)

Childbirth is a multidimensional transitional experience in the life of a woman and has meaning far beyond the physiological process. Labour is an intense experience —a process in which the uterus contracts, the cervix softens and opens, the fetus descends through the pelvis, and the mother helps push a new member of the human race out into the world; this is a process which has far-reaching potential to affect the mother's mental and social health as well as her relationships with family members (Gennaro, 1988; Mercer, 1985).

There is evidence of consumer-driven trends currently present in our social culture which may reflect a growing demand from people who want to be active participants in directing their own health care: one trend is the interest in home births which may be growing in popularity; there is the establishment of task forces across Canada to study the legalizing, licensing and educational aspects of the professional midwives issue; natural childbirth continues to be a goal selected by many childbirth education participants;

hospitals have responded to consumer demand with birthing rooms and beds in an attempt to offer a more home-like environment; and women appear at hospitals with a written birth plan, possibly in an attempt to control and direct their childbirth experience and intercept/prevent any perceived needless medical/procedural interventions. These issues may reflect an adversarial position from a consumer health care point of view and/or a desire to return to a non-medical, non-pathological, non sick-role model or orientation concerning the normal childbearing process.

The childbirth experience is painful for most women and is influenced by a multitude of factors including: personality, age, religion, culture, personal pain experience and historical, physiological and psychological characteristics, and the general meaning of childbirth as well as each specific childbirth experience (Roberts, 1983). The literature identifies the following variables as potentially influential to the overall satisfaction with childbirth: past history of pain, past history of coping success, a wanted pregnancy, sense of control of labour, appropriate expectations of labour, self-efficacy, locus of control, presence of self confidence, attendance at childbirth education classes, and presence of husband and/or support.

This study attempted to circumvent the analyses of possible relationships between the overwhelming variables which may influence the overall perception of the birth experience and focus on the influence/effects of music use during labour on a woman's perception of this strategy as to its helpfulness with the labouring experience. Each childbirth and each woman is individual and unique. The multitude of factors listed previously lead to a realistically complex perception of the birth experience (Nichols & Humenick,

1988). Therefore, there is a need for a more individualized assessment and identification of childbirth preparation style appropriately matching coping strategies to individual needs rather than using a group approach which may allow little variation for the selection of coping strategy options or individual control of selection-empowerment.

Gordon and Haire (1981, cited in Oakley, 1989) suggest that women should question the necessity of the current style of childbirth for low-risk women, especially in view of the low infant mortality rates in the Netherlands and Sweden where childbirth is facilitated by midwives and is not a medically oriented experience. In a position paper, Oakley (1989) reports on the universal reluctance of medical professionals to accept potential alternative, non-pharmaceutical alternatives as legitimate coping strategies for childbirth.

Childbirth education literature suggests that alternative coping strategies be available for use as an adjunct to the basic childbirth preparation strategies in education classes (Livingston, 1979; Nichols & Humenick, 1988; Oakley, 1989).

Research on alternative coping strategies for childbirth generally (Crowe & von Baeyer, 1989; Gaston-Johnsson, Fridh, & Turner-Norvell, 1988; Niven & Gijsbers, 1989; Weisenberg & Caspi, 1989) and the strategy of using music as an alternative adjunct coping strategy specifically (Clark, McCorkle, & Williams, 1981; Duchene, 1989; Geden, Lower, Beattie & Beck, 1989; Hanser, Larson, & O'Connell, 1983), has often focused on the quantitative measurement of physiological variables as an evaluative method.

However, not much is known about a woman's in-depth personal experience when using music during labour as an adjunct to standard

childbirth education class strategies. Sammons (1984) found that perceived relaxation with the use of music during labour was increased significantly. Durham and Collins (1986), Duchene (1989), and Sakala (1988) suggest that alternative coping strategies should be made available to the expectant mother. Durham and Collins (1986) suggest a need for more subjective measures for evaluation of alternative coping strategies. Nichols and Humenick (1988) state that a research re-focusing on the overall birth experience using "soft" variables, such as feelings of satisfaction, happiness, joy, may be useful for evaluating the qualitative experience of childbirth.

Therefore, in consideration of the importance of the childbearing experience in a woman's life; her unique self and situation as well as her individual goals; in light of past quantitative research on the effects of music use during labour; it becomes important to explore and describe the subjective overall perception of the childbirth experience and music use during labour qualitatively. This explorative study investigated the phenomenon of music use during labour as an adjunct to basic childbirth education strategies. Qualitative methodologies were used primarily as well as analysis of quantitative data which contributed insight and expansion of the research findings.

Statement of Primary Area for Study

There is a dearth of research which studies a woman's overall perception of the childbearing process using music during labour as an adjunct to childbirth education strategies for coping with labour. The literature suggests

that it may be plausible for some women to find benefit with the use of music during labour and possibly on their overall perception of the childbirth event.

Presently, we do not know enough about either the individual or the experience of using music during labour, especially when it is found to be a positive or helpful coping strategy. This study focused on the exploration of the women's experience with music use during labour as an adjunct to any and all other childbirth education and/or coping strategies. The study involved the use of personal preference music via headphones/speakers as a coping strategy for labour. Qualitative methodologies were used to explore and describe the phenomenon from the woman's perspective. Quantitative data (Lickert scale) were employed to provide enrichment of the qualitative research data for each participant's experience.

Demographic data were used to add descriptive information to each participant's experience.

Purpose of the Study

The purpose of this qualitative study was to explore and describe the experiences of women who used music during labour as an adjunct coping strategy to childbirth education classes. To increase understanding and knowledge, this study also examined selected demographics for relationships among the qualitative data and a woman's perception of the circumstances of music use during the childbirth labouring experience.

Significance of the Study

This qualitative study explored and described women's experiences with music use during labour from the experiential perspective of the woman. The study's intent was to add to conceptual and theoretical knowledge and understanding of the labouring woman's experience. Specifically, a woman who uses childbirth preparation education and their coping strategies as well as the adjunct coping strategy of music use were examined. Results are expected to expand understanding of the uniqueness of each woman and each labour situation.

Qualitative data provided information on factors influencing a woman's perception of the childbirth event generally and with music use specifically. The demographic data were used for identification of similarities and differences among the women, and also assisted in clarifying characteristics between women who find music use during labour a positive or helpful strategy and women who do not.

These findings will assist or enable health providers/educators to identify women for whom music use during labour could be a useful coping.

Significant also is the nature of the adjunct strategy of music use during labour. The provision of music and equipment is a relatively inexpensive proposition in these economically restrained times. There is no known harm from music use with recommended decibel levels of 85 and under (Livingston, 1979). Music can be instantly initiated, interrupted, or discontinued and can be shared with a support person via a dual headphone jack. Communication can usually be maintained with health personnel through verbal and/or hand

signals initiation because the volume is controlled by the individual woman, with a comfort decibel level of 85 and under. The equipment is familiar to many people, has ease of use and is easily transportable as well as being simple to operate, and does not require much space. Music may circumvent language barriers and is culturally flexible.

Research Areas Explored

1. Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?
2. Are there similarities/differences apparent in the women who find music use during labour to be a helpful coping strategy?
3. Are there similarities/differences apparent in the women who find music use during labour to be a non-helpful coping strategy?
4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?
5. Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

Similarities/differences referred to in the research questions need an explanation of the dimensions explored. This study investigated the informant's previous painful events in their life experiences. Successful coping behaviours used previously may tend to be used again. Prior coping methods could either be isolating or non-isolating. The use of headphones is an isolating activity. This study also sought to discover relationships which

may exist between helpfulness of music use as a coping strategy and previous music use practices; previous coping methods and behaviours with pain, formal music education, frequency, purpose and patterns of music use. Music quantitative and qualitative data provided insight into areas which related to those informants who find music use a helpful or non-helpful strategy, that is, education level, age, previous labours or coping behaviours, etc. Exploration of the informants experiences with music use during labour used open ended questions which provided important information about items which support/influence the helpfulness or non-helpfulness of this coping strategy, for example, support person also uses the music during labour, having the equipment and music provided, staff support of the music use strategy, practising with music before labour, etc. Use of the Lickert scale questions provided information related to the strength of belief and/or importance of factors which influenced the experience.

Definition of Terms

1. Labour: Stage one (These definitions are general and represent average times for both primiparas and multiparas.)
   - phase one or latent phase: contractions are regular and mild intensity, 30 seconds duration; cervix effaces and dilates 0 - 3 cm; phase lasts approximately 5 - 8 hours.
   - phase two or active phase: contractions are regular every 3 - 5 minutes, 60 seconds duration and moderate intensity; cervix effaces and dilates 4 - 7 cm; phase lasts 2 - 5 hours.

- phase three or transition phase: contractions are regular every 2 - 3 minutes, strong intensity, 60 - 90 seconds duration; cervix is effaced and dilates 8 - 10 cm; phase lasts 30 - 90 minutes.

Stage two - contractions are regular every 60 - 90 seconds, strong intensity, every 2 - 3 minutes; cervix 10 cm or fully dilated; stage lasts from minutes - 90 minutes; stage ends with the birth of the baby (Bobak & Jensen, 1990; Reeder, Martin, & Koniak, 1992; Whitley, 1985).

2. Primipara - a woman who will be giving birth for the first time.

3. Multipara - a woman who will be giving birth for the second or third time.

4. Childbirth education - a series of group classes for expectant parents, usually 6 - 8 weeks prior to delivery date; focus on preparation for the birthing experience and parenthood, source of information, expertise, education and weekly practise of labour coping skills and techniques or strategies, offered privately, hospital affiliated, City of Winnipeg or Province of Manitoba public health department, and other community based programs. Most childbirth education

classes are based on the Lamaze, Bradley, or Read method of preparation. Classes can follow the exact method or a variety of modified methods. The Lamaze method used at many centres in Manitoba is based on the theoretical principles of psychoprophalaxis (based on Pavlov's research) of which relaxation as a conditioned reflex is a major component.

5. Music - any type/style/category of music either selected from the study's tape/disc resources bank, or pre-selected preferred music from a woman's own resources, or from a radio station channel.

6. Music use* - Any use of music, any type/style/category of music used during any of the three phases of stage one labour used for any amount of time.

*Note: Not to be confused with music therapy which has a different definition, purpose, time frame and clientele, goals and methodologies. Music therapy is an independent professional discipline, having an extensive body of knowledge and practical expertise. Professional application involves the purposeful use of music with specifically designed therapeutics for an individual in a variety of populations. Methodologies used are based on music therapy theories and professional research drawn from music, music therapy, psychology and science disciplines. Music therapy time

frames for treatment usually involve weeks to months or more. One of the main goals of music therapy is behaviour change or behaviour modification, altering a human response to a stimulus. Many music therapists are registered with their professional licensing bodies and their practice/training involves extensive clinical application (Schulberg, 1981).

7. Postpartum - the 6 week period of time following the birth of a child.

8. Childbirth experience - the description a new mother explicitly and verbally expresses of her childbirth. This study has neither included the birth experience as expressed/written down by the medical personnel nor experiences forgotten, denied or repressed by the mother (Thune-Larsen & Møller-pedersen, 1988).

9. Pain - a sensation of hurt whenever and wherever the person states.
- a subjective experience which includes all aspects of the pain experience, from an individual's perspective, that affect pain; suffering, discomfort and/or negative feelings (McCaffrey & Babe, 1989; Reeder et al., 1992).

10. Suffering - an affective state that may accompany pain; a state of anguish of one who bears pain, injury,

or loss; the suffering aspect of pain (Reeder et al., 1992).

Assumptions

For the purpose of this study, the following assumptions were made:

1. Informants in the study will have the knowledge and the skills to use the audio equipment provided for use during labour.
2. Informants in the study will respond honestly/candidly about their labour experience throughout the interview process in the postpartum period.
3. Informants in the study who reported statements that music use during labour had a helpful/neutral/non-helpful influence as a coping strategy were accepted as stated.

Limitations

The following limitations were identified:

1. Persons who attend childbirth education classes may not be representative of the general population from which they are drawn.
2. Childbirth education class participants who volunteer for the study may not be representative of other childbirth education participants generally (self-selection bias).
3. Knowledge of the availability/unavailability of various anaesthetic/ analgesic options within the hospital environment may influence a study participant's perception of the helpfulness/non-helpfulness of non-

pharmaceutical coping strategies.

4. A variety of factors not identified may influence a participant's perceptions of their helpfulness/non-helpfulness of using music during labour as an adjunct coping strategy (such as subtle negative staff influence, other life stressors, a particularly painful or difficult labour, memory following analgesic use).
5. It is acknowledged that because the interviewer is the researcher, the potential for bias exists for interpretation of data and the understanding of findings/descriptions/interpretations.
6. The possibility of participant recall bias from the interview is acknowledged, however, Niven (1988) reports significantly accurate labour pain recall 3 - 4 years after childbirth using the Melzack Pain Questionnaire (Melzack, 1975) and the Visual Analogue Scale (Scott & Huskisson, 1976).
7. Participants in the study who express a negative childbirth experience may have difficulty assessing any positive influence from the use of music during labour.
8. The childbirth education instructors allowed very little time for the investigator to speak with the class; 10 and 15 minutes.
9. The childbirth education instructors did not give out the information sheets and/or read the letter to the class participants during the requested class and time as had been agreed upon. (This resulted in the following:)
10. (a) Potential volunteer informants therefore did not have the planned time to review the material and decide upon participation.

(b) The researcher should have arranged to introduce the study herself.

11. The music record sheet was not a necessary component of this study. There was some discrepancy about what the categories of music actually were and if they were always identified using the same criteria by all informants.
12. The interview guide should have contained a specific request to have the women comment on the overall impression of their coping ability during labour.
13. It may have been important to integrate and second check for the responses given to the Lickert scale.
14. Problems were encountered which had not been anticipated with courier services not operating on a 24 hour daily basis. This accounted for one woman receiving the music and equipment too late for her use, and another receiving it later than desired in early (latent) phase labour.
15. It may be important to have an interview question about why women decided to participate in the study, for example, What was the spousal influence on the decision?

Conceptual Framework

The conceptual framework used as a foundation and perspective with which to approach this research study was Roy's Adaptation Model. According to Andrews and Roy (1986), humans are biopsychosocial adaptive systems who cope with environmental change through the process of adaptation. This interaction process requires the person continually to change

and adapt. Within the human system there are four subsystems: physiological needs; self-concept; role function; and interdependence. These subsystems constitute adaptive modes that provide mechanisms for coping with environmental stimuli and change.

This model was chosen for this study because it concerns the adaptation process. The labouring woman faces one of the most challenging events of her life requiring adaptation; a labour process which may require the amalgamation of the entire scope of her coping ability and resources. While a woman must adapt to the labour process in the physiological mode, the other three modes are instrumental for adaptation. According to Andrews and Roy (1986), one of the goals of this model is to promote adaptation during health and illness. Health care personnel can regulate stimuli affecting adaptations; interventions generally take the form of increasing, decreasing, modifying, removing, or maintaining internal and external stimuli that affect adaptation. The behavioral responses needed for adaptation may be innate or acquired mechanisms. Music use as a coping strategy for labour may assist a woman with her ability to adapt. Nurses/health care personnel may also assist adaptation of the labouring woman with selection of identification, use of strategies, and support with ability to cope.

The conceptual framework represented diagrammatically may provide an enhanced perception and understanding of the research study in relation to adaptation.

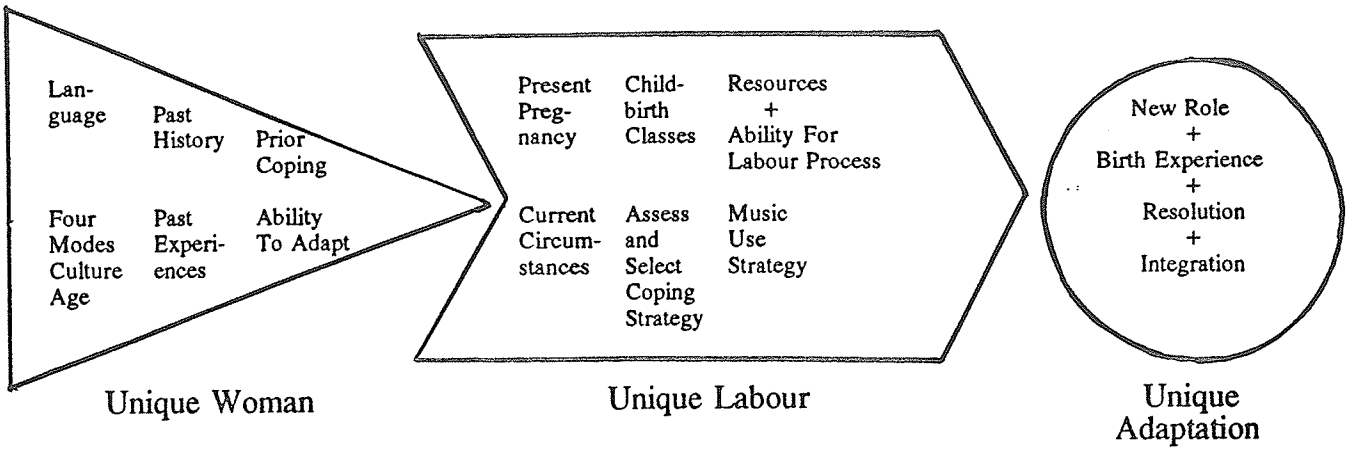


Figure 1

Conceptual Framework

Chapter Two

REVIEW OF THE LITERATURE

Childbirth is a women's issue primarily, but it is much more than this. The childbirth experience is a unique event. It holds importance in many realms: physiological, psychological, historical, spiritual, social/cultural, philosophical, religious and legal. Due to this interrelatedness, the research reviewed has been drawn from the education, nursing, medicine, psychology and music disciplines. This is essential as each area contributes needed perspective for the foundation and direction of this study which explores and describes the phenomenon of music use during labour. The research review has been organized into five categories: childbirth, labour pain, childbirth education, music and pain, and music use as a coping strategy.

Childbirth

Childbirth is viewed as a developmental task of pregnant women by many researchers (Erikson, 1959; Horan, 1984; Lowe, 1989; Mercer, 1986; Oakley, 1989; Thune-Larsen & Møller-pedersen, 1988). Some authors describe childbirth as a normal life crisis (Erikson, 1959; Thune-Larsen & Møller-pedersen, 1988). The originator of a crisis intervention strategy Erich Lindemann (1956) suggests that childbirth is a hazardous situation which creates stress from emotional strain and that a crisis results or is encountered if adaptive mechanisms generated fail to master the new situation; a major life

disorganization occurs. Other researchers suggest the developmental-task nature of childbirth by implying the importance of mastery of the event (Benedik, 1959, 1970; Mercer, 1985; Nichols & Humenick, 1988; Tanzer, 1968). Generally, childbirth is regarded as a major event in a woman's life.

Significant, far-reaching potential effects of unsatisfactory task-mastery of childbirth, dissatisfaction generally, on a woman's post partum life are discussed in the literature. Lagerkrantz (1979), and Almgren, Nilsson and Uddenberg (1972) suggest that a painful and troublesome birth experience may lead to psychological problems postpartum, such as additional disturbances including breastfeeding problems and the need for practical help at home after discharge from hospital. Maternal-infant contact may also be adversely affected (Waldenström, 1988). Women's thoughts of themselves and their relationships with their spouse and other family members may be affected by childbirth (Gennaro, 1988). Thune-Larsen and Møller-pedersen (1988), in a study which is part of a longitudinal research, found that there was a relationship between volunteer subjects childbirth experiences and emotional disturbance postpartum; negative childbirth experience in areas of pain, anxiety, loss of control, loss of time/place, dissatisfaction with own coping, and a negative emotional reaction reached statistical significance with relation to past partum emotional disturbance. Therefore, strategies which can assist a woman to cope with the labouring childbirth experience have far reaching importance for future adaptation and functioning.

Labour Pain — From a Physiological Perspective

While it is not entirely understood why labour is perceived as painful, there are several possible explanations. Throughout the body nerve endings or pain receptors are sensitive to stimulation by extremes of temperature, muscle spasms, or lack of oxygen. The receptors transmit pain signals through the nerve fibres to the spinal cord and then to the brain. During labour the contraction of the uterine muscle fibres causes stretching or dilation of the cervix and also causes nerve ganglia in the cervix and lower uterus to be compressed. The nerve endings within the uterus transmit impulses through the nerves of the pelvis to the spinal cord. The pain of the first stage of labour is then perceived in the lower abdomen and lower back. During the second stage of labour, after the cervix is fully dilated and during descent of the baby's head, the stretching of the vagina and surrounding area, the perineum, plus rectal pressure, generate considerable discomfort (Hillard, 1985).

One major theory attempts to explain pain in terms of both the physiological and psychological key components. The gate control theory of pain attempts to account for sensory, cognitive and motivational processes that play a role in the perceptions of and behavioral responses to pain. The theory postulates that a hypothetical "gate" in the dorsal horn of the central nervous system modulates the transmission of nerve impulses to receptor cells. If a signal of great enough strength is received, the "gate" opens, the signal then enters a complex loop for interpretation, then reaction (Melzack & Wall, 1965). Two types of afferent sensory fibres, along the spinal cord, transmit

impulses; A-delta fibres are perceived as sharp, localized pain, while those transmitted along C fibres are perceived as dull, diffuse and persistent, burning or aching pain. As well, circulating chemicals can also produce pain; serotonin, histamine, bradykinin, prostaglandins and potassium ions according to endogenous hormone theory. The body produces pain modulators such as endorphins and enkephalins —opiate-like substances (Olsson & Parker, 1987). It is still an unknown process. The phenomenon of pain is clearly complex; it involves a complicated relationship and, most importantly, reinforces the notion that pain is a most intensely unique personal human experience.

Livingston (1953) and Melzack (1965, 1981, 1984) lend support to a complex view of the nature of pain. As well as a direct relationship with the central nervous system and influence from the neocortex of the brain, pain may also be influenced by suggestion, attention, anticipation, anxiety and past experiences of the individual. Stevens states that the mind can perceive pain in a part of the body even in the absence of a physical pain stimulus along the pathway of the pain system (phantom pain syndrome) (Mims Jiménez, 1988). The woman's mental state is able to enhance, diminish, misinterpret, or create perception of pain. The simplest interpretation of pain comes from McCaffrey and Babe (1989) who state that pain is whatever the experiencing person says it is and exists whenever she says it does.

There is a well documented association of emotional/psychological components which affect pain perception (Beck, 1959; Melzack, Taenzer, Feldman, & Kinch, 1981; Rich, 1977; Turner, 1980). Other factors which may influence the pain experience of labour (Lowe, 1989), include: childbirth expectations, fear, fatigue, state of health, feelings of helplessness, lack of

control (Roberts, 1983; Thune-Larsen & Møller-pedersen, 1988); expectations —unrealistically positive or negative (Niven & Gijsbers, 1989); cognitive dissonance when the normal pregnancy state is painful, anxiety, distress when reality differs from expectations (Roberts, 1983; Waldenström, 1988); cultural factors (Horan, 1984); unknown, fear, tension (Sakala, 1988); a woman's location in the cosmos, social support, understanding of bodily function, relationship with her mother and father, meaning of pain (Arney & Neill, 1982); the sick role perception, for example, intravenous lines present (Newton, Newton, & Broach, 1988); religious beliefs (Henschell, 1984); and endorphin levels (Cahill, 1989).

From an extensive review of the literature, Roberts (1983) concludes that the reasons why pain in labour is more distressing for some women than for others cannot be explained, because there is no direct relationship between aversive stimuli and perception of pain. Even women who have received Pethidine (narcotic) during labour did not report lower pain rating scores according to a prospective study using a convenience sample of pregnant women (Gaston-Johansson, Fridh, & Turner-Norvell, 1988). This is supported by Roberts (1983) who suggests that the amount of unpleasantness or distress a person experiences is different from the intensity of the pain one is having. Waldenström (1988), and Norr, Block, Charles, Meyering and Meyers (1977) report that effective pain relief does not invariably ensure a satisfactory birth experience. However, other authors find that perception of pain does not appear to be mediated by increased coping skills and decreased anxiety (Crowe & von Baeyer, 1989; Lowe, 1989).

These varied findings lend support to the perspective of other authors

who discuss the global nature of labour pain as multidimensional in nature; a multifaceted phenomenon with wide individual variations that may be dynamically related to a large number of psychosocial, physiological and environmental variables. Uncertainty exists in the tentative nature of our present knowledge about predictors and modifiers of perceived labour pain (Gaston-Johansson et al., 1986; Lowe, 1989; Melzack & Wall, 1965, 1984; Robinson & Fontana, 1989; Turner, 1980; Zimmerman, Pozehl, Duncan, & Schmitz, 1989).

Many researchers agree that there are two components of pain which are related to the pain perception experience; a physical or sensory component which relates to type and intensity of sensation and the affective component which has a suffering or emotional reactive component involving factors that may influence the affective pain experience (e.g., cultural, personal, social), (Beecher, 1959; Gennaro, 1988; Hunter & Phillips, 1981; Johnson & Rice, 1974; Rich, 1977; Shalling, 1975; Wall & Melzack, 1989).

Pharmaceutical management of pain in labour is primarily aimed at reducing/minimizing/eliminating/controlling/altering the perception of pain; however, local, systemic and/or regional analgesic/anaesthetic all have potential/actual side effects/risks. Many women prefer not to take medications that could interfere with their ability to fully participate in the labouring experience or that may interfere with their infant's health. An unmedicated labour is often a goal mentioned by pregnant women. Non-pharmaceutical pain management strategies should be emphasized as the first line of defense (Nichols & Humenick, 1988; Steiner & Steiner, 1988). This area will not be addressed further except to state that whether or not pharmaceuticals are used

by women in labour apparently has no predictive bearing on their report of pain or on their report of coping with the childbirth labour experience.

The notion that painless labour of childbirth (removal of the sensory/ pain component) does not increase maternal childbirth satisfaction is supported in the literature (Gennaro, 1988; Melzack, 1984; Waldenström, 1989). Morgan, who is cited in Nichols and Humenick (1988), reported a study of 1,000 women in which pain was measured using a visual linear analogue scale, 50% of these women had epidurals during labour and yet these patients still reported that they had experienced more pain than expected. By questionnaire, one year later, 16% of the mothers responded that although their epidurals were effective in reducing pain; they were dissatisfied with the childbirth experience. Patients who refused anaesthesia reported more pain but had higher satisfaction scores. These findings suggest the importance of the influence of both the sensory and affective components of pain for the labouring woman; coping strategies may need to target both components of labour pain.

Childbirth Education

A concise definition, part of a broader one, explains childbirth education as a dynamic process in which expectant parents learn cognitive information about physical and emotional aspects of pregnancy and early parenting, coping skills and labour support techniques (Crowe & von Baeyer, 1989; Nichols & Humenick, 1988; Roberts, 1983). Women who attend childbirth classes report a more satisfactory experience (Leifer, 1980; Melzack, 1984; Tanzer, 1968).

Despite observer presence bias as well as possible pain measurement validity issues, Weisenberg and Caspi (1989) in their study found that participation in a preparation for childbirth course led to a significant reduction of pain behaviour (affective component), however pain ratings (sensory component) were not affected. They were investigating the effects of sociocultural origin and educational level on the dependent variables of verbal and behaviour pain ratings as well as coping style during the childbirth experience of 85 women. Although childbirth education classes include strategies which target both the sensory and the affective component of pain, there is disagreement in the literature about which component of pain to direct the techniques for the best outcome.

Bonnel and Boureau (1985) found in their study that pain ratings and pain behaviour were moderately correlated but suggest that pain behaviour may be more an index of self-control; sensitive to anxiety which could be reduced by course preparation. Therefore, pain ratings reflect a cognitive activity influenced by the level of sensory input which is high in childbirth. They postulate that decreasing (sensory) pain ratings is influenced by course preparation only if it provides coping strategies that affect the sensory component of pain. Other authors state opposite findings: Gaston-Johnsson et al. (1988) studied progress of labour pain in primiparas and multiparas in a prospective experimental study with a convenience sample of 54 multiparas and 30 primiparas using measurement tools to assess both sensory and affective pain components qualitatively and quantitatively. They suggest that because pain ratings (sensory component) are unaffected by (Pethidine) merepidine use —a synthetic narcotic analgesic —childbirth preparation classes

might support/encourage the use of non-invasive pain relief methods such as relaxation and music therapy to decrease the affective component of pain.

Many authors, however, do agree that one of the goals of childbirth education is the reduction of anxiety which is documented in the literature to be psychologically and physiologically associated with pain perception (Beck, Geden, & Brouder, 1979; Melzack, 1983; Roberts, 1983; Stevens, 1990; Waldenström, 1988). Other authors, Lowe (1989), Crowe and von Baeyer (1989), and McCaffery (1990) suggest that pain perception is not mediated by reduced anxiety. Crowe and von Baeyer (1989) specifically found that women who reported a less painful childbirth demonstrated a higher anxiety following traditional childbirth education classes. Roberts and Burke (1989) postulate that women who express anxiety following childbirth education classes may be getting ready to cope by obtaining the support and assistance that facilitates reduced distress during labour. Another perspective held by some researchers suggests that women are more satisfied with the childbirth experience, following childbirth education classes, if they can take on a participant, decision-making role, set their own goals, and hold a belief that they have some degree of control over events during the childbirth labour experience (Crowe & von Baeyer, 1989; Davenport-Slack & Boylan, 1974; Doering, 1980; Séguin, Therrun, Champagne, & Larouche, 1989; Wilmuth, 1975).

A woman's confidence, following childbirth classes, influences her perception of the childbirth experience as either positive or negative (Crowe & von Baeyer, 1989). Perceptions of a woman's ability to handle labour may be highly predictive of accurate active labour pain reports, especially the affective component suggests Lowe (1989).

Lowe (1991), in an expert opinion paper, expands the concept of confidence in the ability to cope with labour as a major factor in a woman's perception of pain during labour; she explores confidence from the theoretical perspective of self-efficacy, a primary concept of social learning theory. Suggestions include the development of research-based strategies for childbirth education that are tailored to individual variations in the personality and skills that a woman may bring to her pregnancy experience. Personal control or mastery of the childbirth experience is found to be a "key" component of childbirth satisfaction according to Nichols and Humenick (1988) and Hodnett and Osborn (1989), as well as realistic childbirth expectations (Beaton & Gupton, 1990).

Ann Oakley (1988) summarizes current research findings by suggesting that, although the effectiveness of childbirth education classes has never been proven via the measurement of significant childbirth outcomes, childbirth courses may have increased women's satisfaction with childbirth, which is important. However, satisfaction with childbirth remains an amorphous, multidimensional outcome with complications of measurement (Hodnett & Osborn, 1989).

While acknowledging the importance of these factors, for the purpose of this study, it may be feasible to avoid assessment of the influence of the multitude of potential variables on childbearing coping via one global, vague outcome of satisfaction, and instead focus evaluation on individual coping strategies for effectiveness/helpfulness by exploring labouring women's perceptions.

Pain and Music

Research addressing the use of music as a strategy for coping with pain is scarce but a few studies have claimed some positive results. Rozzano and Locsin (1981) conducted a prospective, case-control study to investigate the effect of music on post-operative patients using variables associated with pain, for example blood pressure, pain rating, scales, and pulse rate. The authors found statistically significant results in the case group using music; the patients demonstrated a decrease in some of the pain behaviours evaluated. The use of their own pain scale tool which had not yet been evaluated for validity may have resulted in skewed results. Interestingly, all 24 patients answered yes, when asked if music use should be recommended to future patients post surgically.

Similar results were reported by Mullosby, Levin, and Feldman (1988) in an experimental case-control study of post operative patients including a reduction in state anxiety with music use. A different pain scale tool was used, making comparison/affirmation of findings with Rozzano and Locsin's (1981) and other studies difficult.

Zimmerman, Pozehl, Duncan, and Schmitz (1989) studied the use of music as an adjunct to pain scheduled medication in chronic pain patients in a case-control experiment using hospitalized patients. Results from The McGill Pain Questionnaire (MPQ) (1979) and a visual analogue scale (VAS) reached statistical significance for all except one item, therefore suggesting that music use did decrease the overall intensity of the pain experience (sensory component).

An early study from the Dentistry discipline was done by Rich (1977) who purports benefits when music by headphones is used as an adjunct to traditional local anaesthetics.

Similar results were found in a randomized controlled trial of the use of music during laceration repair in an emergency ward. Decreased pain was reported but they did not find a reduction in state anxiety (Menegazzi, Paris, Keersteen, Flynn, & Trautman, 1991).

Frandsen (1991) also found music to be a useful alternative for ophthalmic surgical patients in his medical practice.

Zimmer et al. (1982) and Olds (1985) discuss music's effects on the fetus in utero, reporting a variety of items (fetal activity, heart rate) which may be influenced by music use.

Collins and Kuck (1991) found music use for premature infants in the neonatal intensive care unit improved pulse oximetry readings and behavioral state.

Much of the aforementioned research has been done in a wide variety of situations with different target populations; measurement has taken place using different methodology, tools, and design and focusing on a variety of physiological variables primarily, for example, pain scores, blood pressure, and pulse rate. These factors make assessment/generalizing application of findings difficult. However, there were no negative effects from the use of music reported in any of the studies reviewed.

There is scant research that has been conducted on the effects of music use on the childbirth experience.

Livingston (1979) presents an expert opinion paper based on her own

clinical experience which supports the use of music for childbirth education classes and for the labouring woman. Reported positive outcomes include: promoting couple togetherness, enhancing relaxation, and providing a sense of increased control over the hospital environment. Also, Livingston advocates that couples should be given assistance by the health care provider with a selection of alternative coping strategies with the understanding that there are individuals who have no interest in musical sound.

A clinical study by Clark, McCorkle, and Williams (1981) used a two group, non-randomized, post-test only design to evaluate effectiveness of music use during labour. Thirteen primiparas in the case group received 6 one hour individual music practice sessions with a music therapist prenatally. Positive results were reported with the experimental group —decreased anxiety and pain ratings (sensory component) as well as decreased discomfort. However, there are limitations in the study design which make the results questionable; the two groups of participants were all patients of one obstetrician and more significantly, the music therapist was present during the entire labours of the women in the experimental group only.

A similar study was undertaken by Hanser, Larson, and O'Connell (1983) to examine pain responses (sensory component) of seven women who had taken Lamaze childbirth education classes and were using music during labour intermittently. Again, the music therapist was present during the entire labour. They used a repeated measures design with each woman acting as her own control. Results included decreased mean pain responses (sensory component) for all seven participants.

The presence of a music therapist during prenatal education classes and

during labour presents a possible significant bias of increased attention, possibly functioning as the independent variable instead of music-use, as well as the confounding absence of a control group. The authors report that the greatest benefit was for subjects who used music for its rhythm or as an attention-focusing strategy and recommend using music during the entire labour and not just sporadically.

In support of Hanser's et al. (1983) findings, Sammon's (1984) quasi experimental research explored a convenience sample of 54 women attending a Lamaze childbirth education class who were randomly assigned to experimental music use group (24) and a control group (30). The experimental group was exposed to one active rehearsal class of breathing exercises while listening to taped music. Dependent variables of actual music use time in labour and barriers to music use were analyzed. Only 8 of the group of 24 in the experimental group actually used music during labour. Participants who used music during labour did so as an aid to relaxation and as an attention-focusing device for other childbirth education coping strategies. Barriers to music use in the experimental group were: lack of available equipment, equipment failure, poor reception, lack of initiative to plan and organize music selection prior to labour, didn't think about using music, afraid staff wouldn't approve of music use during labour, and labour went too fast to use music.

Durham and Collins (1986) studied 30 Lamaze childbirth education participants who were randomly assigned to an experimental music-use group (15) or a control group (15). Again, physiologic dependent variables were measured; medication use (sensory component of pain) primarily. No

statistical significance was found, however, the authors recommend further research using dependent variables such as satisfaction with music use as an educational aid or strategy rather than physiologic measurements of evaluation.

Recently, Geden et al. (1989) conducted two sequential studies (a) to examine the effects of music use on analogued-self-reported variables of pain (sensory component), heart rate, respiratory rate and blood pressure, and (b) to examine imagery training and music use as coping strategy with analogued labour pain by measuring the same physiological dependent variables. Both studies failed to find statistically significant results. The authors note the research limitations when using analogued pain in an artificial environment as well as the subjects knowledge that they could terminate participation. Clearly, the situation does not simulate the labour experience, therefore, a clinical study was deemed warranted.

Duchene's (1989) and Sakala's (1988) research recommendations are similar; suggestions encourage a wide selection of labour coping strategies be made available to childbirth education class participants. Sakala (1988) suggests that the cultural authority of the medical care system discourages serious attention to alternatives to pain control in labour. She contrasts this to an ideal philosophy of individualized assessment and techniques selection with a spirit of openness to innovation. This parallels the World Health Organization (WHO) statement (1984) which recommends a greater initiative in supporting research and evaluation as well as policy development with respect to non-medical healing and alternatives.

Music Use as a Strategy

Music penetrates into the secret places of the soul

Plato

Music use as a coping strategy is based on the premise that music has properties and effects, some known and some unknown, which could presumably influence perception of and/or response to an event or process such as childbirth. Cited in Reeder et al. (1992), Wall and Melzack (1989) describe three other interactive components of pain theory which expand the gate control theory of pain:

i. Sensory-discriminative system (SDS) which communicates information to the brain regarding physical sensations (pain of labour). When pain information from the body is changed, the brain receives an increased or decreased pain message.

ii. Motivational-affective system (MAS) interprets the pain signal received from the body; a person's feelings, memories, past experiences and culture affect the interpretation.

iii. Cognitive-evaluative system (CES) also affects the central interpretation of pain signals via a person's knowledge, attention and use of cognitive strategies and cognitive evaluation of the situation.

PAIN

	Peripheral Influences	Central Influences	
	Sensory-discriminative system Sensory receptors 1) mechanoreceptors 2) thermoreceptors 3) chemoreceptors	motivational affective system (MAS) 1. past experiences 2. culture 3. memories 4. feelings	cognitive evaluative system (CES) 1. knowledge 2. attention 3. evaluation of situation
Pain Reduction Strategies =	manipulating these receptors	relaxation response	cognitive strategies

Cognitive-evaluative system. (Adapted from Hilbers S, Gennaro S: Nonpharmacologic pain relief. NAACOG Update Series, vol. 5, lesson 15. Princeton, NJ, Continuing Professional Center, 1986)

Figures 2

Cognitive-Evaluative System

The use of music as a coping strategy could be directed at either of the two central influences that affect pain perception. When music is used as an attention-focusing strategy in the cognitive evaluative system (CES) it is feasible that music may also effect relaxation through feelings and memories in the motivational-affective system (MAS) and vice versa. Previously cited research supports the strategy of music use as an effective attention-focusing device (Hanser et al., 1983; Sammons, 1984) as well as an aid to relaxation (Livingston, 1979; Sammons, 1984; Shea & Davis, 1986; Winokur, 1984).

This study acknowledges the possibility that music-use as a coping strategy may affect the sensory-discriminative system and pain perception but this will not be a purposeful route or target. Research supports the painful reality of childbirth (one of the most painful events) as well as the lack of significant results in the attempt to reduce/modify pain ratings —the sensory component of pain (Gaston-Johansson et al., 1988; Melzack, 1983; Weisenberg & Caspi, 1989).

There is another concept which may be operational when music use is the coping strategy; music may be effective via the concept of hemispheric specialization. The left brain processes analytical, cognitive activities and the right brain processes artistic, imaginative activities (Di Franco, 1988; Woolfolk & Lehrer, 1984). It is also suggested that right and left hemispheres of the brain work in harmony together (Di Franco, 1988).

Bonny (1978) states that because music is nonverbal, it can move through the auditory cortex directly to the centre of emotional responses. Music may be able to activate the flow of stored memory across the corpus callosum so that right and left hemispheres of the brain work in unity/harmony rather than conflict (Di Franco, 1988).

Hilbers and Gennaro (1986) suggest possible left and right brain hemispheric music access within the cognitive-evaluative system (CES) of pain perception.

Pain Management Technique	Left Hemisphere	Right Hemisphere
Breathing techniques	Listening to the sound of breathing and counting Patterns learned in class Cleansing breaths	Rhythm of breathing Changing breathing in response to body symptoms Changing and adapting patterns learned in class Intuitive sighs, yawns, or deep breaths not at beginning or end of contractions
Attention focusing	Focal points of word(s)	Picture focal point(s) Imagery
Patterned physical movements		Walking Rocking
Music	Words	Melody Rhythm
Verbal coaching	Relax your left arm	Positive affirmations Rhythm of words

Pain — Left and Right Hemisphere

Figure 3

Music is used via an attention-focusing strategy in the CES or to stimulate relaxation in the MAS or through right-left hemispheric shift, a combination of these or through other mechanics and function presently unknown. However, music is thought to directly access the brain via the thalamus in a non conscious manner which may be influenced by a particular listening style.

Di Franco (1988) describes listening as a selective process having three listening styles:

1. Passive — attention is paid to the total/whole effect, for example bathed in, washed over, floating in (possible left brain activity).

2. Semi-analytical — requires active listening to the major and minor melody lines and patterns, for example seeking recurrence and variations.

3. Analytical — the arrangement and the musical form itself is analyzed, for example, usually used by someone with formal music training (possible right brain activity).

When music is used as an assistance to relaxation in the MAS system, concepts to consider include the understanding that music can also function as an aid to developing a conditioned response, or as a cue for response with key elements of practice and repetition encouraged. When music is used as an attention-focusing strategy in the cognitive-evaluative system (CES), it is an active strategy in which the music is used to achieve a sustained level of mental focusing or actively to remain mentally alert and physically relaxed; this strategy is possibly made a more active one when earphones are used (McCaffery, 1990).

It is suggested that the amount of cognitive control will be influenced by the type of music and the degree to which it is intrusive, for example, rhythm, style, intensity and pitch (Gennaro, 1988; Livingston, 1979).

Empirical research by Dr. Hideo Seki (1983) suggests that music is an effective means of inducing psychosomatic states and suggests classical music may induce a shift from beta brain waves (14 ~ 28 Hz) to alpha waves (7 ~ 14 Hz) via production of L/f type electrical fluctuations. However, although these classical-music induced L/f fluctuations have been effective for pain relief, relaxation and concentration; most of this work has been conducted

on effects of learning in an educational environment. The effects of classical music on intense labour pain has yet to be determined; especially with people who do not like classical music. Other researchers suggest personal preference for music use during labour (Gennaro, 1988; Livingston, 1979; Sammons, 1984; Shea & Davis, 1986).

Further influencing factors on the effectiveness of music use as a coping strategy include activities and/or modifications in techniques and methods to discourage habituation. Di Franco (1988) suggests the use of a variety of styles as well as selection along with intermittent use — she suggests the use of headphones and access to volume control that may increase a sense of control found to be a valuable factor for feelings of satisfaction with the childbirth event.

Summary

In summary, childbirth is a major event in the life of a woman; it is unique, complex, usually painful and not fully understood.

The literature from the various disciplines has supported the complex circumstance and situation of childbirth and the multidimensional perspective of each labour and a woman's coping with each labour.

An exploration of the use of music for labouring women as a coping strategy was plausible and warranted.

Chapter Three

RESEARCH METHODOLOGIES AND PROCEDURES

This study explored and described the phenomenon of music use during labour as an adjunct coping strategy to childbirth education. The childbirth experience was explored from the women's perspective generally, with particular attention to the experience of music use during labour specifically. This chapter describes the following: the research approach (design); the participant population and volunteer sample; the methods, procedures and instruments used for sample selection, data gathering and data analysis; the ethical considerations for human informants (participants) in the study; and issues of confidentiality.

According to Polit and Hungler (1989), qualitative research is often based on the premise that knowledge about humans is not possible without describing human experience as it is lived and as it is defined by the actors themselves . . . often allied with a phenomenological perspective. Field and Morse state that qualitative research can be an effective means of generating new knowledge when bias is suspected in present knowledge or when the research question relates to understanding and describing a phenomenon (Brockopp & Hastings-Tobma, 1989). The topic of this study and the nature of the subject, as an important lived event in a woman's life, were amenable to a qualitative approach. Also, qualitative research is a legitimate method of generating data for analysis through exploration, description or expansion of existing knowledge and theory, state Knafl and Howard (Brockopp &

Hastings-Tobma, 1989).

It seemed feasible to use a qualitative approach with this study which sought to explore a phenomenon and searches for the development of new facts and concepts. Music use during childbirth is a relatively unexplored phenomenon.

A combination of description and exploration was utilized in the design of this study. Description allows the researcher to describe, observe and classify the phenomenon under study; exploration will allow for the examination of the dimensions of the phenomenon and related factors (Polit & Hungler, 1989). According to Seaman (1987), descriptive and explorative designs include both comparative designs (comparing and contrasting cases) and classification designs (observations and descriptions are categorized). Utilizing both designs may allow for a comprehensive perception and presentation of the phenomenon.

A disadvantage of qualitative research is based in part on the difficulties of analyzing the vast amounts of qualitative data generated by small sample populations (Polit & Hungler, 1989). Analysis of qualitative data can be an overwhelming task when dealing with vast narrative content. Polit and Hungler propose three major reasons for analysis difficulties; the absence of systematic rules for analyzing and presenting data; the absence of well-defined and accepted procedures which make replication difficult; and the results are difficult to briefly summarize. This study addressed qualitative analysis using the methodology of content analysis.

Content Analysis Methodology

Content analysis is the most common method of analyzing narrative, qualitative material which may involve quantification. There are several versions of content analysis; two of which will be used in this study — thematic which analyzes themes, and latent which reviews data within the context of the entire dataset for each subject (Field & Morse, 1985).

This study employed the methodological steps for analysis as outlined according to Roberts and Burke (1989). Process steps in content analysis use a series of steps which begin with data collection and are part of the research process in a qualitative study. These steps in the process, according to Roberts and Burke, include: coding for categories and themes; making memos about content and variations in the phenomenon under study; developing names for categories; elaborating classification systems; and testing classification systems within the data as they are collected. The findings at any point during this process can provide some direction for further data collection and the direction that the analysis takes. The researcher enhances objectivity by conducting the content analysis on the basis of explicitly formulated rules which serve as guidelines for sorting according to selection criteria (Polit & Hungler, 1989).

In this study, the units of content for analysis were words and the theme which may be a phrase, sentence or paragraph embodying ideas about the topic (music use during labour). A category system was developed to classify units of content. Quantifying content analytic materials was done by enumeration of occurrences in each category of a category system.

Data Collection Methods

Data were collected by a combination of methods in this study. Self-report techniques were used by informants responding to a telephone interview with the researcher during the postpartum period. This 60 - 90 minute interview was arranged via the telephone and scheduled for an agreeable and convenient time. An interview guide (Appendix A), comprised of loosely structured open-ended questions was used; Roberts and Burke (1989) suggest that an interview guide may guide the researcher in the investigation of a more thorough exploration of the experience. A Lickert scale (Appendix B) was used to add quantitative summative results to this study concerning the effectiveness/helpfulness of the adjunct coping strategy specifically. Demographic data (Appendix C) were gathered using a small number of questions with the potential purpose of adding insight into the qualitative experience.

The Interview Guide

The qualitative narrative was examined to identify recurring themes which emerged through major categories. A direction was taken to search for subcategories which present as words, phrases and/or ideas which represent the essence of thought. This information may contribute information to the research questions. The interview guide had been developed to explore a woman's perceptions with the labour process experience generally.

Question #1, can you tell me about your labour, was designed to provide insight about positive and negative items or events during labour, an overview of the environment and atmosphere, a general understanding of the woman's

lived experience/feelings/attitude/emotions/discomforts and response to other persons involved in the care. This question provided information to help answer all five of the research areas (p. 15).

Question #2, can you tell me about coping with your labour, identified the woman's perceptions of how she coped with labour and the methods and/or techniques she employed; as well as any differences with coping behaviours between home and hospital. This information gave insight into all five research areas.

Interview question #3, what helped most/least, added evaluative or new information to any/all research areas.

Guide question #4, could you identify anything that would have improved your labour experience, identified factors which the researcher has not included.

Question #5, can you tell me about your experience with music use during your labour, was designed to expand knowledge and understanding of all five research areas.

Question #6, will you discuss the equipment provided, added information to research areas #1 and #5.

Interview guide questions #7, is there anything about music use during labour that may improve its helpfulness, #8, is there anything else you would like to speak about or add to our conversation, and #9, if you were to have another pregnancy and labour experience what might you change, provided an opportunity for the informant to identify an item or topic that has not been provided or identified by the researcher.

The guide question #10, what is your past experience with music, sought

sought to explore and identify information related to research areas #2, #3, and #5.

Interview guide question #11, can you remember other painful experiences in your life, explored past coping methods used and identifies a history of past painful experiences; this information was related to all five research areas.

The Lickert Scale Questionnaire

Question #1 provided information for addressing all five research areas.

Questions #2, #3, and #4 provided information for research area #2.

Questions #5, #6, and #7 provided information for research area #4.

Questions #8 and #9 provided information to answer research area #1.

Questions #10 and #14 provided information for understanding the importance and type of equipment used in this study.

Questions #11, #12, and #15 sought to contribute an evaluation of attitude and/or strength of feeling about music use.

Question #13 aided in understanding how music may/may not be enjoyed generally but may/may not be useful for use during labour.

Demographic Information

Information received through the demographic questionnaire (Appendix C) enhanced the results of all the research instruments and assisted addressing all research areas generally and specifically for describing the research sample.

Quantitative data collected were not analyzed statistically, but instead were used to enhance comprehensive insight into the qualitative analysis.

INTERVIEW GUIDE	Research area #1. Do women who have practised child-birth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	Research area #2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	Research area #3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	Research area #4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	Research area #5. Do women who have previously used music for coping find music use during labour to be a helpful/ non-helpful coping strategy?
#1. Can you tell me about your labour?					
#2. Can you tell me about coping with your labour?					
#3. What helped most/ least helpful?					
#4. Could you identify any-thing that would improve your labour?					
#5. Experience with music use during your labour.					
#6. Discuss equipment.					
#7. Anything about music use during labour may improve helpfulness?					
#8. Anything else about your labour you would like to add?					
#9. If you were to have another pregnancy and labour experi-ence, what may you change?					

INTERVIEW GUIDE	Research area #1. Do women who have practised child-birth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	Research area #2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	Research area #3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	Research area #4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	Research area #5. Do women who have previously used music for coping find music use during labour to be a helpful/ non-helpful coping strategy?
#10. Past experiences with music?					
#11. Past experiences with pain?					
#12. Previous painful experiences - ways/methods/ behaviours used for coping?					
LICKERT SCALE					
#1. Music use during labour is helpful?					
#2. Type/ category of music is important?					
#3. Loudness/ intensity of music use during labour is important?					
#4. Rhythm/ fast/slow tempo of music use during labour is important?					
#5. Music use during labour is helpful for early labour?					

LICKERT SCALE	Research area #1. Do women who have practised child-birth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	Research area #2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	Research area #3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	Research area #4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	Research area #5. Do women who have previously used music for coping find music use during labour to be a helpful/ non-helpful coping strategy?
#6. Music use during labour is helpful for active labour?					
#7. Music use during labour is helpful for late labour?					
#8. Music use is helpful when used with other methods?					
#9. Music use during labour is helpful when childbirth coping methods are practised using music?					
#10. Music use during labour using head-phones is helpful?					
#11. Music use should be available?					
#12. If I were to have another labour, I would use music?					
#13. Generally I enjoy music?					
#14. Having music and equipment provided was important.					

LICKERT SCALE	Research area #1. Do women who have practised child-birth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	Research area #2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	Research area #3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	Research area #4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	Research area #5. Do women who have previously used music for coping find music use during labour to be a helpful/ non-helpful coping strategy?
#15. Music use during labour should be recommended?					

Figure 4

Research Areas and Tools

Selection of Informants

The pregnant population from which the informants were drawn are the childbirth education classes conducted by the Manitoba Association of Childbirth and Family and the private Lamaze classes offered in the western area of the City of Winnipeg. Usually, expectant women register for and attend childbirth classes during the last trimester of their pregnancy. These 2 to 3 hour classes run once a week for 4 to 6 weeks and are open to all residents of the City of Winnipeg. Hospitals available for labour and delivery include all hospitals with a maternal/child unit within the City of Winnipeg. The philosophy of both of these childbirth classes welcomes an eclectic approach to childbearing; encouraging the couples to select from a variety of possible labour coping strategies. These childbirth classes were solicited for volunteer study participants at the first or second class by the childbirth instructor. The instructor read a paper (Appendix D) during a class that

summarized the study and requested volunteers. Each person who volunteered or was considering volunteering was given a paper (Appendix E) which described the study, its purpose, the volunteer's suggested participation role, and procedures in more detail as well as time commitment required and issues of confidentiality. Informants were included or excluded from participation in the study according to established criteria (Appendix F). Regardless of exclusion from the study, however, childbirth class participants were informed that they would remain welcome to use the music and equipment available for use during the labour and delivery experience. This study was limited to 5 informants who met the inclusion/exclusion criteria.

Procedural Steps

Formal contact with the childbirth educator followed an initial telephone request for access to the childbirth education classes; a formal letter of confirmation (Appendix G) was sent establishing class date, time, details of investigator's requests and information sheets for distribution were included. The investigator met with study volunteers at one of the childbirth classes. Confirmation of informants/participants understanding of the research proposed, clarification of information and confidentiality, responding to questions, giving out a copy of the Lickert scale sheet (Appendix B), and signing of consent form (Appendix H) were undertaken at the childbirth class arranged with the educator. The music record sheet (Appendix I) was included with the consent form and was left by the informant along with the music and equipment after use.

Following the labour experience, the informants were contacted at home

within the first week to arrange a 60 - 90 minute telephone interview date. The participants were requested to fill out the Lickert scale before the telephone interview. The interview telephone call was initiated by the informant on the arranged date at a convenient time for them. This interview was divided into two or more phone call periods when required by the informant. The telephone interview was conducted using a speaker phone; the conversation was audio taped with the informant's consent. The tape recorder was turned off any time the informant requested. The informants had a copy of the Lickert scale in their possession and communicated their responses prior to the start of the study interview.

The researcher had conducted an informal survey of two new mothers in the community and of seven maternal/child professionals at a recent Maternal/Newborn conference concerning the feasibility of a telephone interview. Along with the researcher's personal and professional experience, the results indicated that a telephone interview rather than an in-home interview period would be preferred. The reasons suggested for this preference included: freedom from having a stranger in the home that a new mother may feel compelled to "entertain", that is, to provide coffee, tea, etc.; to avoid having to prepare/clean her home; to avoid having to prepare herself personally, that is, dress appropriately, hair, make-up, etc.; to avoid possible request for nursing advice/recommendations which may interfere with the objectivity of the interview; to enhance anonymity of the informant; to encourage honest and open communication which may increase when not face-to-face with researcher; to provide flexibility for the interview by leaving the time of the call/s at the discretion of the informant on the arranged date; to

allow for the hectic and uncertain scheduling that occurs with a new infant in the home; most people are familiar and comfortable with telephone use; to avoid unconscious/unintended verbal or non-verbal body language by the researcher; and increased possibility of informants volunteering for the study.

Roberts and Burke (1989) caution that a telephone can be less effective when detailed or sensitive information is needed. However, they state benefits are also present with telephone interviews; including the convenience and many of the advantages of face-to-face interviews, ease of administration, and relatively high response rates.

Three experts in professional maternal/newborn nursing reviewed the instruments to be used and their recommendations were utilized. The results of a pilot are included in this research paper.

Informed Consent

A consent form described and explained the purpose of the study, informant's commitment, role, and expectations. An assurance of confidentiality was made as well as measures that were undertaken by the researcher for this purpose. The informants were informed of their rights and freedom to refuse to answer any of the questions and/or to withdraw from the study at any time. This consent to participate was given to volunteer participants at the first class and reviewed again at the last class prior to signing. Informants were requested to sign two copies of the consent form; one to be kept by the informant, one copy to be kept by the researcher locked in a desk.

Confidentiality

Confidentiality was maintained by using codes instead of names on the data sheets and on the audio tapes (transcribed hard copy). These were kept locked in a case accessible only to the researcher and the researcher's advisor. Audiotapes were erased by the researcher when the study's data were transcribed. Transcribed material was destroyed when this thesis had been successfully defended.

Ethical Considerations

This proposed research study was submitted to the University of Manitoba Faculty of Education Research Ethics Committee for approval prior to initiation. Approval of this proposal was received on June 16, 1992 (Appendix J). Informants were informed verbally as well as through the consent form that they were welcome to request a summary of the study's results by using the request form in their package (Appendix K).

Conclusion

This section of the research paper has outlined the methodologies and procedures for data collection and analysis of content. Selection of informants, instruments developed and used, issues of confidentiality, ethical considerations and informed consent were discussed.

Research Pilot Implementation

A 25-year-old primipara at 38 weeks gestation was the participant for the implementation of this study's pilot. The pilot informant is identified as X. X was an acquaintance of a colleague and was given the writer's telephone number to call if interested in participating in a study about music use during labour. X called initially, after she was at the hospital in early (latent) phase labour. The equipment and music selections were delivered to the hospital labour area and given to her husband. Written information included; a general list of equipment and operating instructions, a request to list the music on the record sheet (Appendix I), and directions to either use or not use the music according to X's desires.

A taped telephone interview with X took place when she was 3 weeks postpartum. The interview guide (Appendix A) and the Lickert scale (Appendix B) were used; demographic data (Appendix C) were collected as well.

Research Pilot Findings

According to the demographic information sheet (Appendix C), X was a married woman between 21-30 years of age with some university education, and was employed full time. This was her first pregnancy and her first labour.

Question #1 on the interview guide (Appendix A) generated a complete description of the labour experience. It portrays a scenario of the chronologic progression of events upon admission to the labour and delivery unit. X had

spontaneous rupture of the membranes in early (latent phase) labour with subsequent intravenous oxytocin augmentation. Electronic blood pressure and internal fetal/external maternal continuous monitoring were employed, therefore she was confined to bed. Her labour room was a small room with one window and clock on the wall. Her husband was present and functioned as her major support person. X and her husband had attended prenatal classes together. X progressed in labour and safely delivered a healthy infant within the usual time frame for a primipara. She had an uneventful recovery and postpartal period and was discharged home with her child.

Refer to the Data Collection Methods (pages 49-55) for easy reference of assessment tools.

The Interview Guide (Appendix A)

Question #1 generated an overall description of the woman's perception of the labour experience. The narrative produced was lengthy and quite comprehensive. The use of cue words was effective in assisting the interviewer as well as with encouraging X to complete as comprehensive a description as possible. This question seems to indeed provide insight to help answer all five of the research areas.

Question #2 produced much information about X's perception of her coping with labour and techniques she employed. This question provided information for all of the research areas.

Question #3 provided some evaluative and new information that will assist with the analysis of all the research areas.

Question #4 provided information and new ideas about what X thought

would have improved her labour experience. These insights also demonstrated the potential to strengthen the importance of items or situations already listed.

Question #5 explored the use of music as a labour coping strategy for X. She provided a wealth of information about her experience with music and her perceptions of any benefit as well as negative aspects. X's information expanded understanding of all five research areas.

Questions #6 and #7 allowed X to provide valuable information about the equipment and its functioning. Many of her statements were helpful for change in procedures and some suggestions were implemented.

1. Recommendation to provide written operating instructions with the music equipment, including how to change the batteries.

2. Recommendation to provide written information concerning the equipment's capabilities, that is, reminders that the Discman and the Walkman could both be used with the dual headphone jack provided; that the Discman functions in both the upright and flat position.

3. Recommendation to provide a written list of categories of music selection represented in the case.

4. Recommendation to provide written music titles for each category of music to facilitate speed and ease of selection.

5. Recommendation to provide music selections arranged within the case in the same order as the category list provided.

6. Recommendation was made to informants that the volume be turned down to lowest scale before putting on the headphones and/or turning on the music equipment.

7. Recommendation was made to have informants select the categories

of music ahead of time, maybe at prenatal classes, to decrease the volume of selections. This would facilitate ease of selection and reduce decision making time.

8. Recommendation was made to suggest to informants that they bring their own music with them for the labour experience.

9. Recommendation was made to include speakers with the equipment as an option to headphone use.

10. Recommendation was made that arrangements include that informants receive the equipment as early in labour as possible.

11. Recommendation was made to have music equipment available at prenatal classes to allow informants some orientation time.

Questions #8 and #9 allowed X the opportunity to identify an item or topic which has not been provided or identified by the researcher. She restated items in this section which has already been identified in question #1. However, although new items were not identified, this question has allowed the informant an opportunity to emphasize the strength of her answers.

Question #10 provided the opportunity for X to explore past experiences with music and add information toward answering research areas #2, #3, and #5. This was explored comprehensively with the use of investigator cue words.

Question #11 explored X's history of experiences with pain and past coping methods used. The descriptions of these areas provided information which contributed to the answers for research areas #1, #2, #3, #4, and #5.

The Lickert Scale Questionnaire — Pilot Study Findings

Question #1 assisted in answering research areas #1, #2, #3, #4 and #5.

Question #2 helped to answer research areas #2, #3, and #5.

Questions #5, #6, and #7 answered research area #4.

Questions #8 and #9 were useful in answering research area #1.

Questions #10 and #14 provided information on the importance to the informant of the provision and type of equipment used in this study.

Questions #11, #12, and #15 contributed an evaluative aspect of attitude and/or strength of feeling about music use during labour.

Question #13 provided information about X's ideas about music use generally and was useful as a comparison to music use during labour specifically.

Summary of Pilot Study Findings

Generally, the interview guide was successful in addressing the exact research questions which were specified in Chapter Three, the data gathering and analysis methodology area of the proposal. As well, the Lickert scale was successful in answering the specified research questions. The scale also provided strength of feeling about certain items in the intended research areas.

With the use of these tools, X was able to provide a rich and generous exploration and description of her experience with labour generally and with music use as a coping strategy specifically. Some remedial areas were identified by X through the pilot research implementation process. These have previously been reviewed in the Pilot Study findings.

Implementation of Recommendations

All of the recommendations listed previously, and suggested by X, were integrated into the research proposal design with the exception of #9 and #11.

A few of the recommendations were already a part of the research design. However, the suggestions were reinforced by restating this information in written guidelines and information as well as including these with the equipment and music selection case. Many of these recommendations were reiterated orally with the prenatal classes and during telephone conversations with the informants at the beginning of labour.

Recommendation #9 was not implemented as it would seriously jeopardize the research's overall design and purpose. As well, recommendation #11 was not a feasible option due to availability of time allotted at the prenatal classes by the class instructor. The demographic sheet, the Lickert scale and the music recording sheet were not amended.

Chapter Four

PRESENTATION OF THE FINDINGS

This chapter will present the research findings. Initially, demographic data will be reviewed and summarized. Subsequent sections will present the identified context unit, as well as descriptions of the categories of coping and non-coping. Themes which emerged through data content analysis will be stated and explored. Three themes (positive perceptions, negative perceptions and neutral perceptions) will be described.

Eighteen specific concept areas have been identified through analysis and are drawn from in each specific case study and addressed as having either an informant positive, negative or neutral/ambiguous perception. There were 18 concept areas which have been identified as encompassing the comprehensive experience of labour according to the informant's descriptions. Each of the individual five cases have described findings. The five informant case findings will then be presented, compared and contrasted comprehensively as a whole.

The interview guide and the Lickert scale results will be addressed in relation to the study's research areas as well as how they may expand or strengthen the qualitative narrative of each informant.

Demographic Findings

The research study sample consisted of 5 informants who used music

during labour. (A sixth informant, who did not use music during labour, will be included for discussion/comparison purposes.) Ten informants signed a consent form for this study. Six used music during labour (one of these informants delivered an ill infant and discontinued any further participation in the study). One intended to use music but discarded this coping technique immediately after the initial few minutes. Two had emergency caesarean sections and one called after the completion of the study's data collection.

All 5 participants had vaginal deliveries with normal newborns and uneventful recovery period during postpartum. Three hospitals within the city were utilized by study informants. Two of the women had a home birth. The sixth informant delivered in a hospital. She had a healthy newborn and recovery period.

Age:	3 of 5 were between 21-30 years of age
	2 of 5 were between 31-40 years of age
Education:	3 of 5 women had a university degree
	2 of 5 women had some university education
Occupation/job	Two teachers, a coordinator of a disability program, associate producer of a radio program, and a copy editor for a magazine
	3 of 5 women worked part time
	2 of 5 women were employed full time
Marital status	All 5 were married/common law status.
Pregnancy	2 of 5 were having their first pregnancy
	3 of 5 were experiencing their second pregnancy
Labour	4 of 5 had experienced their first labour

1 of 5 had experienced their second labour

The sixth informant was between 21 - 30 years of age, had a university degree and was employed part time. She was married and was experiencing her second pregnancy and her first labour.

Profile of Informants

Informant A

A is a married woman between the age of 21 - 30 years who lives in the west area of the city. She is completing an education degree at the University of Manitoba. Currently she is a full time homemaker and works part time as a teaching assistant. A has experienced her first pregnancy and labour.

Informant W

This married woman is between 21 - 30 years of age. She has a university degree and is employed full time in journalism as an associate producer of a radio program. W has experienced her first pregnancy and her first labour.

Informant Q

Q is a married woman between the age of 31 - 40 years. She holds a BA degree from the University of Manitoba and is employed full time as a copy editor here in the City of Winnipeg. Q has experienced her second pregnancy and her first labour with a home birth.

Informant O

This married woman is between 21 - 30 years of age. She lives in the west area of Winnipeg and is employed part time as a home disability assistant coordinator for adults and children. O is pursuing an arts degree from the University of Winnipeg. She has experienced her first pregnancy and her first labour in a home birth.

Informant R

R is a married woman between 31 - 40 years of age. She holds a university degree in human ecology and is employed part time as a teacher here in the City of Winnipeg. R has experienced her second pregnancy and her second labour.

Informant T

This married woman is between 21 - 30 years of age and holds a degree in education from the University of Manitoba and has completed two pre-masters course work in french immersion and special resources. T is employed part time as a teacher in elementary school. She has experienced her second pregnancy and her first labour.

In summary, the demographics provide a profile of well educated, more than minimally employed women, all of whom have spousal support and have either experienced their first or second pregnancy and, with the exception of one, their first labour.

Discussion of Context/Categories

The broad context unit for this study is the experience of women who have used music as a coping strategy during labour. Research data have been described within this major context, the major focus of the research. The two major categories which were utilized to sort the data for analysis were coping and non-coping. These two categories represent the participants' perceptions of their progress through labour and/or their ideas about labour events and/or about how the labour progressed generally. Their responses were usually related within the context of 18 concept areas representing the labour scenario of events. These overall concepts led to assisting with or detracting from the participants' perceptions of coping with the labour experience.

There were 18 concept areas, which were identified from the informants' narratives, that provided a titled summary of usual items addressed during the labour experience. The following concept areas were identified and numbered:

1. medical procedures
2. nursing procedures
3. pain/discomfort
4. equipment
5. incidents
6. coping techniques
7. comforts
8. environment
9. behaviours
10. partner
11. thoughts
12. feelings
13. desires
14. expectations
15. other
16. stressors
17. attitude/belief
18. information/understanding

These preceding 18 concept areas were referred to and contained in most

instances described in the informants' narrative by either direct statement or inference. The perceived nature of instigating positive, negative or neutral perceptions was noted (themes). These perceptions are seen to have been instrumental in the participants' feelings of coping and in their decisions to view these perceptions as influencing either a coping or a non-coping viewpoint. Refer to Figure 5.

Context Unit

Women's experiences using music during labour

Categories

Coping

Non-Coping

Themes

Positive

Negative

Neutral

Concept Areas

1. medical procedures /actions	7. comforts	13. desires/wishes
2. nursing procedures /actions	8. environment	14. expectations
3. discomfort/pain	9. behaviours self /others	15. other
4. equipment	10. partner/support	16. stressors
5. incidents	11. thoughts	17. attitudes/beliefs
6. coping techniques	12. feelings	18. information/ understanding

Figure 5

Schematic of Findings

Informant A

From the narrative generated by question #1 of the interview guide, "discussion of labour experience generally," a summary of findings is presented.

A related a few positive concept areas. She says at the beginning of her labour when her membranes ruptured spontaneously: "I had nurses buzzing all over the place like all of a sudden everyone was happy . . . and it was kind of neat. At that point I thought it was pretty neat . . . everyone is all excited . . . and I thought that this was going to be easy.

Nursing and medical procedures which provided A with information were perceived as positive. "The nurse checked me out right away and I was already 2 cms dilated and I thought this was pretty good. I thought great!"

"The doctor came in and checked me . . . he said my cervix was long and narrow and that I would have a very long delivery if he didn't induce me. . . . they wanted to speed it up I guess. So that was O.K."

Other areas which were positive for A include the use of the fetal monitor. "I like knowing . . . it gave me a calming effect, everything was O.K. with the baby. . . . I felt better hearing that (fetal heart rate). . . . It helped my husband more. In my mind I felt like they knew what they were doing . . . they were taking care of me . . . you know with the baby."

Then A expresses some neutral ambiguous statements. "Whatever they were doing. . . I was in their hands. It (the monitor) really helped him (spouse) . . . he knew when to help me with my breathing a bit more than if we didn't have it on especially near the end . . . but more for interest sake. I don't know, it was kind of neat being able to see it but at certain points I was

thinking this is not neat . . . I want to go home."

Also, about an incident concerning another patient. "They had a girl in the other room next to me screaming her head off the whole time and I found that distracting. I could hear everything that was going on next door . . . terribly loud . . . screaming bloody murder and no, no, no . . . like blood curdling horror movie screams with her contractions and so in one instance it was distracting but when my contractions got really bad I was saying (to myself) do your breathing . . . it helped me . . . in my mind that I'm in control, I'm in control, over and over again. . . . I am thinking I'm not like her, I'm in control. . . . I didn't want to be a screamer . . . it kind of helped."

The rest of A's narrative relates to concept areas which she describes with negative perceptions. Related to the environment, she states: "I felt cramped and felt I couldn't breathe. The room was too small, I wanted the birthing room." Other areas include medical and nursing procedures, equipment, thoughts and feelings. A mentions equipment 8 times in a negative way. She describes being "hooked up to machinery and wires sticking out all over me, was a real distraction. . . . I hated it . . . it was very uncomfortable. . . . I couldn't get out of bed . . . or change positions" and "they wouldn't do anything about it . . . every time I had a contraction it seemed to coincide with the machine (sphygmomanometer dynamap - automatic B/P machine) and sucked all the blood out of my fingers . . . I was hooked up to the IV."
A mentions nursing and medical procedures/events in a negative context. "I think shift changes were kind of annoying too . . . different people . . . different faces . . . you want to trust that one person through the whole thing.

"The doctor was present at the beginning and then I didn't see him until

he delivered the baby."

"A student nurse put the IV in wrong . . . the older nurse came and redid the IV because it was wrong. It was nerve wracking."

"I was embarrassed about it . . . (when her water broke) like you felt you were wetting your pants . . you can't control that . . . I nagged at the nurses to change my thing under me as I messed it again."

"I was very depressed after a pelvic exam when I was told that I had made no progress . . . I had to go to the bathroom . . . urinate something awful and the nurses wouldn't let me - she later apologized for this. . . . They (nurses) were peeking in the room at the tape (monitor) and dashing back out. I felt kind of ignored."

A continues to discuss labour events which concern nursing and medical personnel. "For hours I was left alone . . . they just didn't really listen . . . I believe my husband was terrified at times. They refused to give me analgesia because I wasn't far enough along."

She sums up her experience generally/expectations: "I expected someone who knew more than my husband or me to be in the room more often. I never knew if I was succeeding . . . I was panicky. . . . We thought when we ask they'll basically give us whatever I need I guess. . . . I didn't feel that I had enough care personally, myself."

Question #3 of the interview guide generated information about coping with labour. A discussed things/areas which were positive for coping. "My breathing helped . . . I would have been unprepared without knowing breathing techniques. . . . Thinking in my mind that the breathing would help even to a degree, feel it would help . . . it did help."

"I had my husband rub my legs . . . he kept me comfortable . . . bringing me ice . . . wiping my forehead. I needed him right next to me."

"Closing my eyes and concentrate and saying the words, like I am in control. I had to use something where I realized I was in pain, and I was in pain, but I was controlling the pain."

"Picturing the baby in my mind . . . . thinking about a good outcome . . . she (the baby) was so important to me that I was thinking about having a healthy baby. . . . I said to myself, stop thinking about me . . . the baby must be going though some awful times . . . being squashed through there."

"Having him (spouse) there . . . very important."

"I was thirsty because I had a cold . . . my mouth dried out . . . I had to have ice between every single contraction. I couldn't have survived without that."

"Reading in early labour was O.K."

"I guess I listened to music when I had it."

Some negative aspects for coping with labour were related. "Trying to relax . . . massage was kind of impossible."

"Focal point didn't work for me really."

"I couldn't visualize our trip to Florida last year. . . . I was going to image being in the water . . . I couldn't do it . . . can't imagine the pain not being there because I knew it was there. I couldn't convince myself that I wasn't in pain so that didn't work."

"Shifting positions didn't help."

"The Demerol didn't really help . . . it was just as painful . . . it made me lose track of contractions. . . . I was kind of resentful after the baby."

A states what helped the most with coping "to get me through it all? I think my breathing . . . just to concentrate on it took some mental stress off what I was working on." A states that shifting positions was the least helpful suggestion to assist coping "too strenuous to move."

When asked question #3, what may have improved your labour experience, A states: "More attention from the nurses . . . to give you information or to be there . . . to make one feel a little more calm . . . not on my own. Not to have anything that took him (spouse) away from me, I think, was not good."

A identified a birthing room when asked what would have improved her labour, questions #4.

When asked about her experience with music use during labour, question #5, A relates her perceptions. She selected music that was familiar to her. "I know the words to all the songs." A preferred the headphones which "fit in the ear . . . or speakers . . . being hooked up to equipment was a bit much later on (in labour)."

When asked about the equipment, question #6, A stated that there was no problem except that having speakers also would be a valuable option.

A did not identify anything which would improve the usefulness of music use during labour, question #7.

Question #8, anything else about your labour you would like to add, and question #9, if you were to have another pregnancy and labour experience as well as what may you change, were combined. Identifying anything which may have improved the labour experience generally elicited these responses, "I would have been in a larger room . . . I would have had a nurse with me and

be checked more often. . . . they could tell me how I was doing more often."

Question #10 referred A to past experiences with music. She has had formal lessons and now plays the saxophone only on holidays. She has had experience in the school bands. A sang in the school choir throughout high school. She owns a Walkman and has used it for exercise purposes. Music played in their home two to three times a week and often while she did housework. She and her husband own a compact disc player and use it frequently together. Mr. A plays a synthesizer as well as guitar; especially on special occasions and holidays. A stated: "We listen to all kinds of music . . . the differences . . . the instruments . . . the rhythms and everything . . . I sing along."

Discussion of previous painful experiences in your life was the response to question #11. A had a ruptured ovarian cyst and subsequent surgery which she described as very painful. "I think because nothing good came of that it was a lot harder to deal with than labour. The pain was solid, never-ending."

A describes what helped her cope with pain in the past. "I want people around me. I want a shoulder to cry on . . . lean on . . . just around me. I don't like being alone when I'm hurting." She says she likes to get her mind off it, watch TV, read, try not to think about it, medication and music sometimes.

Summary of Interview Guide Findings

Informant A listed 5 positive aspects of her labour experience generally, 3 neutral/ambiguous statements and 11 negative perceptions.

She recounted 9 positive aspects of her coping with labour and 6

negative perceptions.

Breathing techniques helped her cope the most and the least helpful coping technique was changing positions.

Suggested improvements to her labour experience include; more attention, more information, a birthing room and constant presence of spouse.

Music used during labour was familiar music via headphones and speakers.

Improvements to the labour experience include the following suggestions: a larger room, presence of a nurse, more information and progress reports.

Past experience with music include: formal instrument lessons, school band, choir, owns a Walkman and uses it for exercise, music is used regularly, owns a compact disc player and headphones.

Husband plays a synthesizer and a guitar.

Previous painful events and coping behaviours include: pain is worse when there is no "good outcome," desire people around, to cry, to lean on, take her mind off pain by watching TV and using medication or music.

Findings of Lickert Scale

Subject A
- strongly agrees with statement #5, music use is helpful for early labour
- agrees with statements #2, #3, #4, #8, #9, #11, #12, #13, #14, and #15
- there is uncertainty of the helpfulness of music for #1 and #10 about the helpfulness of headphones.
- disagreement for the helpfulness of music use in active phase labour
- strong disagreement for the helpfulness of music use during late (transition) phase labour

Figure 6

Informant A

Lickert Scale

1. Music use during labour is helpful.	2. Type/category of music use during labour is important.	3. Loudness/ intensity of music use during labour is important.	4. Rhythm, fast/ slow tempo of music use during labour is important.	5. Music use during labour is helpful for early labour (beginning hours of labour).
6. Music use during labour is helpful for active labour (middle of labour).	7. Music use during labour is helpful for late/ transition labour (1 to 2 hours before birth).	8. Music use during labour is helpful when used along with other methods of coping.	9. Music use during labour is helpful when childbirth coping methods are practised using music.	10. Music use during labour using headphones is helpful.
11. Music use during labour should be made available.	12. If I were to have another labour, I would use music.	13. Generally, I enjoy music.	14. Having music and equipment provided was important.	15. Music use during labour should be recommended.

Music use: 50 minutes. Category: contemporary, easy listening

Lickert Scale Questions

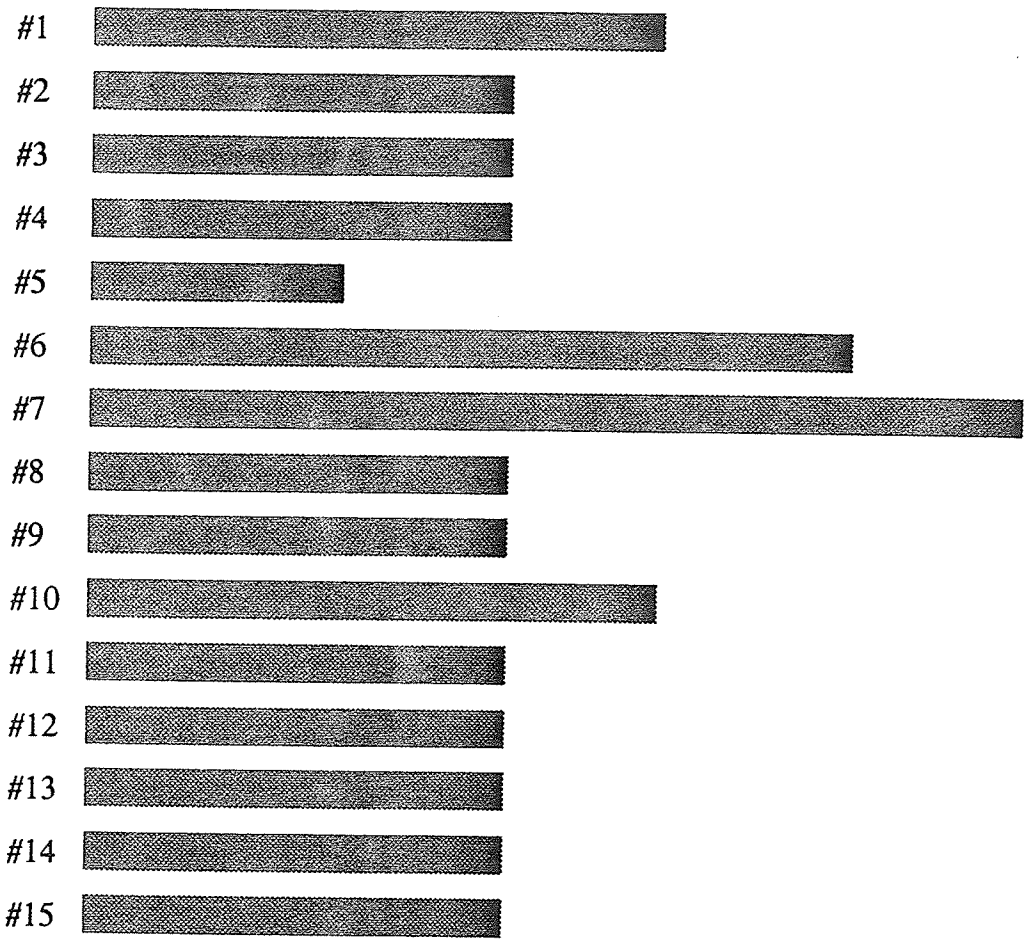


Table 1

Informant A

Research areas:

1. Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	5. Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

In conclusion, A has provided a rich narrative and response to the Lickert scale questions. Generous data have assisted with the addressing and understanding of the research areas, and themes.

A discusses labour generally and refers to a few positive aspects of the experience (drawn from one of the 18 concept areas). She makes the statement: "They were taking care of me . . . you know with the baby." Positive aspects of labour are translated into a perception of coping.

When A discusses the more negative concept areas of her labour, she regards this as evidence that, "I didn't feel that I had enough care personally, myself." This may depict a non-coping feeling.

A described many ways she used to cope with her labour. Coping is defined by A, "to get me through it all." Therefore, there is ambiguity about which category fits; about whether A thinks/feels that she has coped with labour or how effective the coping was. A stated that without breathing techniques she would have felt unprepared; she considered herself prepared.

A did not practise childbirth coping strategies using music and therefore research area #1 remains unanswered.

The findings necessary to explore research areas #2 and #3 will be

discussed at the end of this chapter as this area necessitates a review of responses from all informants.

Music use as a coping strategy (50 minutes of use) during labour was recorded by A as uncertain. However A states strong agreement for music use helpfulness during early labour and strong disagreement for music use during late labour. She is very definite about when it could be useful and when it definitely would not be helpful. These represent the only highest and lowest used rating on the Lickert scale by A. Research area #4 is clearly answered.

A stated in her narrative that she has experienced past painful events and that she has used music as a coping strategy. A states: "Get my mind off it, watch TV, read, try not to think about it, medication and music sometimes."

Informant W

W responded to question #1 of the interview guide with the following general perceptions of the labour experience. From the 18 concept areas, positive, negative and neutral or ambiguous perceptions are related. Positive impressions are presented initially.

W states that: "We started to walk around quite a bit, pace around, we found that a lot better."

About the epidural, she says: "He (the doctor) was really good and he did it very quickly and let my husband stay and I could hold on to him and he got it in right away . . . I was glad . . . I was satisfied with that."

The environment was described. "The room we had was actually really good because you could see the river . . . it was kind of exciting . . . it was good."

"Listening to the other couple in the room . . . what was going on there so I found that really distracting which was good . . . the more the better at that point (early labour)."

"The lighting was good, not bright . . . temperature was O.K. and the nursing station . . . there was lots to look at . . . so I could be distracted that way. The picture of the farm on the wall . . . I really liked that . . . the roof was sparkly and I used to stare at it. . . . looked nice. I had a feeling that it (room, bed) was clean and felt comfortable. It (bed) seemed to do everything when I needed it."

Some experiences with the staff were related in a positive way. "One nurse . . . she reminded me of my mom. Really natural and just seemed friendly, would talk. Most of them were really good . . . I liked all of them.

I figured that they knew what they were doing."

Concept areas which were positively identified included her partner and some coping techniques. "My husband . . . yah it was so great to have my husband there. It was just wonderful and I used my husband which worked because by that time we were really in sync. Having him leave, I thought I need this . . . there's no way he can be gone especially for 45 minutes . . . that can't happen because that would be horrible. Really everything was pretty good and my family is great and my husband is great . . . it was broken up (labour) . . . first we did this . . . then we walked . . . then we came back . . . then we were hooked up, etc. . . . it seemed to go very fast."

A few descriptions given by W have been classified as neutral or ambiguous. W states that the quickness of the labour was positive. "It was fast . . . it was broken up and it seemed to go very fast." In another paragraph, she says, "I thought that's all that I can take, it was just going too fast."

Having another couple in the same room is also related as ambiguous. "For awhile, this other couple was there and so . . . I found that really distracting." Later, W says, "The distraction was good, better at that point early in labour." Also, "Well I liked them (nurses and doctors) but it was just like a revolving door."

W relates concept areas which are perceived as negative. Concerns with nurses and doctors include the following: "I was hooked up to the fetal monitor . . . and then they are always taking your blood pressure and this sort of thing. I found that kind of distracting in itself."

"We had to tell them to do another exam, we thought things would have

progressed along a little bit."

"I was really hooked up to things . . . IV . . . and then another drug and then the automatic blood pressure machine comes on every few minutes so you're stuck . . . also they put an internal monitor like a head clip on."

W states: "I liked them (doctors and nurses) but it was like a revolving door and I didn't really like that at all. A doctor promised to get me something (I'll get you something), I never saw her again. That was it. My doctor wasn't around and I didn't expect to get her . . . she took off."

She also states: "Another doctor told me I wouldn't deliver until 5 a.m. . . . I was ticked off. He also told me he had been up since Friday and this was Sunday night, so I thought well that's too bad but I don't really need to hear that."

"They also wanted me to push when there wasn't really a doctor there."

W states: "There were no less than 5 nurses, I guess that's not rare . . . the one I didn't like was unfortunately the one in the delivery room . . . she looked like she wanted to be somewhere else . . . one who asked questions which didn't make sense . . . and I thought that didn't make me feel too confident."

"I haven't been checked since I got there . . . Well, aren't you going to check, I asked the nurse? Not check or evaluate? The nurse gave a heavy sigh and then she checked. . . . the least you could do was check. Also, it was horrible to have to lie down with really, really bad contractions, so the nurse could hook up the monitor . . . that was the worst discomfort."

In the delivery room, W relates events: "The delivery room wasn't ready . . . it wasn't pleasant at all. . . . The residents were arguing about their

shifts . . . I was feeling really, really strong pressure. . . . I thought someone should talk to me, tell me what to do . . . so I said — somebody talk to me! I was alone."

Another negative perception was related. W states: "I had to be in court the day after I had the baby because I'm trying to adopt my stepson . . . that was a real stressor. Yah, and the economic stress of the lawyer fees."

W relates her perceptions of coping with labour, interview guide question #2. Areas which describe positive coping with labour include: "I would just say talk about anything . . . just to get my mind off of it . . . when it was really, really hard I used his eyes as a focal point."

"One thing we did do, I haven't done this since I was little, whenever I got sick. I would just rub my legs, my thighs with my hands sort of up and down."

"I had a shower which was great."

"I used walking at home and in the hospital, also some reading . . . I used the type in it like a focal point in my breathing . . . a big red sun that I would stare at . . . I was staring, stare at that and breathe. . . . I read same paragraph, kind of over and over."

Answer question #3, W says that the most helpful coping technique for labour was her support person, her husband. The least helpful was "the reading I used as a distraction . . . it worked for a while but it couldn't sustain too much . . . I guess I'd try something and if it wouldn't work I would just drop it."

W stated her response to question #4, to identify anything which may have improved the labour. The following were related.

"I know now why everyone wants the birthing room . . . other ways are just not very good at all . . . to stay in the same room would just be great."

"Also, if I could have had the nurses I liked at the end (of labour) . . . that would have made things a lot better."

"The music was good for the time we used it . . . it made things go fast and it was neat because we'd go down the hall and listen to the radio together . . . it was getting me to dance at one point."

"Rubbing my legs up and down . . . I found that really soothing and it was funny that I did that because I hadn't done that for years and all of a sudden, I found myself doing that in labour . . . oh yeah, that does feel good."

Question #5, which asked for information about music use during labour generated these responses which follow. W relates positive elements concerning music use. "The staff were very receptive . . . a lot were interested . . . I was a bit self conscious but my husband was O.K. . . . it didn't bother him . . . he thought it was funny."

"It helped with distraction and atmosphere . . . Harry Chapin is my favourite and I know pretty well the words to all the songs so I found that really soothing. I would remember seeing him in concert, hearing him, seeing my friends . . . it was very good . . . very distracting."

"I used it to help me with my breathing . . . background more than distraction."

"I think it helped me relax . . . I was thinking about the words and that sort of thing and it seemed normal. Everything about labour seems so abnormal, but this is normal. Like music is normal. You listen to it every day and so it just seemed very normal."

"It stimulated pleasant thoughts and visualizing the concert . . . imagining."

Some negative aspects of music use related were: "It didn't interfere with communication with other people but some times with my husband . . . a few times he would say something and I would say what, what? That was a bit of a drawback."

"It made me feel a little bit self-conscious . . . it bothered me a little bit because you wonder what people are thinking . . . so it bothered me a little bit."

W was asked question #6 about the equipment. "I used the headphones that cup your ear . . . my husband used the ones that just go in your ear . . . I liked mine . . . they were comfortable."

"The cord was O.K., long enough, etc. . . . maybe too long."

"We were unfamiliar with the Discman . . . so we didn't use it at all."

"The Walkman was pretty straightforward . . . easy to use . . . there was no problem changing positions . . . I felt comfortable with it . . . I have used headphones and Walkman type things before . . . my husband too."

Question #7 provided information about what W thinks would have helped music use during labour. "I think for me . . . what I would have done is . . . have made a lot more selections at home . . . we didn't get around to it . . . more Harry Chapin stuff."

W didn't add anything more in response to question #8 about additional information about her labour.

Question #9 elicited responses which addressed what W may change for a future labour. "I might try and go to the Victoria (hospital) just to get a

birthing room . . . I can see why that is so important . . . I might try and do this."

"I would use music but I would bring lots of my real favourites . . . like things that are very, very familiar."

W related her past experiences with music. "I took piano lessons for about 4 or 5 years. During junior high I took the guitar program for 3 years. I used to sing in the Swing choir at school for 3 years. I always sing around the house. I use music at home quite a bit. I listen to CBC a lot."

"I have a Walkman and the 'in the ear' type headphones . . . used this for jogging around the track . . . the sound of the track and the sound of the breathing and the music would really help a lot . . . this was a way of coping."

Question #11 related to painful experiences and way, methods, behaviours used to cope. W stated that when she had experienced painful events she has used the TV. "I listened to the TV a lot then."

She stated: "I'd rather be alone . . . have one person around if you need anything . . . but not have them right there."

"People around, not to stay, just to be a distraction."

"I also do rocking sometimes and sometimes I just lie in bed and try and blank my mind and you know . . . not think about it."

"I used music then too . . . I would flip around until I found a familiar song . . . I had no patience with songs I didn't know."

Summary of Interview Guide Findings

W listed 9 positive statements about her labour, 2 ambiguous/neutral

areas and 10 negative perceptions.

Perceptions of coping during labour include: 5 positive statements.

The most helpful coping technique for labour was her husband's support. The least helpful was the reading used for distraction.

Improvements recounted for the labour experience include: the birthing room, nurses attention for delivery (ones that I liked).

Music use during labour responses included: helped with distraction, familiar music, helped with breathing, relaxation, labour seemed normal, stimulated pleasant thoughts, occasional communication difficulties, stimulated self-consciousness.

Music equipment responses include: use of headphones comfortable, cord long enough, unfamiliar with Discman, Walkman easy to use, comfortable for spouse.

Suggestions for improving music use helpfulness: include and bring more selections.

No response to question #8, nothing to add.

Changes suggested for a future labour include: the Victoria Hospital birthing rooms, use music, bring a variety of familiar music.

Past experiences with music include: piano lessons, guitar lessons, choir experience, singing, owns a Walkman and headphones, used Walkman for jogging.

Previous painful experiencing and coping behaviour include: use of TV, being alone, one person to check on you, rocking, lie in bed, blank my mind, use music with familiar song/words I know.

Findings of Lickert Scale:

Subject W
- strongly agrees with statement #5 and #8, music use is helpful for early labour and is helpful when used with other coping methods
- agrees with statements #1, #2, #10, #11, #12, and #15
- uncertainty about music use helpfulness with #3, #4, #9 and #14 i.e., loudness/rhythm and when other coping is practised with music, as well as having the equipment provided
- disagreement with #4 and #6, music use for active labour
- strong disagreement with #7 and #13 statements, music use for late (transition) labour and general enjoyment of music

Figure 7

Informant W

Lickert Scale

1. Music use during labour is helpful.	2. Type/category of music use during labour is important.	3. Loudness/ intensity of music use during labour is important.	4. Rhythm, fast/ slow tempo of music use during labour is important.	5. Music use during labour is helpful for early labour (beginning hours of labour).
6. Music use during labour is helpful for active labour (middle of labour).	7. Music use during labour is helpful for late/ transition labour (1 to 2 hours before birth).	8. Music use during labour is helpful when used along with other methods of coping.	9. Music use during labour is helpful when childbirth coping methods are practised using music.	10. Music use during labour using headphones is helpful.
11. Music use during labour should be made available.	12. If I were to have another labour, I would use music.	13. Generally, I enjoy music.	14. Having music and equipment provided was important.	15. Music use during labour should be recommended.

Music use: 2.5 hours Category: easy listening, CBC talk radio

Lickert Scale Questions

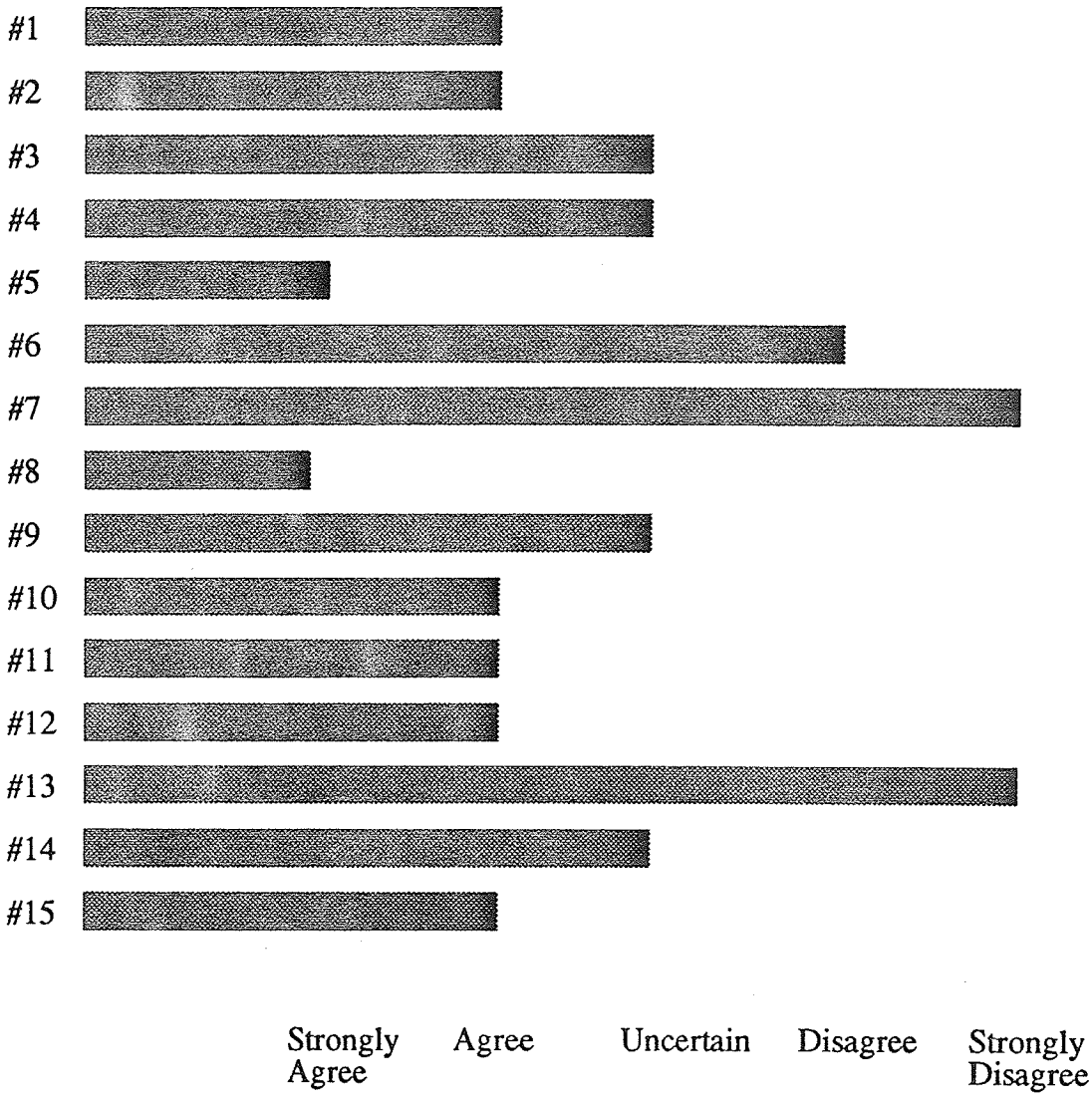


Table 2

Informant W

Research areas:

1. Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	5. Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

To conclude, W's perceptions of the labour experience provided exploration and understanding of the research areas. Along with the Lickert scale ratings, the responses have assisted with the identification of concept areas. These concept areas evidence positive, negative and neutral themes. As well, whether W perceives she has coped or not coped with the labour experience.

W discusses her labour and makes reference to many positive concepts of the experience. She makes the statement: "One nurse . . . she reminded me of my mom . . . really natural . . . friendly." It is from this one of many like statements that a positive sense of coping may be perceived by W.

The many negative concepts of labour which were discussed, related a negative impression by W. Concept areas which were perceived as negative included staff behaviours and statements which indicated a negative attitude. W states: "A doctor promised something and never returned . . . they (nurses and doctors) rotated like a revolving door . . . the nurse wanted to be somewhere else . . . talk to me, I'm alone."

W's neutral statements suggest she wanted to like the staff but incidents prevented this. She says, "I liked them . . . but it was a revolving door," and

"labour was fast, that's good . . . but I thought that's all I can take . . . it's too fast."

W would not go back to this hospital; she intends to go to the Victoria hospital. "It was not very good at all." This may indicate a non-coping perception of her labour experience.

Research area #1 was not answered because W did not practise at all. W did not use music when practising coping techniques although she strongly agrees that it would be helpful.

The research areas #2 and #3 will be discussed at the end of this chapter.

Music as a coping strategy during labour (2.5 hours) was addressed in the interview as well as the Lickert scale. W used music during labour for a variety of purposes: "To relax, to cue breathing, atmosphere, normalcy, distraction"; however she was a bit "self-conscious." Strong agreement is rated on the Lickert scale for research area #4 — music use during early labour (#5). She strongly disagrees with #7 in which addresses the helpfulness of music use during late phase labour. There is some discrepancy with W's rating of Lickert #13 generally, I enjoy music and the other answers; they seem to contradict. There may have been a misunderstanding of the statement when read to W over the telephone. She may have heard or interpreted a negative statement instead. Especially as she rates #1 (music use is helpful) with agreement.

W's past experiences with pain and coping strategies profile a history of music use. She states that she would go to bed with her Walkman and flip around until she found a familiar song. This answers research area #5.

Informant Q

Question #1 of the interview guide provided the following responses. Q experienced a planned home birth.

Positive perceptions which were related by Q include: "The midwife came right over when we called. Just my husband and my midwife were there . . . that was all I would have wanted . . . it was intense and intimate and I was glad these were the only people there."

"They put a towel over my belly and then poured water over the top of the towel and that was really comforting."

Negative responses that Q related were: "The labour was quite long . . . as far as pain, it was harder and more painful than I had expected."

"I was afraid during (the labour) especially when I felt the first push . . . that scared me."

"I hadn't expected these feelings and pain . . . I tried not to imagine what to expect . . I didn't know."

"I felt I was in transition all the time."

Question #2 which asked about coping with labour elicited the following. Q stated: "I think I was able to just retreat into yourself and not have to think about how other people are reacting to the way I was handling it."

"You just go through one contraction at a time . . . when one was over it's goodbye . . . you never have to deal with that one again."

"I spent a lot of time in the bathtub . . . it was so comforting."

"I did deep breathing . . . lots of back rubs."

"I didn't open my eyes for hours and hours . . . that was part of my retreating into myself . . . excluding all stimuli from outside . . . I didn't try

and ignore the pain . . . the noises I made made me feel that I was letting out the pain."

"I changed positions . . . I walked around . . . I leaned over the top of the dresser . . . I was on all fours . . . lying on my side . . . it worked very well."

For question #3, Q responded that the bathtub helped the most. "The surroundings helped the least with labour . . . because I withdrew it into myself and wasn't aware of the room . . . it had no bearing."

Q stated that nothing she could think of would have improved her labour experience, question #4.

Q's experience with music use during labour, question #5, was minimal. "It was on for 5 - 6 hours . . . in active labour . . . mostly background . . . atmosphere" and "I can't remember anything about the music . . . my husband says I asked for certain things (music) . . but I don't remember."

For question #6, Mr. and Mrs. Q used their own music and equipment. She stated that she could hear it very easily. Q stated: "I have a set of headphones, but I don't use them."

Question #7 elicited the following responses about improving music use helpfulness. Q stated: "I might choose music that has certain rhythms or things like that . . . it's hard to say."

Question #9 about changes Q might make for another labour experience included the following responses. "I think I would practice my relaxation techniques more" and "visualization is another way of using relaxation but I'm not very good at doing this . . . maybe next time."

Q responded to the question about her past experiences with music,

question #10. "I have had formal music training . . . yes . . . In piano and singing . . . also choir experience."

"We use music at home often . . . a few times a week for atmosphere."

"I play music to jazz up things a bit and clean the house."

"I would listen to my Walkman with my headphones on the bus . . . it was great . . . music right in your head . . . wonderful . . . it's a good escape . . . you're right . . . the headphones do make a difference."

"Our family has a history of music use."

Painful experiences in Q's past and coping methods used were related in question #11. "Yes, when I have had pain . . . I write things down . . . I think them through . . . I talk to people and pour out my soul . . . I listen to music."

"One particular painful event . . . I had an album I bought and I listened to it over and over and over and over again because it captured my mood . . . I used my headphones to go to bed and listen to that song for weeks on end."

"I tend to go off by myself and curl up."

"It just didn't occur to me to use headphones . . . I suppose the main reason was that the stereo equipment wasn't in this room."

Summary of Interview Guide Findings

Q (home birth) listed 3 positive aspects of her labour experience generally, no neutral statements and 5 negative perceptions.

Q recounted 8 positive ways of coping with labour.

The time in the bathtub helped the most with labour. The environment/ surroundings helped the least.

Q had nothing to add to her labour experience.

Music use during labour included the following: played 6 hours, used during active labour, used via speakers.

The equipment used was their own stereo system — they were satisfied.

Improvements suggested for music use during labour include: selection of music with specific rhythms.

Changes suggested for a future labour experience include: practise relaxation techniques, use visualization.

Past experiences with music were related and include: formal piano lessons, choir experience, use music at home often, use music to change mood, own and have used Walkman and headphones, own a stereo system, family has history of music use.

Previous past experience with pain and coping behaviours include: writing things down, think them through, talk, pour out my soul, listen to music, listen to familiar music over and over, use headphones in bed, isolate myself.

Findings of Lickert Scale:

Subject Q
- agreement with statements #2, #4, #5, #9, #11, #12, #13, #14, and #15
- uncertainly about statements #3, #8, and #10 about the loudness of music use and the helpfulness of headphones
- disagreement with the statements #1 and #6 that music is helpful and its usefulness for active labour
- strong disagreement for the statement #7, music use for late labour

Figure 8

Informant Q

Lickert Scale

1. Music use during labour is helpful.	2. Type/category of music use during labour is important.	3. Loudness/ intensity of music use during labour is important.	4. Rhythm, fast/ slow tempo of music use during labour is important.	5. Music use during labour is helpful for early labour (beginning hours of labour).
6. Music use during labour is helpful for active labour (middle of labour).	7. Music use during labour is helpful for late/ transition labour (1 to 2 hours before birth).	8. Music use during labour is helpful when used along with other methods of coping.	9. Music use during labour is helpful when childbirth coping methods are practised using music.	10. Music use during labour using headphones is helpful.
11. Music use during labour should be made available.	12. If I were to have another labour, I would use music.	13. Generally, I enjoy music.	14. Having music and equipment provided was important.	15. Music use during labour should be recommended.

Music use: 5 hours Category: new age, instrumental

Lickert Scale Questions

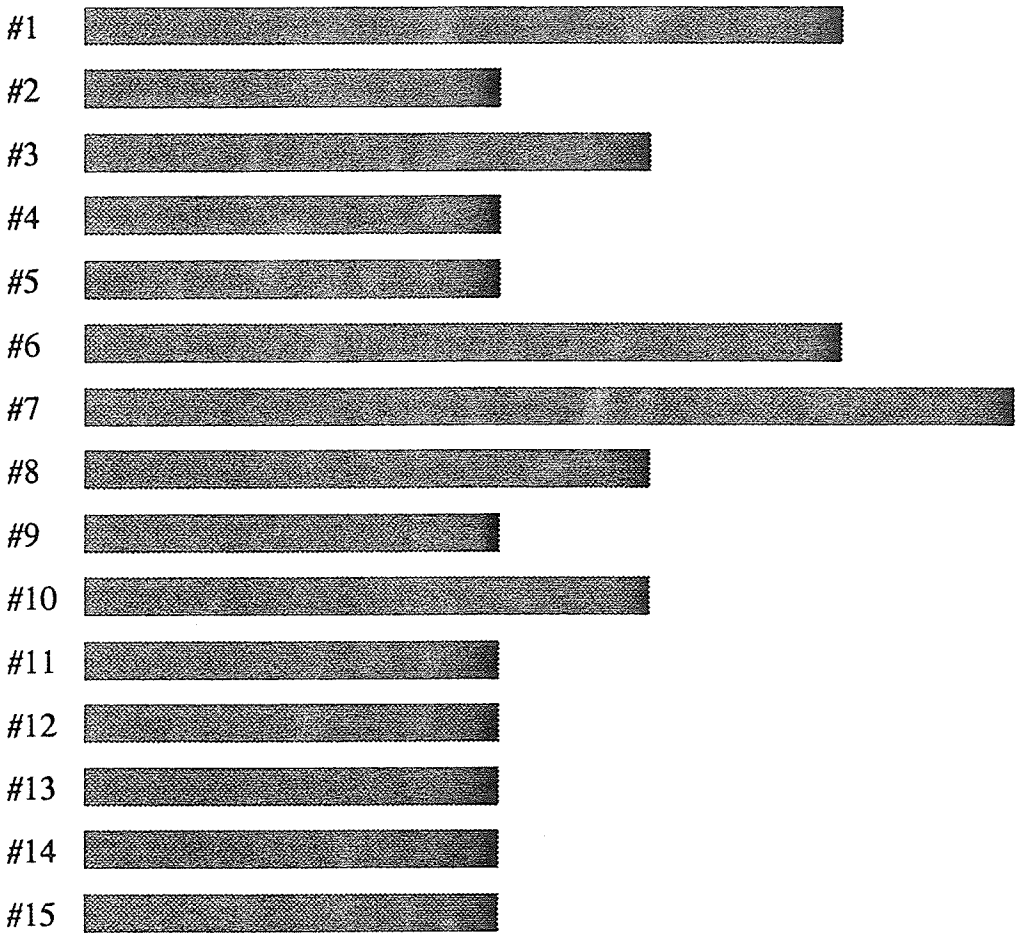


Table 3

Informant Q

Research areas:

1. Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	5. Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

To conclude, Q experienced a home birth and used music (5 hours) which provided a generous narrative. The Lickert scale and this data have provided exploration of the research areas, themes as well as whether Q expresses a coping or non-coping perception.

Q discusses concept areas and coping strategies which she described as positive. She suggests that there was a perception of positive feelings: "I was glad these were the only people there . . . it was intimate and intense . . . it was all I would have wanted."

Q discussed negative concept areas which were described as: "The labour was too long . . . harder and more painful than I had expected . . . I was afraid . . . that scared me." There was no specific relationship between negative statements, perceptions, and a non-coping attitude.

Evidence of Q's perception of having coped with the labour experience is demonstrated by one of her statements: "That was all I could have wanted." She could think of nothing which would have improved her labour.

Research area #1 was answered somewhat by the statement Q made about future labours. "I think I would practice my relaxation techniques and I might choose music that has certain rhythms." This suggests that practising

coping techniques with music would be helpful.

Research areas #2 and #3 will be discussed at the end of this chapter.

Research area #4 is answered by Q with her responses to the interview guide and the Lickert scale. She used music during labour for 5 hours, doesn't remember the music, but her husband stated that she made specific requests for music throughout her labour; during the 5 hours that music was used.

Q stated that she agrees that she would use music again in a future labour. However, Q stated she disagreed that music use during labour is helpful. This is contradictory. This #1 statement on the Lickert scale has probably been misinterpreted.

Research area #4 is answered with agreement for music use in early labour and disagreement for active labour and strong disagreement for late labour.

Research area #5 has been explored. Q stated that she listened to music when experiencing a past painful event. She listened to familiar music over and over again via headphones in her bed.

Informant O

O responded to the interview guide question #1, which requests information about the labour experience generally.

Positive concepts of the labour experience were related by O. She said: "I thought of labour as a journey that we were on and I can accept that. It was a point of acceptance I felt because I didn't worry about it after that."

"Also, I had my partner and my sister who were kind of my main birth attendants as well as the midwife."

"I knew it might be good to have somebody else there you know, because I would be doing it at home . . . if I wanted other positions where I needed support, it would be nice to have as much help as I could . . . it was very much co-done, I don't know, it worked out very well, between them I think. . . . It was nice having both of them there . . . I always had somebody who was like family."

"I guess I am very much somebody who believes in your mental energies very much . . . how things come out positively and negatively too . . . I had to let go of my image of a short labour and be able to relax with the thought of a longer one. I wasn't sad."

"With each contraction . . . I had a goal . . . and I could feel her (the baby) come down a bit farther."

O stated that she: "Cleared my emotional slate beforehand, I think . . . I was concentrating on emotional cleaning. I didn't worry about anything . . . my mum was here too and she was to look after things on the outskirts."

Areas which were related with a negative perception are described. O stated: "I was excited about it (labour) so I didn't really rest at all . . . I

probably should have done if I'd have known how long it might go . . . a little longer than I thought . . . it took longer . . . I wish I had rested more in the first part in retrospect . . . it did take longer . . . I asked the midwife how long it was going to take. . . . She said as long as it takes . . . so, I said, O.K. and I didn't worry about that any more . . . I would have taken drugs at this point if I was in the hospital."

"I guess you never know about being in labour and one of the things for me was I didn't realize that the length of contractions or the time between them could vary so much as well as the contractions themselves . . . slowing things up."

O also related many statements about her coping techniques used for her labour experience, question #2. "Baths are very soothing for me . . . I did this twice for 1 hour and again for 3 hours . . . it was good for me . . . I was able to sleep in there . . . it was really nice to be in the bathtub you know."

"We listened to music at that point . . . for a while when things started . . . it took awhile."

"There wasn't any point that I didn't think I coped with the pain . . . it was what I expected . . . I eased into it . . . had time to do this."

"At the end (of labour) I got so determined that I decided to squat . . . I had done a whole bunch of different positions . . . kneeling . . . and leaning over the dresser or whatever."

"When I got to pushing . . . 2 1/2 hours, it seemed less painful than before because I had this goal . . . I had no concept of time."

"Other coping techniques I used was breathing . . . for sure . . . I'm intuitive so I thought I will more or less have an idea of how to breathe . . . I

didn't practice types or anything beforehand . . . I followed my attendant's suggestions . . . it was easy to follow."

"We used massage . . . my back . . . lower back. My sister was rubbing my abdomen."

"When I think of my contractions, looking back, I thought I coped really well."

"I also sort of practised some visualizations beforehand . . . but I didn't do any in labour . . . to my surprise. Instead, I thought of opening up . . . but used no images in my mind."

"When I knew the baby's heartbeat was O.K. and she (the baby) was fine . . . I knew she was fine . . . I knew that she was there and O.K. and I could feel her kicking . . . I had certain thoughts of that."

"I just let them come (the contractions) . . . that is strange to me because I thought I would have some kind of image about them and I didn't."

"And words of encouragement were very positive . . . you're doing great . . . doing well . . . she was positive . . . it was like, that's nice, oh, I am O.K. . . . nice to know."

O had related an ambiguous or neutral area concerning the length of the labour and her need to know or have information. "For me it wasn't necessary, knowing that at certain points, how long it's going to be . . . I think that was good for me . . . I did need to know when she did an internal (examination) how much further I had to go . . . at that point I had to know."

The responses generated about what helped the most or least for coping with labour, question #3, are described. O states that: "Encouragement from all was probably the most helpful thing and that I was in my own atmosphere

(home environment) and being in control."

"Also the music playing, pretty much all the time in the background . . . I didn't concentrate on it, but noticed when it wasn't there at times. That was just one additional thing which was very important in my coping."

"Having the people who I love around me, people I loved the most . . . I felt very loved and supported and I think that was probably the most helpful . . . a great help to me."

"The least helpful things for labour we would just stop doing. Otherwise, if someone had been really adamant that I do something that I knew (it) wasn't what I needed to do, that would have really disturbed me . . . bothered me."

Asking question #4 did not elicit any more information about what would have improved the labour experience. O stated: "It was pretty well as good as it could be. I think . . . I had control over what was going on here."

Question #5 asked O to respond to a request for information about music use during her labour experience. She stated: "We used it in active labour . . . it was early on . . . but I wasn't concentrating on it . . . whatever was playing was O.K. I had tapes picked out and we used them . . . it was a peaceful tape . . . was very calming . . . helped me relax I think. I would call the tapes empowering . . . strong female singers . . . with images of strength, earth kind of times . . . gets you back to nature . . . firmly roots you in place . . . It was associated with a movie I had seen . . . was familiar."

"I felt, this was the process of women having children, this is what you do . . . we've done this for centuries . . . the music had this meaning for me."

O said: "Music made the room comfortable . . . when there's music in

the background it kind of cushions . . . sense of you can't hear every sound . . . it sort of protects you . . . that's why it was important to have it."

"The music will always make me think of the labour with her so, in that, it has become very significant. My sister was also concerned with the music and interested in a bit more variety perhaps."

Question #6, description of equipment, O only used her own stereo and tapes, "we didn't use headphones at all."

These responses related to question #7 which requested input about anything which would have improved the helpfulness of music use during labour. O responded: "I think for sure it's good to be able to regulate the loudness . . . it was right where I wanted it to be . . . not a main focal point . . . also, I would pick out more tapes for variety . . . maybe ten more."

O could not add anything else to the labour experience in response to question #8.

Question #9, which asked what O might change if she were to have another labour experience elicited the following: "I would definitely want it at home."

"My people around me didn't know where everything was so they were searching and looking . . . I would be a bit more organized . . . let my mother know where things were."

"I would rest more in that first prestage." (Referring to latent phase labour.)

Question #10 dealt with past experiences with music. O responded as follows: "I took piano lessons and guitar lessons eons ago . . . I'm not very good . . . but I enjoy music."

"I sang in the choirs at school and went to music camp . . . I like to sing."

"We listen to music probably every day."

"I own a Walkman and headphones. I used it for travelling, like on trips . . . it's really important time for me to have it . . . because it's home for one thing . . . it gets me in touch with being home and being, having something that can reconnect you with them when you are far away from all the people that you love . . . also to block out sometimes . . . block things out."

"I use music that I know and get — create a mood . . . I've often used music for a purpose. I hadn't really thought about it but you're right, I do."

"My family is very musical in a way, my mother sang in a choir too . . . she plays the piano . . . when we get together and sing and there's much music use."

"My husband's family . . . he loves music very much for sure . . . likes it louder and more often . . . uses cassettes more often."

"We have headphones at home but don't use them . . . often we listen to music in the car to create mood . . . to relax or to be excited."

Question #11 about past experiences with painful events and coping techniques elicited the following responses from O. "I am quite vocal . . . I like talking to people I care about . . . I like lots of hugs . . . being close to someone is important so touch is also important."

"Being touched was very comforting."

"I am not someone who blocks it or tries to stifle it . . . I go with the flow . . . if I need to cry, I cry."

"Music plays a strange part in it because if I'm feeling said I put on said

music and I can cry to that. It helps me express what mood or feelings I have . . . that's O.K."

"In the past, when I have physical pain, I would just curl up in my bed by myself . . . at home . . . spend time to myself."

Summary of Interview Guide Findings

O (home birth) listed 8 positive aspects of her labour experience generally, 3 negative statements and 1 neutral perception.

O recounted 11 positive ways of coping.

Being in control and in my own environment with music was the most important helpful item for coping with labour. The least helpful thing would be someone suggesting changes that I wouldn't want to try or do.

Music use during labour included the following: used during early and active labour, used personal music which was familiar, calming effect, relaxing effect, music had meaning, music helped imagery, has imprinted and her child in her memory with music, select more variety before the labour.

Equipment was their own stereo, tapes — didn't use headphones.

Responses suggested which would improve the helpfulness of music use during labour included regulation of the loudness and selection of a large sample of music ahead of time to improve variety.

O did not contribute additional information about her labour.

Changes suggested if O was to experience another labour include: home birth, people I love around, better organization for other's functioning, more rest in early labour.

Past experience with music were related and include the following:

formal lessons with piano and guitar, sang in choir, music camp, listen every day to music, own Walkman and headphones, use Walkman for travelling, use familiar music, use music to block out or reconnect, mood. Musical family history maternal, musical family history paternal, spouse uses music often.

Previous painful experiences and coping behaviours question provided the following responses: very vocal, talking, hugs, close to someone I care for, touch, cry, go with it, music to set mood, music helps express moods/feelings, isolate myself, time in bed.

Findings of Lickert Scale:

Subject O
- strong agreement with statements #11 and #13 - music use should be available and general enjoyment of music
- agreement with statements #1, #2, #4, #5, #6, #7, # 8, #12, and #15
- uncertainty about statements #3, #9, #10 and #14 - loudness of music, practise with other coping methods, the usefulness of headphones and the importance of having equipment provided

Figure 9

Informant O

Lickert Scale

1. Music use during labour is helpful.	2. Type/category of music use during labour is important.	3. Loudness/ intensity of music use during labour is important.	4. Rhythm, fast/ slow tempo of music use during labour is important.	5. Music use during labour is helpful for early labour (beginning hours of labour).
6. Music use during labour is helpful for active labour (middle of labour).	7. Music use during labour is helpful for late/ transition labour (1 to 2 hours before birth).	8. Music use during labour is helpful when used along with other methods of coping.	9. Music use during labour is helpful when childbirth coping methods are practised using music.	10. Music use during labour using headphones is helpful.
11. Music use during labour should be made available.	12. If I were to have another labour, I would use music.	13. Generally, I enjoy music.	14. Having music and equipment provided was important.	15. Music use during labour should be recommended.

Music use: 10 hours Category: feminist, strong vocal instrumental

Lickert Scale Questions

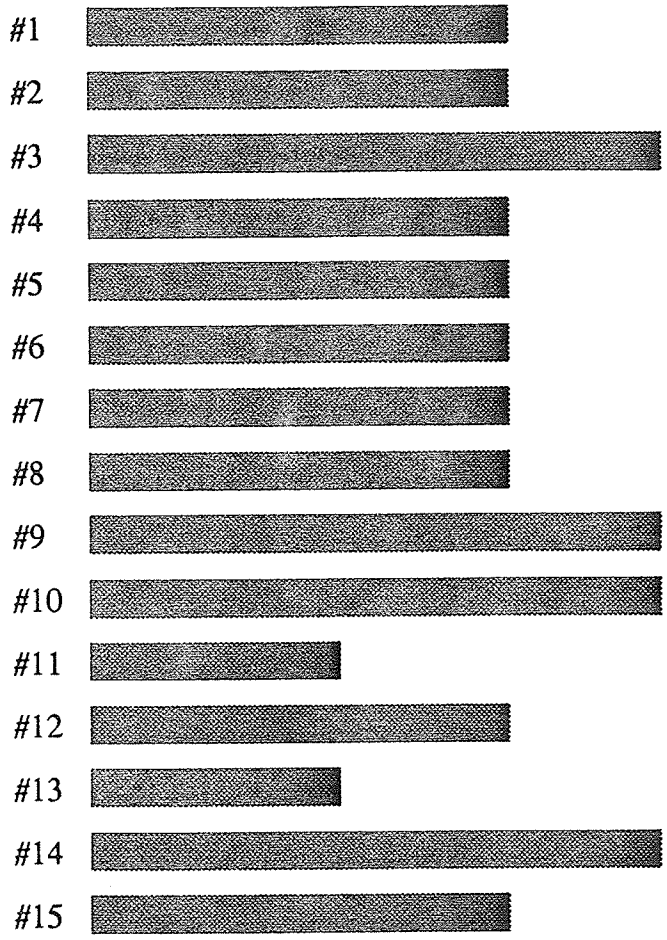


Table 4

Informant O

Research areas:

1. Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	5. Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

O has provided an extensive narrative and responses to the Lickert scale which assist in exploring the research areas.

Positive concepts have been identified by O and may be associated with a positive theme and a perception of coping as O related that: "Having the people who I love around me, I felt very loved . . . a great help." This may suggest positive feelings of perceived coping.

A negative theme was represented by statements by O about how long labour was: she mentioned this six times. The midwife did not elucidate how long labour may be. This may be associated with a feeling of non-coping.

O's perception of her coping with labour may be represented by the statement about what may improve her labour. She says, "The labour was pretty good . . . it was pretty well as good as it could be . . . I think I had control over what was going on here . . . there wasn't any point that I didn't think I coped with the pain . . . I thought I coped really well."

Research area #1 could not be answered as O did not use music to practise labour coping techniques.

Research areas #2 and #3 will be addressed later in this chapter.

Research area #4 was explored by the interview guide. O used music

during labour for 10 hours. She states: "It was peaceful, calming, relaxing, empowering and familiar . . . I was comfortable, and protective, and have good memories." O agrees with all the Lickert scale statements related to the helpfulness of music use during labour. Statements which are seen as uncertain concern headphone use, loudness of music, practise with other coping techniques, and having the equipment provided.

Music use during labour appeared to have been a helpful coping strategy for O and possibly enhanced a positive perception of coping.

Research area #4 has been answered with O's agreement with statements #5, #6 and #7; about early, active and late labour and the helpfulness of music use.

Research area #5 is about previous music use with past painful experiences. O states: "Music plays a strange part in it because if I'm sad I put on music and I can cry to that. It helps me express what mood or feelings I have." Therefore O has used music previously during painful experiences.

Informant R

Positive concepts which were recounted about the labour included the following. R stated: "I liked the environment . . . it was a smaller, cosy room, blue colour and made me feel relaxed . . . like your bedroom."

"It wasn't as scary as the first time, I sort of expected that they would do this and that."

"The nurses were really pleasant . . . I was comfortable with them."

R related her labour experience generally in response to question #1. Regarding staff issues, R stated negative perceptions. "They think you're different if you don't fit into their perfect scale of what's normal. I didn't like that."

"I had the drip (induction of labour) and they wouldn't give me anything to eat or drink all day . . . it got worse, worse and worse."

"A lot of times they talked between themselves . . . maybe there was a problem and I should be told about it. I didn't like that. They should speak so I can hear them . . . they shouldn't be talking about personal things at this time . . . it made me apprehensive."

"I didn't like that they wouldn't allow anything but ice chips and nothing to eat . . . they wouldn't tell me why. I usually feel better when I can eat."

"The doctor who was doing the epidural poked me about 11 or 12 times in the back . . . I hate needles . . . he said I'd be paralysed . . . I chose a non-teaching hospital so this investigating and poking and learning from you wouldn't happen."

"Also, I didn't like the feeling of an epidural at all and I couldn't move but I guess it was better than the pain . . . the machines for the baby were

very annoying."

One area which generated a neutral/ambiguous description concerned smells. "It was so medicinal . . . I suppose it's to be expected . . . it was O.K. but it didn't relate to me very well."

Question #2 related to coping with labour and R responded with the following: "I am not very good with pain. I never practised breathing."

"I knew if I could eat the pain would be better."

"My husband was very important . . . he had to be there because the pain didn't seem to be half as intense . . . I felt that when I was holding his hand really tight he wouldn't complain. Like I felt sort of like the pain was going into him and he would face the pain because he could take a lot more than I can. The harder I pushed, concentrated the more the pain went into his wrist . . . and go away."

"However, he went for a 2 hour lunch. I wish he would have just stayed there. If I had to stay there and cope with it why did he have to keep going in and out. He should have come back right away."

"I sort of left the breathing techniques that were taught . . . I decided I'll breathe the way I feel like I should be breathing . . . to suit myself."

"We talked and he talked and I listened."

R's responses to question #3 about what helped the most and what helped the least follow. "The most? . . . having a partner there."

"The least? . . . the breathing . . . the way they teach you to do it and it doesn't feel right."

R stated what may have improved the labour experience. "I'm one of those people who have to know everything and when the doctors and nurses

would discuss without telling me I would imagine all kinds of things wrong . . . you see my first baby was not born perfect and I had anxiety when they weren't talking to me but about me . . . if everything is normal, I want to know . . . as long as I know, then I feel everything is going to be fine and I can deal . . . cope with it (labour)."

Question #5 generated R's responses to her experience with music use during labour. "I brought my own tapes, ones I've used at home and CBC radio. . . . I used music for quite a while . . . 5 hours . . . I especially used classical music . . . I felt it was very soothing, calming, relaxing. Until the pain got so intense it was useful, then I really wanted everything to be just quiet."

"Yes, I found the music went along with the way I was breathing . . . the music was relaxing . . . the breathing was relaxed . . . when things were slow like this, I could deal with it a lot easier. It helped me concentrate with contractions."

"I could think of being in my house, imagine the wind and the trees . . . I could think of the ocean and waves and the lake . . . it took me away from all the confusion . . . especially if I kept my eyes closed."

"The headphones were useful, especially for us because my spouse doesn't like that kind of music . . . I had it on very low volume and I had no trouble talking to him between contractions and hearing the nurses."

"I didn't sense any trouble from the staff about our use of music during labour."

The responses for description of the music equipment follow. R stated: "I brought my own tapes . . . like was recommended . . . the length of cord

was good, nice and long."

"My husband found and changed the tapes for me . . . I didn't want to worry about it."

"I really couldn't move much in bed anyway with all the monitors . . . so I didn't feel with the equipment."

"The equipment was easy to use . . . I was comfortable with it . . . it's not complicated . . . I own a Walkman . . . I use it frequently in the garden."

There were responses to question #7 about anything which may improve the helpfulness of music use during labour. R stated: "Ensure you bring your own tapes . . . everyone has their own taste."

"The dentist tried to put country and western music by earphones . . . I thought I'd die . . . I requested a change to symphony . . . it worked well."

For question #8, R had no other comment to add about labour and music use.

What might you change if you were to have another labour experience was question #9, and it generated the following responses. "I would bring my own blanket and pillows from home . . . things that are comforting . . . so that if you closed your eyes, the feelings, smells, sensations . . you would be in your own bedroom . . . a familiar feeling which is comfortable."

R spoke about her past experiences with music in response to question #10 included: "I have no formal music training, however, I can play the piano very well by ear . . . I do this often . . . I sing in the choir at church."

"As I said before, I use my Walkman in the garden all the time till winter . . . then I use it in bed at night when I'm reading."

"My mom's family is very musical. When we visit in the country . . .

the usual happens. All my relatives play some kind of instrument or another . . . some play two instruments — the violin/fiddle, piano, clarinet, harmonica, accordion and one uncle plays the trumpet and the saxophone. Some of the relatives used to have a little band and play at local weddings . . . so we play, me on the piano, and we sing."

"My husband loves music and noise . . . if he's home, all the radios are on and the TVs too . . . if he could have the stereo on too (it's broken) he would . . . he turns them on when he enters a room and doesn't turn them off . . . he always has music on."

Memories of past painful experiences and coping techniques was the request for comment from question #11. R states: "I don't handle pain very well . . . but when I have pain, I like to be around people . . . I scream . . . yell and talk a lot about it — over and over and probably cry. I do not like to suffer alone. I often go off by myself with my Walkman to the garden; or I go to bed. There are still people around."

"If pain was intense, I would want somebody around holding my hand and probably I'd like to be quiet."

Summary of Interview Guide Findings

R (second labour) listed 3 positive statements about her labour, 6 negative aspects and 1 neutral description.

R recounted 5 positive ways used to cope with labour and 1 negative aspect.

Having her spouse there was the most important, helpful coping technique; the least helpful coping technique was the breathing.

Improvements to the labour experience include: more information is

needed, better communication, positive feedback when present.

Music use during labour generated the following responses: personal tapes and radio, classical type, soothing, calming, relaxing, used during early labour, cuing breathing, helped contraction, assisted imagery, used headphones.

Music equipment was satisfactory - brought own tapes and spouse operated equipment, easy to use.

The helpfulness of music during labour could be improved by: using your own tapes which are familiar and your own preference.

Changes suggested as improvements to the labour experience include: bring personal items - blankets, pillows, things which are familiar.

Past experiences with music use in response to question #10 include: no formal lessons, natural piano talent, sang in choir, uses Walkman and headphones frequently, uses Walkman in bed. History of music in the family - most play an instrument. Spouse uses music constantly/daily.

Previous painful experiences and coping behaviours related include: presence of people, scream, yell, talk about it over and over, cry, no suffering alone, handholding, quiet with intense pain.

Findings of Lickert Scale:

Subject R
- strong agreement with statements #2, #3 and #14 - type of category is important, loudness of music is important and having the equipment provided
- agreement with statements #1, #4, #5, #8, #9, #10, #11, #12, #13, and #15
- uncertainty about statements #3 - loudness of music and its helpfulness during labour

Figure 10

Informant R

Lickert Scale

1. Music use during labour is helpful.	2. Type/category of music use during labour is important.	3. Loudness/ intensity of music use during labour is important.	4. Rhythm, fast/ slow tempo of music use during labour is important.	5. Music use during labour is helpful for early labour (beginning hours of labour).
6. Music use during labour is helpful for active labour (middle of labour).	7. Music use during labour is helpful for late/ transition labour (1 to 2 hours before birth).	8. Music use during labour is helpful when used along with other methods of coping.	9. Music use during labour is helpful when childbirth coping methods are practised using music.	10. Music use during labour using headphones is helpful.
11. Music use during labour should be made available.	12. If I were to have another labour, I would use music.	13. Generally, I enjoy music.	14. Having music and equipment provided was important.	15. Music use during labour should be recommended.

Music use: 5 hours

Category: classic, slow, lamenting, calming

Lickert Scale Questions

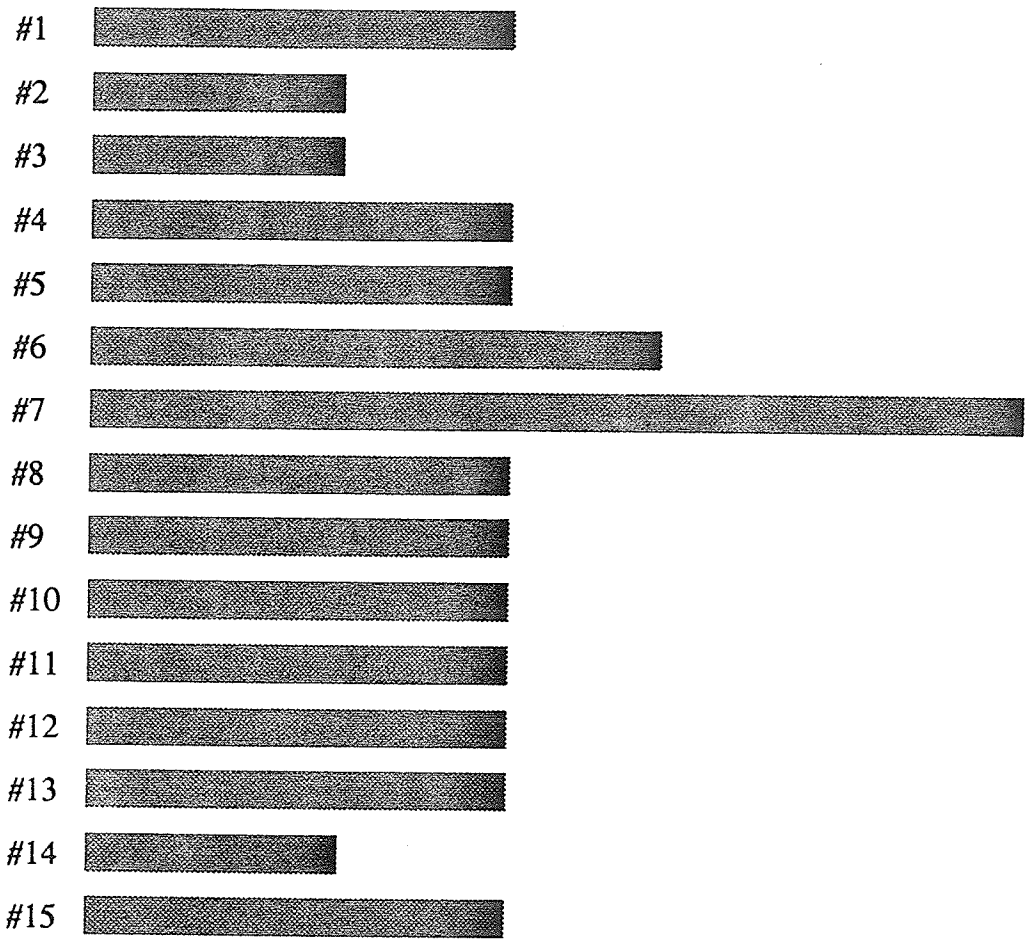


Table 5

Informant R

Research areas:

1. Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	5. Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

In conclusion, R related positive concepts of her labour experience which concerned; the presence of her spouse, the environment, labour was what she expected, and her coping by using her husband's support. These can be related to a positive sense or perception which helped her cope with this experience.

Negative concepts were many and related to her sense of not being cared about and also not being informed of progress and events. R states: "I would imagine all kinds of things wrong . . . I had anxiety when they weren't talking to me, but about me . . . I want to know." These relate to non-coping perceptions.

Overall, R expressed what could be considered a sense of her perceptions about her ability to cope with labour. "As long as I know, then I feel everything is going to be fine and I can deal . . . cope with it (labour)". There is evidence that R did not view her experience as coping with labour positively.

Research area #1 was not answered because R did not use music to practise labour coping techniques.

Research areas #2 and #3 will be addressed at the end of this chapter.

Music use (5 hours) was expressed as a positive coping strategy by R.

She states: "I felt it was very soothing, calming, relaxing, assisted with breathing and with concentrating." R used music to assist with imagery. There was agreement with all Lickert scale questions except #6 and #7; music use during active and late stage labour.

Past use of music during painful experiences was present. R states that she often uses her Walkman, sometimes in bed, but still makes sure there are people around.

Informant T

These findings have been included as a comparison to the other 5 subjects who actually used music during labour. T, when labour started, after an initial attempt with music use, decided immediately not to use any.

T responded to question #1 about her labour generally. Again, descriptions are positive, negative and neutral content.

Positive information includes the environment. "I really enjoyed the birthing room when it was available."

"The side rails to hang on to was very nice."

"Fortunately the whole floor was very, very quiet that day."

Also, other positive responses included the staff: "The nurses were just fantastic . . . I had about 3 or 4 different nurses during the whole thing . . . one labour nurse rubbed my back and that really helped . . . the staff were so encouraging . . . to hear them made me stronger and feel O.K. . . . comfortable and warm inside."

"I knew they were looking after me because of their loving, a lot of understanding, and a lot of empathy that I felt."

An ambiguous or neutral response was related by T. "The nurse massaged my lower back and it did feel nice but she only did it for a while and I really didn't like people touching me to tell you the truth . . . I just wanted them around."

T related some negative occurrences. "They were short staffed and they didn't want us in the birthing room because it was too far for them to walk."

"My husband had tried the music and I asked him to please turn it off because I didn't find it helpful."

"I had an epidural, an IV, and a monitor . . . I couldn't feel . . . I wished I could have felt the pushing . . . I missed out on that . . . not feeling was rather sad."

"My husband doesn't know how to rub my back the right way."

"Listening to other women going through all different stages of their breathing really confused me."

"I was convinced, and my husband too, that there was conspiracy . . . putting me off because the doctors were too busy to come and help me."

T related positive information about coping. "We used an epidural which was fantastic . . . I did really deep breathing and breathed the pain away . . . it was something that I just kind of came up with . . . it fit what worked with me."

"Walking around was really good . . . it was fantastic. I would squat sometimes which was really helpful but . . . when I had a contraction I would ask for just quiet."

"I dealt with the pain inwardly and I had a bit of massaging on my back between contractions."

Support from spouse was seen as positive as T states: "My husband was there and he was very supportive too . . . the other thing that helped were the encouraging words from my husband . . . he said and did some wonderful things."

In response to question #3, T stated: "That the breathing was tremendously helpful . . . the focusing on breathing was effective . . . also, I had this imaginary point inside that I focused on . . . the counting and the blowing.

"The most helpful was the imaginary point."

"The least helpful was anything which disturbed the quiet when I was concentrating . . . in that internal spot . . . and being touched also."

T identified what would improve her labour experience. "The birthing room, absolutely, the birthing room, yes, yes. It's #1 on my list."

Question #5 concerned music use during labour. T did not use music. She found it intolerable immediately when initiated. "I already knew that it wasn't right."

"We knew we wanted to try the music but when he turned it on I told him please shut that off now . . . then it was very quiet."

Question #6, T did not use the equipment.

Question #7, music was not helpful at all.

Question #8, T added that a suggestion to improve the experience would be to use music with the baby after the labour.

Question #9, about what T might change in another pregnancy/labour experience. "Well, I guess using the birthing room . . . the whole time."

"Also, a cot for my husband so he could lie down."

"If he (husband) could have listened to music with . . . I think that would have been helpful . . . beneficial to him."

Past experiences with music, question #10, elicited the following responses. T stated: "I played a trumpet for a little bit . . but I never enjoyed it."

"I was in the choir for a few years . . . and I like to sing."

"I have music going all the time."

T stated: "My husband played clarinet for a long time and he has a little

piano thing in the basement . . . we collect music . . . he's a fanatic . . . he uses headphones . . . he goes to bed with music on and I can't stand it . . . I like quiet when I go to bed because I can't concentrate on my inner quiet."

When asked about previous painful events in life and coping, T responded with the following: "As a child, I had suffered some child abuse . . . and when I was being beat, I would focus inside again and I remember the abuser being upset because I wouldn't cry . . . this made me very, very strong within . . . It has come to my rescue in several situations."

"It was definitely an internal type of thing where I just came inward . . . separating yourself by hiding inside."

"If I'm in pain, I'll be very, very quiet and scrunched up for a little bit . . . my husband has laughed when I've hurt myself and I needed it to be quiet."

"After the pain it helps to have kind words, encouraging and caressing after."

Summary of Interview Guide Findings

T planned to, but did not use, music during labour; immediately found it non-helpful.

T listed 5 positive statements about her labour, 1 neutral description and 6 negative perceptions of the event.

Coping with labour was recounted and includes 6 positive statements: spousal support, breathing, walking, encouragement from others, internal strength.

The most helpful thing to cope with labour was the internal point of

strength; the least helpful coping technique was anything which disturbed the quiet and the imaginary spot.

Factor identified which would improve her labour experience: the birthing room.

Music use during labour was not initiated. T had planned this but immediately discontinued the use as it was unsatisfying and disturbing and intolerable.

T did not use the equipment.

Music was not helpful at all — the opposite in fact.

An improvement suggested was to use music after the baby was born.

Changes suggested to improve any future labour experiences include: the birthing room, a cot for spouse to lie down, music and equipment for my spouse.

Past experiences with music elicited the following responses: played a trumpet - never enjoyed it, choir singing, music use continually. Spouse plays a clarinet, piano, plays music continually, a fanatic, uses Walkman in bed with headphones.

Previous painful experiences and coping behaviours were related: suffered child abuse, coped by finding a space within herself — a source of strength — separating — hiding within, quiet with pain, need quiet in environment to cope, kind words and caressing after.

Findings of Lickert Scale:

Subject T did not use music during labour; she had planned this but immediately upon her attempt to do so, she decided that it was not helpful. T's responses to the scale are included for comparison to the other 5 informants

- strong agreement with statements #13 - general enjoyment of music and agreement with statements #5 and #11 - music is helpful during early labour and music use should be available
- uncertainty with statements #2, #3, #4, and #15 - type/loudness/ rhythm of music use is helpful as well as the statement that music should be recommended for labour
- disagreement with statement #14 - having equipment provided was important and strong disagreement with statements #1, #6, #7, #8, #9, #10, and #12

Figure 11

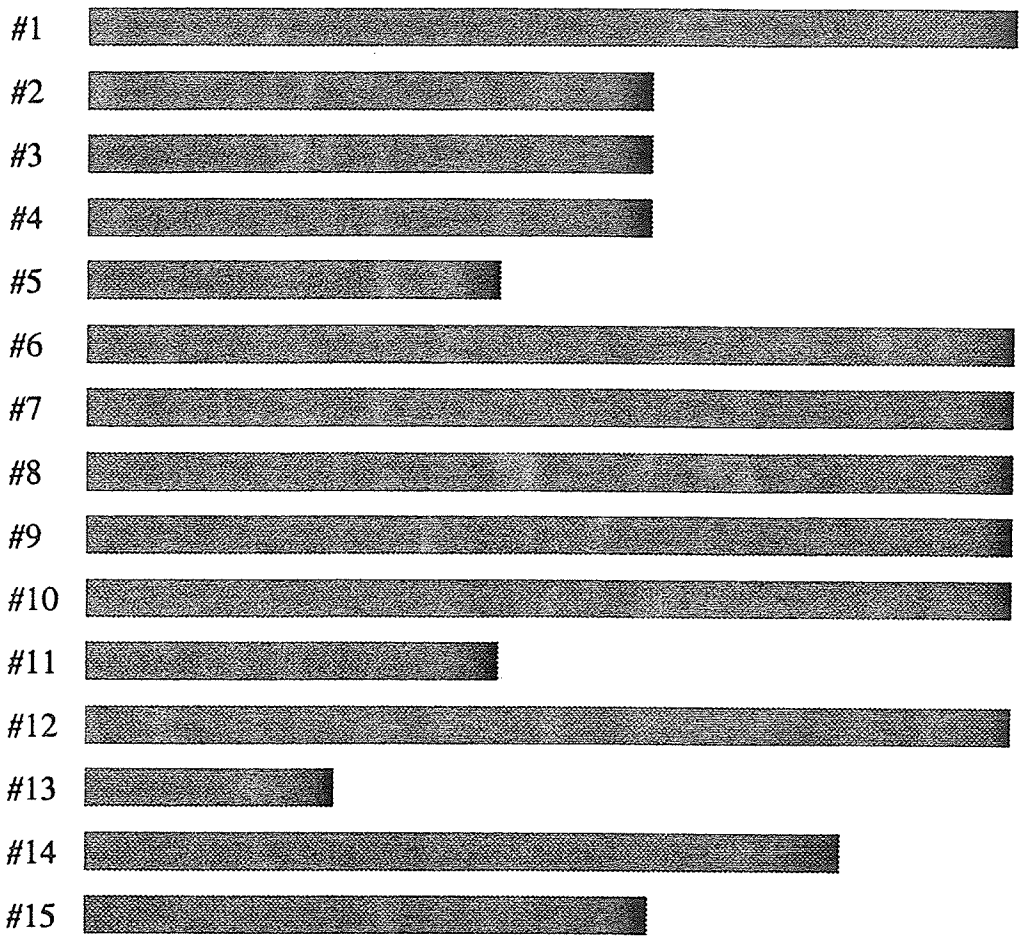
Informant T

Lickert Scale

1. Music use during labour is helpful.	2. Type/category of music use during labour is important.	3. Loudness/ intensity of music use during labour is important.	4. Rhythm, fast/ slow tempo of music use during labour is important.	5. Music use during labour is helpful for early labour (beginning hours of labour).
6. Music use during labour is helpful for active labour (middle of labour).	7. Music use during labour is helpful for late/ transition labour (1 to 2 hours before birth).	8. Music use during labour is helpful when used along with other methods of coping.	9. Music use during labour is helpful when childbirth coping methods are practised using music.	10. Music use during labour using headphones is helpful.
11. Music use during labour should be made available.	12. If I were to have another labour, I would use music.	13. Generally, I enjoy music.	14. Having music and equipment provided was important.	15. Music use during labour should be recommended.

Music use: 30 minutes Category: classic, pop, rock

Lickert Scale Questions



Profiled as a contrast - unusual.

Table 6

Informant T

Research areas:

1. Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?	2. Are there similarities/ differences apparent in the women who find music use during labour to be a helpful coping strategy?	3. Are there similarities/ differences apparent in the women who find music use during labour to be a non-helpful coping strategy?	4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?	5. Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

Conclusions are reviewed for informant T. This woman planned to use music for her labour but discontinued the music immediately after it was initiated. This case has been included in the study for contrast and comparison with the other informants' findings.

Positive aspects related to a positive theme. A sense of coping is perceived by T with the following positive comments. T states: "I knew they were looking after me because of their loving, a lot of understanding, and a lot of empathy . . . comfortable and warm inside." Her descriptions of coping describe an overall impression of coping with labour.

Negative concepts which T related coincide with a negative theme and a decrease or lack of perception of caring. "I felt there was a conspiracy . . . that they were too busy to come and help me."

Neutral responses concerned the effort made by staff to use touch which T identifies as positive and yet, truthfully, she does not like to be touched which is negative. T seemed to appreciate the impetus to assist her with coping even though she did not want the behaviour and it did not help her.

Research area #1 can not be answered because T did not use music during practise with coping techniques for labour; she did not practise any

coping techniques.

T did not use music during labour because she found it detracted from her coping ability. T experienced a really negative perception of its use or helpfulness.

Research area #4, the helpfulness of music use during the three phases of labour, responses indicated that there is agreement with music use during early phase labour only.

T agreed that she enjoys music and that it should be available for use during labour, however, she responded with strong disagreement that music is helpful for labour. Possibly T agrees that music should be available for others use but she is uncertain if it should be recommended.

T did not relate any previous painful experiences with music use. Instead she responded that complete quiet needed for her successful coping with pain. Therefore, research area #5 has been answered.

Compilation of Informants Responses

All informants except one responded with more negative than positive statements about the general labour experience. This suggests a negative theme to perception of the labour experience generally. The one informant who made more positive statements about labour experienced a home birth. Positive themes were often associated with statements that capture the essence of coping.

All informants recounted almost exclusively positive coping behaviours/ techniques/skills. Some coping behaviours common to all women: spousal support, essence or feeling of perceived caring and support from others, breathing or adapted breathing and music use in early labour.

Coping strategies and concepts which helped the most and the least were individual and different for each informant.

Common concept areas identified for 4 out of 6 informants to improve the labour experience generally included: the birthing room environment and the desire for more information.

Common concept areas for music use identified as positive during labour included: personal preference music, music use in early labour, music which was familiar.

Common factors for improvement of music use helpfulness during labour included: increased variety of personal preference music.

Common elements of spouses were that they all have a keen interest in music.

Overall, informants were satisfied with either their own or provided

equipment. Only one informant did not use headphones while using music.

Common elements among the informants, related to past experience with music included: all but one had formal lessons in at least one musical instrument; the other informant plays the piano by ear; all have choir experience; all own a Walkman; all have used their Walkman and headphones except one informant; this particular informant did not use music during labour. The sixth informant who did not use music during labour also had formal music training but never enjoyed the lessons or the experience.

Common elements of past experience with pain and coping behaviours included: 4 of the 5 informants have used music to cope with previous physical or emotional pain.

Informant Summary Statements - General Coping and Themes

Informant	Statements	Numbers of Concepts Area Recounted (Negative -, Positive +, Greater Than >)
A	I did not have enough care personally. They were taking care of me. She felt prepared to cope with labour. I never knew I was succeeding.	- > +
W	I would deliver in a different hospital. Had many negative feelings re staff. I used my husband (for coping) which worked. I used his eyes as my focus for coping.	- > +
Q (home birth)	Much fear described re: length of labour. Surroundings helped least. Nothing else could improve experience. It was all I would have wanted.	- > +
O home birth	As good a labour experience as it could be. Control over whatever was going on. I thought I coped really well. There wasn't any point that I didn't think I coped with the pain.	+ > -
R	I coped well because of my spouse. I can cope with it (labour) if information is provided honestly. If I know things are alright, I can cope. Many negative concepts stated.	- > +
T	(Informant did not use music.) I knew they were looking after me. I felt loving, empathy and understanding. I dealt with the pain inwardly - in that internal spot.	- > +

NOTE: Five informants state or infer that they have coped with labour.

Table 7

Informant Summaries

Summary of Lickert Scale Findings

Ratings: Strongly Agree = 1, Agree = 2, Uncertain = 3, Disagree = 4, Strongly Disagree = 5

1. Music use during labour is helpful.		2. Type/category of music use during labour is important.		3. Loudness/ intensity of music use during labour is important.		4. Rhythm, fast/ slow tempo of music use during labour is important.		5. Music use during labour is helpful for early labour (beginning hours of labour).	
A	3	A	2	A	2	A	2	A	1
W	2	W	2	W	3	W	3	W	1
Q	4	Q	2	Q	3	Q	2	Q	2
0	2	O	2	O	3	O	2	O	2
R	2	R	1	R	1	R	2	R	2
T	5	T	3	T	3	T	3	T	2

6. Music use during labour is helpful for active labour (middle of labour).		7. Music use during labour is helpful for late/ transition labour (1 to 2 hours before birth).		8. Music use during labour is helpful when used along with other methods of coping.		9. Music use during labour is helpful when childbirth coping methods are practised using music.		10. Music use during labour using headphones is helpful.	
A	4	A	5	A	2	A	2	A	3
W	4	W	5	W	1	W	3	W	2
Q	4	Q	5	Q	3	Q	2	Q	3
O	2	O	2	O	2	O	3	O	3
R	3	R	5	R	2	R	3	R	2
T	5	T	5	T	5	T	5	T	5

11. Music use during labour should be made available.		12. If I were to have another labour, I would use music.		13. Generally, I enjoy music.		14. Having music and equipment provided was important.		15. Music use during labour should be recommended.	
A	2	A	2	A	2	A	2	A	2
W	2	W	2	W	5	W	3	W	2
Q	2	Q	2	Q	2	Q	2	Q	2
O	1	O	2	O	1	O	3	O	2
R	2	R	2	R	2	R	1	R	2
T	2	T	5	T	1	T	4	T	3

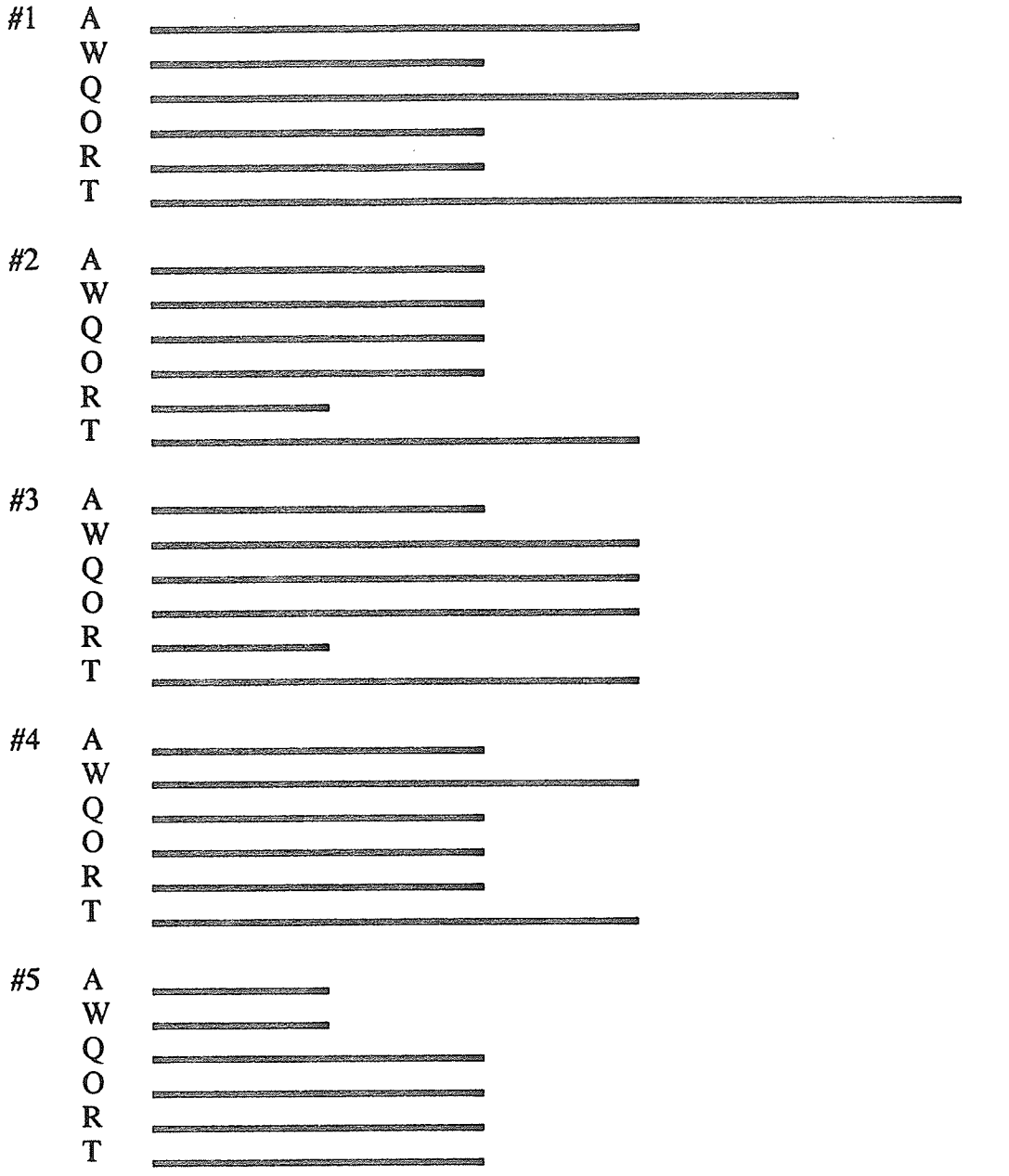
Note: Informant T did not use music during labour.

Figure 12

Lickert Summary Ratings

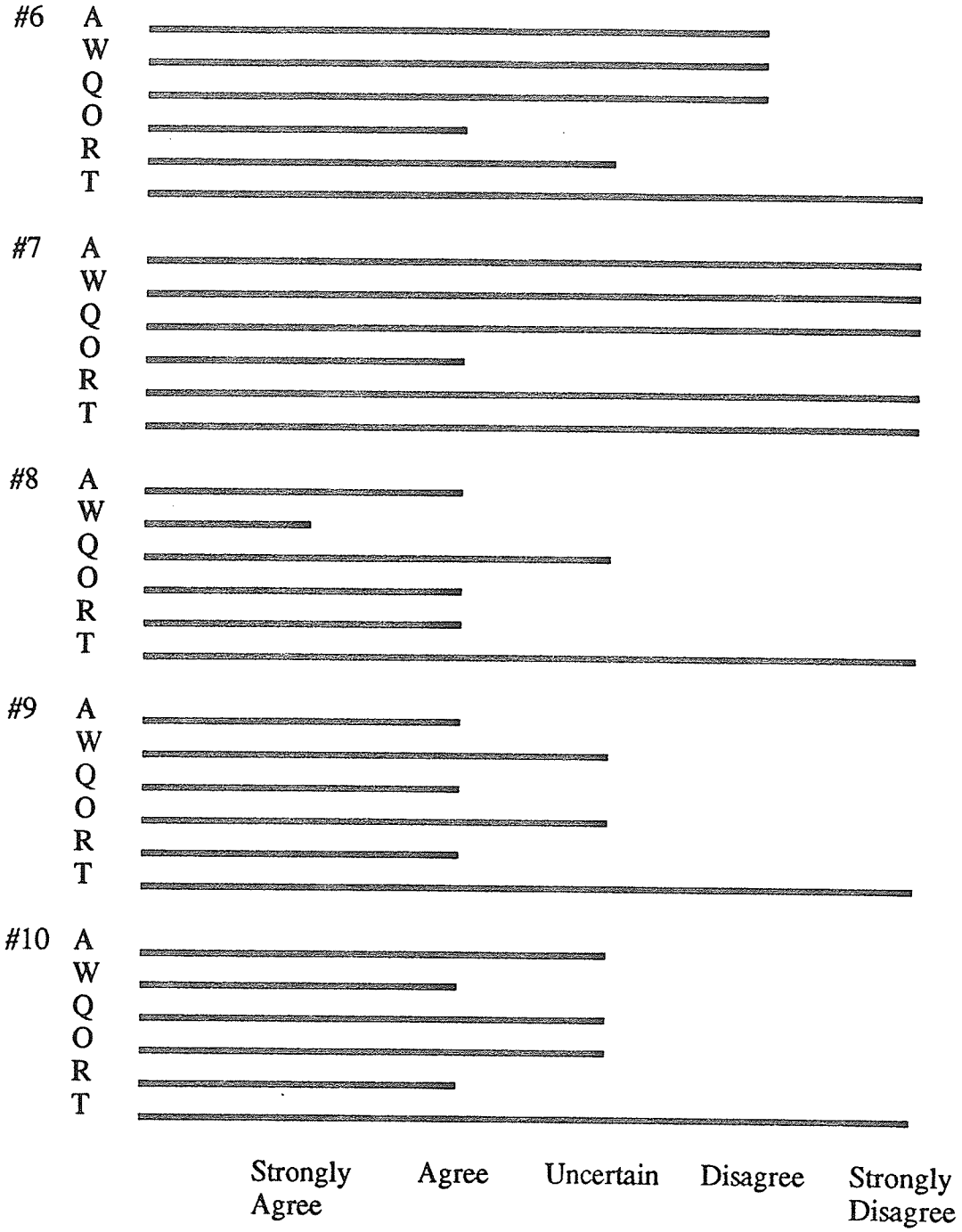
Lickert Scale Questions

Comparison of Six Informants



Lickert Scale Questions

Comparison of Six Informants (continued)



Lickert Scale Questions

Comparison of Six Informants (continued)

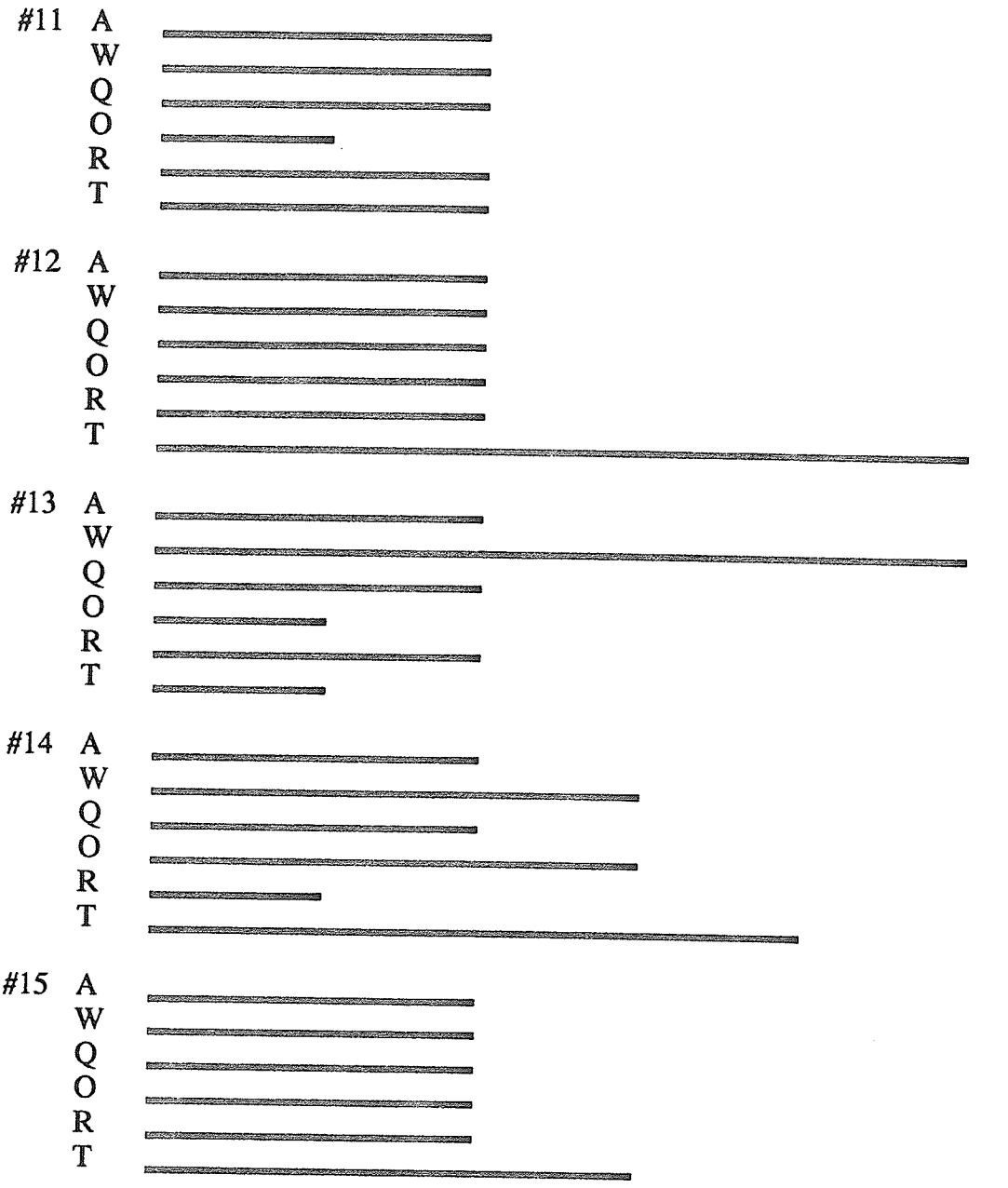


Table 8

Likert Summary Findings

Summary of Lickert Scale Findings

1. Music use during labour is helpful.	2. Type/category of music use during labour is important.	3. Loudness/ intensity of music use during labour is important.	4. Rhythm, fast/ slow tempo of music use during labour is important.	5. Music use during labour is helpful for early labour (beginning hours of labour).
3/5 agree	4/5 agree 1/5 strongly agree	3/5 uncertain 2/5 agree	4/5 agree	5/5 agree
6. Music use during labour is helpful for active labour (middle of labour).	7. Music use during labour is helpful for late/ transition labour (1 to 2 hours before birth).	8. Music use during labour is helpful when used along with other methods of coping.	9. Music use during labour is helpful when childbirth coping methods are practised using music.	10. Music use during labour using headphones is helpful.
3/5 disagree	4/5 strongly disagree	4/5 agree	3/5 agree 2/5 uncertain	3/5 uncertain 2/5 agree
11. Music use during labour should be made available.	12. If I were to have another labour, I would use music.	13. Generally, I enjoy music.	14. Having music and equipment provided was important.	15. Music use during labour should be recommended.
5/5 agree	5/5 agree	4/5 agree	3/5 agree 2/5 uncertain	5/5 agree

Figure 13

Likert Summary Findings

Discussion and Conclusion of Amalgamated Findings

Interview Guide and Lickert Scale

Generally, informants who volunteered for this study described concept areas in terms of positive, negative and neutral perceptions. Positive concept areas were sometimes related to the theme of coping. Negative perceptions

were more frequently stated than positive concepts. However, each informant also listed many positive coping concept areas and techniques. These were often related to an overall perception of coping with labour according to informant's general statements of coping. Overall, informants were unique and individual in their selection and use of coping techniques.

Music use during labour was identified as helpful; a positive coping concept area by 3 of 5 informants. All participants agree that music use was helpful during early phase labour, even informant T. All informants disagreed that music was useful for late labour. All informants agreed that music use during labour should be available; that they would use music with another labour; and that music use during labour should be recommended.

All informants who found music use during labour helpful commented on the need and importance of using familiar music; this was preferred. Therefore, they all agreed with the #2 statement on the Lickert scale; that the type of music was important.

All of the informants own and have used a Walkman and headphones in the past and were familiar with this equipment.

Informants who found music use helpful during labour all have used music previously during painful experiences with either physical or emotional pain.

All of the informants (including T) who volunteered for this study have had formal musical instrument lessons except one who had a natural talent to play the piano. All the informants had singing experience; mainly in a choir.

All of the informants (including T) had a spouse who was very interested and active in a variety of music use activities.

All of the informants' spouses demonstrated an interest in the study and all the men signed the consent form along with their wives.

All of the informants regularly use music in their homes and cars.

The Lickert scale statements consist of a variety of responses; and while there is some argument concerning the importance of these statements, generally responses reflected individual preferences.

Coping and non-coping categories appear to be diffuse and blended and not necessarily related to the positive or negative themes specifically or with the number of positive, negative or neutral concept areas stated.

Informants' overall perceptions of having coped with labour seemed to be generated from statements and descriptions of their perceived coping techniques, skills and/or behaviours used during labour.

Research area #2 asked the question about apparent similarities and differences in the women who find music use during labour to be a helpful coping strategy. Upon review of the statements already listed, there were many similarities. Also, these women are all married, well educated (at least some university education), have the responsibility of part or full time employment, and have attended prenatal classes with their spouses. Differences in the women who find music use during labour a helpful coping strategy consist of individual variations in the other coping strategies which they found helpful. Four of these women used headphones, the fifth used speakers; one of the women who used headphones would have liked the option to use speakers. All of these women used different types/categories of music as well as for different lengths of time.

Research area #3 asked if there are similarities/differences in the women

who find music use during labour to be a non-helpful coping strategy. Only one of the informants (T) did not use music during labour because she found it detracted from her ability to cope. T is the only person who can be contrasted to the other informants who used music during labour and found it helpful.

Similarities include demographic information data, and all of the above-mentioned similarities among the women who found music helpful. The exceptions, in which T differed from the other group, include: finding music use non-helpful as a coping strategy, the need for complete quiet for coping and the lack of previous use of music for coping with previous painful experiences. The social history of T includes a history of child abuse. Another difference from the group who used music was that although T also took formal music lessons as did all the informants, she alone never enjoyed the experience.

Conclusion of Findings

The narratives generated by the interview guide questions, the Lickert scale statement responses and the demographic information have been reviewed and described. The context unit was defined as the experiences of women who have used music as a coping strategy during labour. Categories of coping and non-coping were identified as major components of the informants responses. This was an important consideration of all aspects of the explored experience of labour generally and labour with music use specifically.

The informants perceptions were described in terms of coping in all

aspects of the interview guide as well as the Lickert scale questions. The narratives were reviewed extensively and three themes became apparent; positive, negative and neutral perceptions which were main perspectives of the informants lived experience.

Circumstances which were indicated as positive appeared to be elements basic to positive perceptions — a major theme and possibly related to the category of coping. Other factors which were described as negative appeared to detract from the informants positive perceptions of caring and possibly lead to perceptions of non-coping. Neutral or ambiguous responses were also contained within the narratives; these were deemed uncertain in their influence upon positive, negative or neutral perceptions by informants and therefore coping or non-coping perceptions also. Positive, negative or neutral perceptions were regarded as themes within the description of findings.

The six narratives, upon considerable review, produced 18 concept areas.

1.	medical procedures	10.	partner
2.	nursing procedures	11.	thoughts
3.	pain/discomfort	12.	feelings
4.	equipment	13.	desires
5.	incidents	14.	expectations
6.	coping techniques	15.	other
7.	comforts	16.	stressors
8.	environment	17.	attitude/belief
9.	behaviours	18.	information/understanding

The concept areas are inclusive of and represent all situations or experiences

which are contained and expressed in the narratives of the informants as identified by the researcher.

Summarizing of the interview guide responses has been completed for all informants; a compilation of statements salient to each inquiry area. General overall statements of labour experience perception has been included for each informant; this may describe the essence of their labour experience, and especially as it relates to coping or non-coping categories.

Each informant's Lickert scale responses have been summarized. A graphic representation was completed as well.

All informants Lickert scale responses have been compiled and listed together for comparison and to facilitate understanding of the results. A graphic representation has been included for clarity.

A general conclusion of informant findings has been included. Salient results and considerations were highlighted, compared and contrasted. Exploration of the results and their application to research areas #2 and #3 has been completed.

Informant #6 has been included where applicable, in the findings for elucidation of the results via comparison with the 5 informants who used music during labour.

In the fifth chapter of this research study, a discussion of the findings was completed. The results have been reviewed and summarized in the context of the research literature contained in Chapter Two as well as in relation to the conceptual framework. Along with suggestions for further research, prenatal education and labour care practices, study difficulties and conclusions have been included.

Chapter Five

SUMMARY AND DISCUSSION OF FINDINGS

This final chapter includes a brief review and summarization of the study as well as a thorough discussion of the research findings. The study's findings are discussed within the context of the research's literature and the conceptual framework. Suggestions for further research, prenatal education, labour care practice implementation, study difficulties and conclusions have been included.

Summary of the Study

The purpose of this study was to explore and describe the experience of women who use music during labour as a coping strategy. The study intended to add conceptual and theoretical knowledge and to expand understanding of the uniqueness of each woman and each labour situation.

Research areas were explored through an interview guide, a Lickert scale and demographic data. Research areas included:

1. Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?

2. Are there similarities/differences apparent in the women who find music use during labour to be a helpful coping strategy?

3. Are there similarities/differences apparent in the women who find music use during labour to be a non-helpful coping strategy?

4. Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?

5. Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

Research Area Findings

Research Area #1

Do women who have practised childbirth education coping strategies using music as an adjunct strategy find music use during labour to be a helpful strategy?

This area was not answered as the women who participated in this study did not practise childbirth education strategies at all.

Research Areas #2 and #3

Are there similarities/differences apparent in the women who find music use during labour to be a helpful coping strategy? and
Are there similarities/differences apparent in the women who find music use during labour to be a non-helpful coping strategy?

As only one of six women used music during labour and found it non-helpful, comparison of similarities and differences is limited.

Women who have volunteered to use music during labour have used music for previous painful experiences.

Women in this study who found music use during labour to be a helpful coping strategy have had formal music instrument lessons and/or play an

instrument.

Women in this study who volunteered to use music during labour as a coping strategy have spouses who have a keen interest in music generally.

Women in this study who used music during labour and one woman who did not reported more negative than positive aspects of the labour experience generally.

One woman who used music during labour with a home birth reported more positive than negative aspects of the labour experience.

Women who used music during labour and one woman who did not report more positive than negative aspects of their coping ability during labour.

Research Area #4

Is there any one of the three phases of first stage labour that women identify music use as a strategy to be the most/least helpful?

All the women in this study strongly agreed that music use would be the most beneficial in latent phase labour and the least beneficial in transition phase labour.

Research Area #5

Do women who have previously used music for coping find music use during labour to be a helpful/non-helpful coping strategy?

The women who found music use during labour to be a helpful coping strategy have identified using music for coping with previous painful events.

All six women used coping strategies during labour that they have used

previously to cope with painful events.

The conceptual framework used as a foundation and perspective for this study was Roy's Adaptation Model (1986). Briefly, Andrews and Roy (1986) describe humans as biopsychosocial adaptive systems who cope with environmental change through the process of adaptation. This interaction process requires the person to continually change and adapt. Roy describes four subsystems which constitute adaptive modes that provide mechanisms for coping with environmental stimuli and change; physiological, self-concept, role function, and interdependence. Health care personnel can regulate stimuli affecting adaptations. The behavioral responses needed for adaptation may be innate or acquired mechanisms. Music use as a coping strategy for labour may assist a woman with her ability to adapt.

The research emphasizes the multidimensional transitional experience of childbirth. The literature identifies many factors and variables which may influence the painful experience of childbirth (Roberts, 1983). These factors lead to a realistically complex perception of the birth experience (Nichols & Humenick, 1988; Oakley, 1989). This study attempted to circumvent the analyses of possible relationships between the overwhelming variables which may have influence on childbirth experiences and focus on the effects of music use during labour as a possible helpful coping strategy. Currently, not much is known about a woman's personal experience when using music during labour as a coping strategy. In consideration of the importance of the childbearing event in a woman's life it was important to explore and describe the experience. According to Brockopp and Hastings-Tobma (1989), qualitative research is a legitimate method of generating data for analysis

through exploration, description or expansion of existing knowledge.

An interview guide was developed to encourage the generation of rich narrative from women about their experiences with childbirth and with the use of music during labour. A Lickert scale was constructed to address music use during labour specifically and to add strength of feeling to their narrative responses. Fifteen statements were used in the scale.

Volunteer participants were requested from two public access childbirth prenatal classes at the City of Winnipeg. Ten informants volunteered and signed consent forms along with their spouses. All six participants in the study were married women between 21 - 40 years of age and employed. All had at least some university education. Four informants delivered vaginally at city hospitals; two had home births and all had healthy newborns and postpartum periods.

Participants were interviewed in a 60 - 90 minute telephone taped interview arranged at the subject's convenience.

Transcribed material was analyzed using content analysis; a common method for the analysis of qualitative data. Content analysis is a process which involves steps for coding, classifying categories and sorting data along specific guidelines. Quantifying content analytic materials was completed including the responses from the Lickert scale.

A comprehensive discussion of the research findings, described and contained in Chapter Four, follows.

Discussion of Findings

This explorative study was developed to investigate the experience of women who use music during labour as a coping strategy.

Discussion of Labour Experience Generally

Themes: Positive, Negative and Neutral

The women were invited to tell about their labour generally. Cue words were used to encourage the conversation to be comprehensive. These women spoke about many different aspects of the labour experience, represented by 18 concept areas, which they quickly followed with words to describe how these were perceived. Either it was seen as positive, for example "I liked that . . . it was good" or they perceived things as negative, for example, "I hated that . . . it really bugged me . . . ticked me off." Occasionally, the women viewed a concept area as both, for example, "She rubbed my back, it was nice . . . but truthfully I don't like to be touched." It was striking that the majority of all the informants descriptions were quickly followed by a statement of positive or negative reflection. The women seemed to easily classify the concept areas consistently in this manner. Therefore, the themes for this study emerged from the narratives. There were 18 concept areas which were identified through analysis of the narratives. The descriptions of events, situations, staff, ideas, feelings, etc., fit into one or many of the stated concept areas. The informants were very definite about what they liked and did not like. The women consistently identified negative perceptions more frequently

than positive perceptions when discussing their labours. Only one woman did not. She used music during labour at a home birth and identified more positive than negative aspects of the birth experience.

Interestingly, all six women rarely mention the word "pain" directly in their discussions. Pain is referred to by statements of contractions described as: intense, overwhelming, strong, long, unbelievable, etc. Three of four women, who delivered in hospitals, had epidurals for anaesthesia during labour. The fourth woman wanted an epidural but had a narcotic (Demorol™) analgesic instead and found this unsatisfactory. It was difficult to remain aware that these three women had epidurals as the narratives describe someone experiencing the pain of labour. It did not read as if they were free of pain and there appeared to be no difference in their narratives concerning pain compared to the women who did not receive epidural anaesthesia.

Other salient elements may be instrumental in the complex perception of pain other than from purely a physiological source. This is supported by Melzack (1975) and Livingston (1953) who describe pain as having a complex nature which receives influence by suggestion, attention, anticipation, anxiety and past experiences of the individuals. Beecher (1959), and Hunter and Phillips (1981) agree that there are two components to pain: (a) a physical and a sensory component which relates to type and intensity of sensation and (b) an affective component which has a suffering or emotional reactive component involving factors that may influence the affective pain experience.

The informants in this study were similar in the identification of positive perceptions which concerned the following: the importance of the environment — especially the desire for a birthing room, the need for

information about progress and procedures — to be communicated regularly, and the need to know about the infant's health. These factors were universally important to all the women, including the women who had experienced home births. Positive statements were made when informants were given information and feedback by staff concerning events and progress in an ongoing regular manner. Supportive research on coping identifies five modes of coping: information seeking, direct action, inhibition of action, intrapsychic processes, and turning to others for support (Cohen & Lazarus, 1979). This may explain, in part, the key positive element of having their spouse present as a major coping asset by all the women.

Therefore, when information was provided, statements included: "The nurse checked me out and told me I was 2 cm dilated . . . I thought great . . . that was pretty good." Conversely, when information was not forthcoming, negative remarks were stated: "We had to tell them to do another exam . . . they hadn't checked since we arrived . . . that was the worst!" It was also important for informants to be allowed control, or at least a perception of control, over aspects of the labour which were perceived as important. Statements included, "They wouldn't let me go to the bathroom . . . said I couldn't . . . told me I had to have this equipment on at all times . . . we asked for analgesia but we were told it was too early - then it was too late."

Other areas which were important to all informants was a perception of being cared about, looked after, respected, treated with kindness, treated with dignity; therefore the importance of at least one person who would care was of paramount significance — their spouse. These concepts were stated using a variety of terms but retained the essence of caring; they were perceived as

positive and important. The research supports the importance of these concept areas during labour.

Roberts (1983) identifies many variables associated with women's perceptions of the childbearing event: sense of control, a wanted pregnancy, self confidence, presence of husband and/or support, presence of supportive caregivers, and attendance at childbirth classes. Many of these concepts are understandable as they may represent basic human requirements which may increase during the period of stress that labour stimulates (Aguilera & Messick, 1982; Roach, 1987). Other positive concept areas which were discussed were very individual in nature.

Negative themes emerged from the narratives. There were many more negative concept areas recounted in the general discussion of labour by informants than positive. Common concept areas perceived as negative include: dissatisfaction with the lack of continuity of care from a single caregiver (not able to develop a sense of trust), nurses and doctors, for example "We were left alone . . . we had 5 - 6 nurses . . . it was like a revolving door . . . the doctor never showed up until the last minute before the delivery . . . they peeked in at the monitor once in a while."

When informants perceived that their individual unique expectations or ideas about labour were not accurate; or they perceived a discrepancy between what they expected to happen and what actually happened, they were upset and negative. This was true for the two women who delivered during home births. An example of this perception is stated by informants: "It was awful . . . they didn't listen to us . . . we thought that they would give us what we needed . . . I never expected that labour would last so long and be so painful

. . . no one would check me and tell me how I was doing . . . how much longer it would be." The importance of these factors during labour, especially information giving, is supportive of previously cited research by Roberts (1983).

Other negative concept areas reflected by informants were circumstantial and individually varied; unique to the individual woman and her desires, for example one woman really did not think the ice machine should be down the hall — this was perceived as very negative; as well another woman did not like the picture in her room; one woman wanted quiet; another used the noise and distraction around the nurse's desk as distraction from labour pain. These negative themes may relate to negative perceptions of labour and of non-coping.

Neutral concept areas were identified with ambiguous statements; they were neither positive nor negative but unique. It may be that the informants had not made up their minds or withheld judgement.

Positive and negative concept areas identified by all informants are areas supported in the literature previously. Previous research reinforces the common positive and negative themes identified to be influential of labour experience perceptions. These include: control, presence of significant other, support from staff, information, communication of procedures and progress. Whether or not infant health as an outcome is of similar importance is probable but unclear. There was one informant and spouse who were extremely enthusiastic participants in the study but would not continue with the interview process when the infant was diagnosed with a problem. Cohen (1984) states that the outcome domain cannot be overestimated when related to

perceptions of coping.

Four of six informants listed information and the environment (birthing room) consistently when asked what would improve labour generally. Five of six informants expressed more negative concept areas (reflection of a negative perception or theme) than positive concept areas (reflection of a positive perception or theme). This seemed to be in contrast to general statements made which described themselves as having coped with labour.

Coping and Non-Coping Categories

Discussion of Coping With Labour

Generally, when informants discussed this interview guide question, they listed many more items overall and more positive than negative coping strategies. The women seemed very definite about what strategies might work for them. When the informants "knew" what would function as a coping strategy — it seemed to (possibly a self-fulfilling prophecy). They were willing to try other coping strategies which they quickly discarded if found to be ineffective.

Other coping strategies surprisingly, seemed to appear without prior planning — behaviours used in the past and forgotten. For example, one woman stated: "I was rubbing my thighs, it was comforting . . . I haven't done that since I was a child," and another woman stated: "I tried the breathing the way I was taught . . . but it wasn't right . . . so I just did deep breathing . . . go with the flow . . . that worked much better." Almost all the women stated that the breathing worked when they adapted it to their needs.

Another woman responded: "I knew if I could get to that spot, internally . . . a special place inside me . . . I would be O.K., I would use that strength."

Significant was that during labour informants used many of the same techniques identified for coping with past painful events. When each informant's responses for coping with labour pain were compared with those coping techniques stated for past pain experiences, there were at least two and at most five techniques in common. For example, one informant mentioned how she coped with previous painful events: "Cry and talk a lot to people who are close to me . . . want my husband around not necessarily in same room . . . I often have a bath and go off to bed and curl up." Recalling coping used during labour, this informant states: "The bath was the most helpful thing I did . . . it was great . . . to have my husband and the people who loved me around — near me . . . I kind of used speaking — noises when I had contractions which helped me think I was getting rid of the pain."

All informants related the importance of having their spouse present even if the spouses' behaviours were not seen as assisting with coping. The spousal presence was perceived as of paramount importance for each woman's coping. This is supported in the research (Roberts, 1983).

None of these participants practised any of the labour coping strategies taught at the prenatal education classes. Only one woman thought that maybe she would practice next time, the others didn't seen to perceive practising as an important aspect of coping with their current labour or with future labours. All of the informants used breathing as a coping strategy; however, they used adapted breathing styles, for example, "The breathing was out of sync with what I felt I needed to . . . so I changed it and used deep long slow breathing

. . . was much better." New research suggests that complex breathing patterns are too complicated and difficult for women to remember. Instead, paced breathing or patterned breathing is probably easier to learn, use and remember (Reeder et al., 1992).

Although all but one of the informants stated many more negative concept areas than positive ones regarding their labour, this did not deter the women from perceiving and deciding how they coped with labour. Informants generally were positive about the numbers of techniques used and in reviewing their coping ability and performance in a positive light. All but one of the women made a statement of overall coping perception which may be interpreted as positive, for example, "I dealt with the pain inside myself . . . and I think I coped very well . . . and there was never a time when I didn't think I could handle the pain."

It appears that women who may describe many negative concept areas of their labour and many negative coping strategies can remain positive in their regard for their own ability and/or performance of coping. Women may be able to separate their own view of themselves as having coped with labour amid negative perceptions of labour.

Elucidation of these findings may be provided by the research. Literature concerned with coping suggests a theoretical framework which relates to the ways an individual copes with stressful experiences and reacts. Cohen (1984) describes cognitive appraisal which mediates psychologically between the person and the environment. Two types are defined: primary appraisal — the significance of the event; and secondary appraisal — evaluation of personal coping resources and options.

It is suggested that appraisal may change continuously from moment to moment and is influenced by situational and personal factors (Lazarus, 1966).

Perhaps the informants may have evaluated in the manner described: able to appraise their own personal coping, resources, options, etc., separately from their evaluation of the environment or the event circumstances. Therefore, participants may view the birth experience with many negative concept areas and still view their own coping abilities/performance as positive. It may be that the women view many of the childbirth events as beyond their control and direct their coping energies toward themselves, their resources, and to others who are significant. The sixth informant who viewed labour positively and coping positively had a home birth.

Discussion of Music Use During Labour

Of the informants who intended to use music during labour, five of six did so. All five found some benefit. This is supported by the Lickert scale. It is not clear how it was helpful; or if music served the purposes for all women; or in a typical similar manner or through the same processes. It is clear, however, that these women found music helpful as a coping strategy during labour. The music was used for varying time periods; from 50 minutes to 10 hours; most used music during early (latent) phase labour; one woman used it for a short period in active labour. All the informants used the music at times for continuous periods and at other times intermittently. No one used music continuously without stopping at all. These women were all familiar with the equipment; all with the Walkman; a few with the Discman; most used

the equipment that they were familiar with. There was no difference between women who used headphones and those who used speakers concerning the helpfulness of music use during labour. Three of the four women who delivered in the hospital used the headphones. The one who did not use headphones did not use music at all (T). Of the women who delivered at home, one used music via speakers while the other used music via headphones periodically. One common factor among the women who used headphones was that they had used music by headphones in the past and were familiar with the equipment. Informants varied in their opinions of the helpfulness of having both the music and the equipment provided. This rating varied on the Lickert scale with individual preference. Three women preferred to provide music and equipment themselves and three others felt it was important to have these provided.

Descriptions of music use during labour contain some similar responses and some which vary; they are individual and unique. Consensus was found in the following areas: personal preference music, music use early labour, and use of familiar music. These were important key elements whether women found music use helpful during labour. As well, the women all agreed that it is important to increase the number of selections available in the preferred category. The Lickert scale findings provide strength of importance; all five rate the importance of music type/category as agree or strongly agree. This supports the importance of personal preference music as well.

Positive statements about how music use during labour helped coping include the following terms: relaxation, distraction, atmosphere, imagery, music made the abnormal event of labour appear normal, breathing, peaceful,

calming, empowering, familiar, cushions against other sounds, protection feeling, and created memories of my daughter. The purposes seemed as varied as the individual informant.

The strength of agreement concerning the previous statements about positive aspects of music use during labour is demonstrated by the Lickert scale responses. These results strengthen the narrative analysis. Important aspects of agreement include: type/category of music is important, music use during early labour is helpful, music use for active/late phase labour is non-helpful, music should be available for labour, music use should be recommended, and also would use music for future labours and general enjoyment of music. (One woman circled strong disagreement here but it is inconsistent and contradictory with her narrative which describes the helpfulness of music us as well as her desire to use music for a future labour. It appears that there has been some misunderstanding about this statement.)

Informants mentioned very few negative factors about music use during labour. One woman mentioned that while she was able to remain mobile in the halls while using the equipment with her husband, she felt conspicuous and a little embarrassed — the staff were very interested and paid a lot of attention to them and what they were doing. Another woman didn't like the volume of selections available in all categories because it took more time to find familiar music. This was described as negative. It took her husband's attention away from her too long.

There was a difficulty described by another informant. She said there was no interference with communication with the staff because they gestured to her and she noticed their appearance in the room, etc., but with her

husband, she often found herself saying: "What, What?" until they worked out a signalling system. Another woman stated the importance of turning the volume down before putting on the headphones.

Four participants used the equipment provided and the other woman used her own. There appeared to be satisfaction with whatever equipment was used. All informants had personal preference about headphone use or not, and type of headphone style desired. All informants had their spouses take on the responsibility for all of the equipment's functioning as well as finding the selection of music.

Every informant who used music during labour and found it helpful also had used music in the past during painful experiences. As with other coping techniques that women used during labour, music is possibly a familiar way of coping or one of a few preferred methods of coping. This suggests that not only can women easily identify some general coping techniques which will probably help; they may have realized the possible helpfulness of music use for coping in the same manner for similar reasons. This thought is strengthened when we consider T who identified the need for quiet with painful events.

It is interesting to note also, that all of the informants who found music use helpful for labour have all used music, with or without headphones, for some purpose previously, for example, atmosphere to set a mood, running, pain, cue breathing, and for exercise. They have also used music at least a few times a week in their homes or cars.

Another important factor that is similar for all informants and may influence a woman's decision to use music during labour is their past history

of music. Every informant has had formal musical instrument lessons and choir experience. One of these women plays an instrument with natural talent. The woman who did not enjoy/like the lessons was T who did not use music during labour.

The spouses of all the informants who used music during labour all signed consent forms, and have a keen interest in music generally, music equipment and music related activities. Four of the six men also play a musical instrument. These factors may have had influence on: the informants decisions to volunteer for this research; their perception of the general birth experience; as well as on unknown factors. These men also operated the equipment and selected the music that the women requested. The spouses of the informants functioned in a vital role in this research study. The spousal support may be an important variable affecting the results; especially influencing how the women perceived the helpfulness of music use during labour.

The research on music as a coping strategy addresses the descriptions from the informants narratives. The findings generated from the narratives and the Lickert scale suggest evidence that music use as a strategy is directed through the central influences of the cognitive-evaluation system (CES). Music may have access through this main avenue using both the motivational affective system (MAS) — feelings, memories, and past experiences within a relaxation response; and the cognitive evaluative system (CES) — knowledge, attention, and evaluation of situation within cognitive strategies (Hibbers & Gennaro, 1986).

Statements by all the informants mention familiar music as one of the

most important aspects of music use during labour. Similarities among all informants who find music use during labour helpful include past painful experiences of music use as a coping strategy. Many informants verbalized how music assisted with visualization and stimulation of memories of familiar people, and/or of familiar feelings. As well, participants mention the use of music as a cuing strategy for breathing and by assisting with concentration. Almost all informants mentioned that music during labour helped their relaxation ability.

Bonny (1978) states that music can move through the auditory cortex directly to the centre of emotional responses and may activate the flow of stored memory so that left and right hemispheres work in harmony rather than conflict. The women in these case findings frequently mention the importance of using not only preferred music but familiar music. Their statements reflected a desire to find and use music with familiar sounds and words. This seemed to assist stimulation of specific memory of feelings and emotions.

Informants responses and their formal musical education may suggest that at least two listening styles were operationalized during their childbirth experience. Descriptions of how the informants perceived the music include: atmosphere, setting a mood, cushioning sound, and making things appear normal. These describe a passive-attentive style of listening. Other responses include: music I know, music that is familiar, music and songs where I know the words, music that stimulates a memory of previous listening, and like to have a variety of music that I know. This may represent a semi-analytical style that was being used (Di Franco, 1988).

According to McCaffrey (1990), earphones may encourage attention-

focusing in the cognitive-evaluative system (CES). This may account for the differences in the individual preference to use or not use headphones. Those informants who coped by using music as an attention-focusing strategy may have preferred headphone use over speaker use.

Unquestionably, the participants desired and used their own personal preference of music use during labour; it is uncertain if the informants would have agreed to participate had choice of music been denied or restricted.

All informants agreed that music use was the most helpful for early labour and the least helpful for late labour. It seems reasonable to suggest that because the research on childbirth pain rating is one of the most extreme forms of pain (Melzack, 1983); informants do not find music helpful to block the sensory-discriminative system during active and late phase labour. The women in this study described their labour and coping perceptions through memory recall after the event. Descriptions of the coping process which were utilized, collected during labour, may vary significantly from their perceptions of this process once the extreme pain was over in the postpartum period. Therefore, it remains that there are difficulties in trying to assess coping as a process in naturalistic settings (Cohen & Lazarus, 1979).

Conceptual Framework

The conceptual framework used as a foundation and perspective was Roy's Adaptation Model. According to Andrews and Roy (1986), humans are biopsychosocial adaptive systems who cope with environmental change through the process of adaptation. There are four modes which provide

mechanisms for coping with environmental stimuli and change. Childbearing is one of the most challenging events in a woman's life requiring adaptation; the labour process may stress all her coping ability and resources either innate or acquired. This study's purpose was to explore music use as a coping strategy for women during labour.

Through the use of an interview guide and a Lickert scale, women shared their experiences using music during labour. The informants were asked to share their perceptions of labour generally, their perceptions of coping with labour and specifically their experience using music as a coping strategy. Information that was provided was analyzed to increase understanding of how women perceived events, the coping strategies used, and how they adapted to this event.

The informants narratives generated an awareness that the adaptation process utilized prior experiences with painful events, prior coping strategies, support from a significant person (the spouse), and childbirth education. Although all but one informant viewed the labour generally with more negative concept areas perceived than positive; an overall statement of coping with labour was made. It seems that the adaptations needed to cope with childbirth were drawn heavily from the personal self and from significant others. Music use may have increased the personal self resources.

Research from crisis theory identifies three balancing factors that determine whether a stressful event will end in crisis: (a) perception of event, (b) available situational supports, and (c) available coping mechanisms. A deficit in any of these factors during a stressful period may result in disequilibrium and eventual crisis (Aguilera, & Messick, 1982).

Support for an individual's adaptation and coping through any of these balancing factors may be an effective avenue through which the mechanism of music use during labour functions.

Modes of coping identified by Cohen (1984) include: information seeking, direct action, inhibition of action, intrapsychic processes, and turning to others for support.

Informants who were confronted with negative perception of events beyond their control (labour) may select other areas from which to draw support to cope and/or adapt.

All informants stated that the most important aspect of their ability to cope was the presence of their spouse. Music use during labour may have increased their ability to cope and adapt to early labour by strengthening a resource and skill that was already a familiar and successful one for them previously.

Therefore, for those informants who have had previous experience using music as a coping strategy for painful circumstances, music use may be of benefit to strengthen adaptation ability for the labour process experience.

Childbirth Education

Childbirth education is a dynamic process in which expectant parents learn cognitive information about physical and emotional aspects of pregnancy, early parenting, coping skills, and labour support techniques (Crowe & von Baeyer, 1989; Roberts, 1983). Prenatal classes were not referred to in the informants narratives except when breathing techniques were discussed. The

participants viewed this coping strategy as valuable especially when they adapted the breathing technique to better suit their personal needs or style.

The literature supports the idea that women are more satisfied with the childbirth experience following education classes if they take on a participant, decision-making role, set their own goals, and believe they have some control over events during labour (Crowe & von Baeyer, 1989).

This study has found that informants frequently mention the need to feel in control; the need for communication; the need to have staff consistently available; and the need for staff to listen to their needs and requirements necessary for coping.

A woman's confidence level following childbirth education classes influences her perception of the experience as either positive or negative (Crowe & von Baeyer, 1989). As well, a woman's self-efficacy may be predictive of coping (Lowe, 1991). Lowe's research using social learning theory as a foundation supports the need for childbirth education tailored to individual variations in the personality and skills that each woman brings to her pregnancy experience. Like the women in this study, it is suggested that women are unique individuals who are quite definite about what they know about themselves; what they like and do not like.

The childbirth preparation classes that the study's informants attended were not taught by health care professionals, but rather, by interested lay women. Informants spoke of circumstances, concept areas, which were described as negative concerning the hospital, nurses, physicians, routines and procedures. Complaints centred around lack of or decreased communication and information. Of the informants who delivered at home, one had no

complaints about the environment, the other woman complained about lack of information about length of labour and the labour process which was affecting her ability to cope. Perceptions of coping and control may be increased with more readily available information about these areas from a variety of health care personnel. This may provide a more realistic reflection of the childbirth experience in the hospital setting.

It may be important for childbirth classes to address individual differences with an exercise or tool designed to assist in the identification of familiar prior coping techniques (including music use) as well as successful comfort measures used previously. This may generate unique information and increase self-awareness. Measures and strategies to improve self-confidence and self-efficacy during the childbirth classes could be a worthwhile endeavour as this is associated with positive perceptions of the birth experience.

It is important to teach informants and their spouses to adapt any and all of the coping strategies that they perceive as necessary during labour and to emphasize the possibility that breathing techniques, as well, may need to be adapted to their own needs as they listen and receive feedback from their own bodies, for example to set their own rhythms. These couples need to have basic information about what to expect, and instructors regularly should initiate reality checks throughout the class schedules. Couples may benefit from suggestions to practise utilization of potential coping strategies in a variety of settings and circumstances. Clarification should also take place regarding expectations of the roles of all persons involved in the labour experience.

This study's findings support the research concerning the importance of

the presence of the spouse during labour as a key support for a woman's coping ability. This finding has implications for the special needs of single women experiencing childbirth; as well as the adolescent female. Therefore, selection of a labour support is not without major implications for the woman's coping ability. Those persons best suited as labour companions/ support is unknown and this becomes an interesting complex question.

Implications for Practice

The childbirth areas of hospitals have changed in many ways, including the physical structures to meet consumer demands and to provide an improved experience. However, this study's findings agree with previous research results that suggest that there is still dissatisfaction and negative perceptions associated with the labour experience generally. Information, knowledge and communication were not sufficient to promote a labouring woman's coping ability. Nurses and other significant staff need to be cognizant of the importance that these factors have on a woman's perceptions of the experience. These perceptions may be remembered and further influence future labours. Home births may be viewed as a feasible alternative to a negative hospital experience. This situation may have dire consequences. Understanding that some women seem to have positive perceptions of their own coping abilities, nurses can take advantage of this by encouraging and supporting her unique attempts and skills to cope. Nurses can remind women to listen to their own bodies and adapt their techniques accordingly as well as facilitating these adaptations.

There needs to be sensitive attention paid to the negative feelings which are present when women discuss the "revolving door" staff dilemma. It is a difficult problem from an administrative-staffing perspective and takes on greater significance when women do not have spousal support in labour. Theoretically, it is difficult, if not impossible, to develop a helping or trust relationship with many staff members, especially under the stress of labour. It should be noted here that nurses who attempt to practice their profession in an efficient research based manner are often constrained by a variety of factors, for example, shift scheduling, availability of staff, variety of staff experience and competence level, relief for three breaks/shift, assignment alterations, ratio of staff to clients, busyness of the unit area, complexity and risk of client situations.

It appears that another important aspect identified as negative by informants is the perception that staff's personal comments are inappropriate, for example "Physician comment that he'd been up for 36 hours . . . I didn't have confidence in him . . . he was not being appropriate to solicit sympathy from women in labour" and "nurses speaking together, close by, about personal events was bothersome."

Music use may be an appropriate technique for nurses to suggest for women in early labour who have used music previously to assist with coping, especially women who have had formal music education and are familiar with the equipment. Women should be encouraged to bring along their personal preference music to the hospital. It may be important for nurses to understand that not only might it not be beneficial to just turn on the radio or any music for labouring women; it may be detrimental to a woman's coping ability. A

woman's personal history and phase of labour appear to be critical factors concerning music as a coping strategy. Another unanticipated finding from all the informants was the desire and request to use the music and equipment during the postpartum period, which many did.

Future Research

Areas identified for possible future investigation are suggested:

1. Research would be useful to explore the labour experience having identified previous coping techniques and using encouragement, support and practice during prenatal education classes to support these selected techniques.

2. It may be worthwhile to repeat this study with a larger sample of informants with a history of music use for coping with prior painful experiences as informant selection criteria.

3. It would be interesting research to assess the level of a woman's confidence or self-efficacy before and after childbirth education classes. Would the labour experience be viewed more positively as confidence levels increase?

4. Also useful would be research to further explore similarities/ differences in the coping behaviours and the individuals who find music use during labour helpful and those who do not.

5. Research is needed to investigate the importance of outcome on perception of coping during the labour experience.

6. An interesting area for research would involve childbirth education classes assessing for previous coping techniques used for past painful events as

well as individual comfort measures and allowing a longer session of classes for self awareness and practice. Evaluation of the success of these measures during labour would provide valuable information.

7. It is also necessary to investigate prenatal classes and describe the similarities and differences in course curriculum content as well as the similarities and differences among the instructors.

8. It would be interesting to repeat this study using a variety of socioeconomic education/cultural backgrounds.

Conclusion

For the women in this study, childbirth was experienced with many more negative perceptions than positive perceptions. Only one woman, who delivered at home, perceived her labour with more positive than negative perceptions. These perceptions represent the positive, negative and neutral themes of the research. The women's perceptions were represented from among the 18 concept areas which were outlined and generated from the narratives. The results, at times, represented a less than ideal childbirth experience.

However, encouragement can be found in the findings that demonstrated how labouring women recount the numbers and strength of belief in their own coping resources and ability. The statements gleaned from the narratives suggest an overall perception that the women coped with labour. These women seem to place themselves in the coping category rather than the non-coping category.

Women who have used music from previous painful experiences seem to find music use during labour as a helpful coping strategy for early (latent) phase labour. These informants are familiar with the equipment and have used this type of equipment in the past. The use of personal preference music (especially familiar music) was found to be the most helpful during labour. Speakers and headphones were used and found to be satisfactory based on individual preference. There was general agreement that music use should be recommended and also made available for labouring women. All of these informants had spouses who keenly supported their wife's use of music during labour. The men were also instrumental in facilitating the actual operation of the equipment. The participants were unanimous in their agreement and desire to use music in the postpartum period.

The purpose of this study was to explore and describe the experiences of women who used music during labour as a coping strategy. Their labour experiences have been explored generally as well as specifically for the purpose of understanding the use of a music as a coping strategy.

Findings have increased understanding of the childbirth experience and women's perceptions while using music as a coping strategy during labour. Prior research from a variety of disciplines has been reviewed and described to provide a broad theoretical base for all sections of the study.

Suggestions and implications for further research and nursing practice as well as for childbirth education have been listed. The conceptual framework has been utilized as a foundation for this study's design, implementation and findings.

> There is still much to know and understand about which coping strategies are most beneficial, for whom and under what situations . . . the key question may not be which coping strategies an individual uses but rather how many are in his/her repertoire or how flexible the person is in employing different strategies. . . . We may be able to help people cope better, but to do so requires taking into account the types of persons who might benefit from a strategy and the types of situations in which that strategy might be useful. (Cohen, 1984, p. 269)

From the research findings the unique woman, her unique history, and her unique childbirth experience is of paramount importance.

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Appendix A

Interview Guide

The interview process with the volunteer informants will begin with a general conversational exchange about the childbirth experience generally or about the infant. This may assist in setting an open atmosphere for sharing thoughts and feelings.

As you know _____, I am interested in understanding more about the experience of labour when using music as a coping method.

To start, _____,

1. Can you tell me about your labour?

Investigator cue words:

- length
- pain
- analgesics/anaesthetics
- memory
- interventions
- room-bed-pictures-sheets-pillows-noise-lights-window-temperature
- doctor
- nurses
- equipment
- medical interventions
- other supports
- support person
- expectations
- fear/emotions
- nervous
- hungry/thirsty
- other discomforts
- other stressors
- other

2. Now, _____, can you tell me about coping with your labour?

Investigator cue words:

- breathing
- support person
- effleurage
- distraction
- massage
- T.V.
- talking
- relaxation
- other support
- concentration
- imagery
- home/hospital
- reading
- puzzles/games

3. What helped most/least?

Investigator cue words:

analgesic/anaesthesia
use heat/cold
back rub
music
shower/bath
others
nothing
pressure
other
past/previous coping strategies/ behaviours
support person

Thank you _____, for sharing with me.

4. Could you identify anything that would have improved your labour experience?

5. Now, _____, can you tell me about your experience with music use during your labour?

Investigator cue words:

staff response
time-length
pattern use
type/categories used
intensity/loudness
rhythm - fast/slow
number of tapes used
use by support person
support person response
help with atmosphere
help with distraction
help with isolation/withdrawal
communication
used when during labour
helped with breathing technique
helped with cueing breathing techniques
helped with pacing breathing
help with relaxation
helped with concentration
help with imagery/pleasant thoughts

6. _____, will you please discuss the equipment provided?

Investigator cue words:

headphones used	ease of use
length of headphone cord	allow position change
familiarity with equipment	past use of equipment

7. _____, is there anything about music use during labour that may improve its helpfulness?

8. We have discussed your labour experience _____, now is there anything else you would like to speak about or add to our conversation.

9. If you were to have another pregnancy and labour experience, what might you change?

10. _____, I would like you to talk to me now about your past experiences with music.

Investigator cue words:

like music	own music audiotapes/discs
formal music training	use music to relax
instrument education	use music for pleasure
choir experience	music at events
use music past	history of music us in family
frequent use music - how	childhood music experiences
play instrument	music for singing
listen to music	music in car
music for dancing	own music equipment/type
attend music concerts	how do you listen to music
own/listen with headphones	listen with a purpose

Thank you _____ for discussing this with me. Is there anything about this subject that you would like to add?

11. Can you remember other painful experiences in your life _____? If yes, can you share ways/methods/ behaviours you may have used to help you cope?

Thank you again _____. Your openness is appreciated.

The interview guide will be followed when feasibly possible with each informant. However, there may be circumstances during the interview when the success of a participant's open expression necessitates some deviation in the use/and or order of the guide questions.

Appendix B

Lickert Scale

Please rate the following statements according to the scale provided. Circle Strongly Agree if you strongly agree with the statement and Uncertain if you are uncertain what you think/feel about the statement. Thank you.

1. Music use during labour is helpful.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

2. Type/category of music use during labour is important.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

3. Loudness/intensity of music use during labour is important.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

4. Rhythm, fast/slow tempo of music use during labour is important.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

5. Music use during labour is helpful for early labour (beginning hours of labour).

Strongly Agree Agree Uncertain Disagree Disagree Strongly

6. Music use during labour is helpful for active labour (the middle of labour).

Strongly Agree Agree Uncertain Disagree Disagree Strongly

7. Music use during labour is helpful for late/transition labour (1 to 2 hours before birth).

Strongly Agree Agree Uncertain Disagree Disagree Strongly

8. Music use during labour is helpful when used along with other methods of coping. Some other ways of coping are breathing, walking, focal point, medication.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

9. Music use during labour is helpful when childbirth coping methods are practised using music.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

10. Music use during labour using headphones is helpful.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

11. Music use during labour should be made available.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

12. If I were to have another labour, I would use music.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

13. Generally, I enjoy music.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

14. Having music and equipment provided was important.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

15. Music use during labour should be recommended.

Strongly Agree Agree Uncertain Disagree Disagree Strongly

Appendix C

Demographic Information

Please answer the following questions. You may choose not to answer one or all of them.

1. Age

   a) 16 - 20 _____ b) 21 - 30 _____
   c) 31 - 40 _____ d) 41+ _____

2. Education

   a) Some high school _____
   b) High school grad _____
   c) Some college/vocational/technical diploma _____
   d) College diploma _____
   e) Some university _____
   f) University degree _____
   g) Other _____

3. Occupation/job (please specify)

   a) _____

   b) Full time _____ c) Part Time _____

4. Marital Status

   a) Single _____ b) Married/common law _____
   c) Separated _____ d) Divorced _____
   e) Widowed _____

5. Number of Pregnancies

   a) First _____ b) Second _____
   c) Third _____ d) Four or more _____

6. Number of Labours

   a) First _____ b) Second _____
   c) Third _____ d) Four or more _____

Appendix D

Request for Volunteers
(To be read by childbirth educator)

This letter is a request for volunteers for a research study to be implemented during the summer months of 1992. It is a study to assist in understanding the experience of music-use as a coping method during the labour and delivery event. The investigator is Diane Clare who is a registered nurse and has a baccalaureate degree in nursing and has completed the course work for the degree of Master of Education (Health); this study will complete the research requirements under the advisorship of Dr. Dexter Harvey at the University of Manitoba.

Diane has asked me to read this to the first childbirth education class of this session to explain a little about the study. The research involves using music via headphones during labour. The study seeks to discover more about the possible helpfulness and experience of music use during labour.

Participation in the study requires that music is used during labour and agreement is made to have a 60 to 90 minute interview with the investigator in the post partum period to be conducted via the telephone.

Information sheets are available to provide more detail about the study. Those persons who are interested in volunteering can take the information home. Diane will be present at one of the classes later in the course, to answer questions, clarify information and speak with volunteers.

Thank you for your attention; Diane says she is looking forward to meeting everyone.

Appendix E

Volunteer Participants Information Sheet

- The study involves the use of personal preference music (whatever you like) via headphones during labour.

- Music use during labour may be a helpful coping method for labour alone and/or when used with other childbirth coping methods (analgesics, breathing techniques).

- Music use during labour may be more helpful as a coping method for your labour if you:
    1. Become familiar with the equipment.
    2. Select music that works for you.
    3. Allow the music to cue your breathing relaxation.

- Music use during labour has no known risks when used at 85 decibels or less (conversation levels are 50 decibels).

- Hospital personnel are becoming aware of the use of music as a coping method for labouring women since many childbirth education classes encourage and promote the use of music. Music use during labour is your choice.

- All hospitals in the City of Winnipeg allow the use of personal radios and tape players which are battery-operated; only plug-in equipment needs to be evaluated by maintenance personnel before use in the hospital.

- Study participants are invited to use either tapes and discs provided or their own music during labour. Personal favourites and cultural alternatives are encouraged.

- A selection from five music categories will be available on audiotapes or compact discs; each category of music will have a variety of musical beat, rhythm and intensity. The five categories include: classical, contemporary, easy listening, rock, and country.

- A Sony Walkman and Discman will be available for the labour experience; extra batteries are included.

- A variety of Sony headphone styles will be available for use during labour to allow for personal comfort and preference.

- The audio equipment will be adapted for use during labour with a dual headphone jack to enable the support person to listen to music along with the study participant.

- Music use during labour can be for as short or as long a period of time as desired; intermittent music use during labour may be helpful.

- Although this study is concerned with music use during the labour period, volunteers are welcome to use the music and equipment during the birth, the recovery period and/or the early post partum period if desired.

- Participants will have access to the equipment and music until the day following delivery when the investigator will pick up the equipment at the hospital.

- Participants or their support person will be given a music use recording sheet which is simple to use and involves writing down the audiotape or disc number used or specific music used and the time it was used; recording sheets are included in the equipment case. Leave the sheet in the case when finished.

- Participants can call Diane Clare at 889-3560 when they are in labour and the equipment and music will be sent to them at the hospital in a suitcase via a courier. There is no cost to the participant.

- Participants will not be held responsible for damage or theft of music and equipment.

- Study participants will be contacted in the post partum period by the investigator, Diane Clare, to establish a 60 to 90 minute telephone interview at a time convenient to the participant. The interview can be done in two sessions as needed.

- Study participants can request a summary of the study's findings when completed by filling out a Request for Study Results form available from Diane Clare.

- Consent forms for volunteer participants will be available at your childbirth education class.

- Diane Clare will be present to discuss the study and to sign the consent forms at one of your childbirth education classes.

Appendix F

Inclusion criteria for research study informants.

1. Pregnant women who experience labour and delivery at 38 weeks gestation or greater.

2. Pregnant women who will have a term pregnancy (38 - 42 weeks) during the research data collection period of June, July and August, 1992.

3. Women who will be able to read and comprehend English.

Exclusion criteria for research study informants.

1. Pregnant women who have an elective or emergency caesarean section delivery.

2. Pregnant women who experience fetal distress, infant morbidity and mortality during their childbirth experience.

3. Pregnant women who have a labour support person who does not desire to participate in the research study.

4. Women who are not able to read and comprehend English.

Appendix G

Letter of Confirmation to Childbirth Educator

Diane Clare

632-2269 (office)

April 22, 1992

Prenatal Lamaze Classes
Kathy Cordy
167 Bedson Street
Winnipeg, Manitoba R3K 1P9
837-1258

Dear Kathy:

This letter's purpose is to thank you for allowing access to your childbirth education class participants.

As I stated in our telephone conversation, my research study involves investigating the experiences of women who have used music during labour as an adjunct coping strategy to any and all other childbirth education coping techniques.

I have included the Request for Volunteers sheet to be read by you at the first childbirth education class as well as Volunteer Information Sheets to be given to interested persons.

Unless otherwise instructed, I will attend one class of the childbirth education series which starts on May 13, 1992. I will speak with class participants for a 5 to 10 minute period at the end of the class. I will telephone in advance to arrange the date.

Yours sincerely,

Diane Clare

Diane Clare

052-2269 (office)

April 22, 1992

Linda Plenart, 774-2758
Linda Urich, Program Director, 475-1865
Manitoba Association for Childbirth and Family
327 Pembina Highway
Winnipeg, Manitoba
R3L 2E3

Dear Linda:

This letter's purpose is to thank you for allowing access to your childbirth education class participants.

As I stated in our telephone conversation, my research study involves investigating the experiences of women who have used music during labour as an adjunct coping strategy to any and all other childbirth education coping techniques.

I have included the Request for Volunteers sheet to be read by you at the first childbirth education class as well as Volunteer Information Sheets to be given to interested persons.

Unless otherwise instructed, I will attend one class of the childbirth education series which starts on May 12, 1992. I will speak with class participants for a 5 to 10 minute period at the end of the class. I will telephone in advance to arrange the date.

Yours sincerely,

Diane Clare

Appendix H

Consent Form

Women's Experiences Using Music as a Coping Strategy During Labour

This is to verify that I, _____, have been informed about a study concerning the experience of music-use as a coping method during labour to be used along with any and all other methods taught in childbirth education classes. Diane Clare, R.N. B.N., researcher, has informed me that participation in the study is voluntary and that I can refuse to answer any questions and/or withdraw from the study at any time without any penalty.

Diane Clare has discussed the study, explained details, has provided study information sheets and informed me that there is no known risk in participating. I understand that there is no financial benefit and that there may or may not be benefit with the use of music during labour as a coping method.

I have been informed that the transcribed audio tape data will use codes instead of names and that any identifying characteristics will be removed from the transcripts. The audio tapes will be erased immediately following transcription of the material.

My participation involves the coping method of music use during labour and a 60 to 90 minute audiotaped telephone interview with the investigator about the childbirth experience. Only a code will identify the audiotaped telephone interview and the transcribed material. All information will be kept confidential between Diane Clare and her advisor, Dr. Dexter Harvey. All material will be kept locked in a desk when not being used.

I have been given a copy of this consent form and may call Diane Clare at 889-3560 or Dr. Dexter Harvey at 474-9013, if there are any questions or concerns.

When the study is concluded, I will receive a summary of the study's findings by filling in the Request for Study Results form and mailing to Diane Clare

_____ _____
Participant's Signature Researcher's Signature
Date: _____ Date: _____
Telephone No. _____
(Optional)_____ Date: _____
Participant's Support Person Signature

Appendix I

Music Use Record Sheet

Country	Classical	Contemporary	Easy Listening	Rock	Other
Example: Tape #1 40 min.					

Other personal preference music brought by participants.

Type or Title					
No. min. in use					

Note: Please copy down the tape number used and the number of minutes of listening time; if the music is your personal material, please list the song title or the category of music and the number of minutes of listening time.

Thank you,
Diane Clare

Faculty of Education
ETHICS APPROVAL FORM

To be completed by the applicant:

Title of Study:

WOMEN'S EXPERIENCES USING MUSIC AS A COPING STRATEGY DURING LABOUR

Name of Principal Investigator(s) (please print):

DIANE E CLARE

Name of Thesis/Dissertation Advisor or Course Instructor (if Principal Investigator is a student) (please print):

DR. DEXTER HARVEY

I/We, the undersigned, agree to abide by the University of Manitoba's ethical standards and guidelines for research involving human subjects, and agree to carry out the study named above as described in the Ethics Review Application.

Signature of Thesis/Dissertation Advisor or Course Instructor (if required)

Signature(s) of Principal Investigator(s)

To be completed by the Research and Ethics Committee:

This is to certify that the Faculty of Education Research and Ethics Committee has reviewed the proposed study named above and has concluded that it conforms with the University of Manitoba's ethical standards and guidelines for research involving human subjects.

Name of Research and Ethics Committee Chairperson / Date

Signature of Research and Ethics Committee Chairperson

THE UNIVERSITY OF MANITOBA

FACULTY OF EDUCATION
Office of the Associate Dean

Winnipeg, Manitoba
Canada R3T 2N2
Telephone: (204) 474-8780
Fax: (204) 275-5962

June 16, 1992

Ms. Diane S. Clare

Dear Ms. Clare:

Thank you for sending me the revised letter of consent concerning the proposed research, "Women's experiences using music as a coping strategy during labour". I have reviewed the letter and am pleased to report that it conforms to the ethics policies and procedures of the Faculty. Accordingly, I have attached a copy of the signed ethics approval form.

Good luck with your research.

Yours truly,

Stan B. Straw, Ph.D.
Chair, Research and Ethics Committee

JCK/ew

Enc.

cc. Dexter Harvey, Advisor

Appendix K

Request for Study Results

To: Diane Clare

I would like a summary of the research study findings when the investigation is concluded. Please send the results to the address below.

Please print.

_____
Participant's Name

_____
Address

_____ _____
City Province

_____ _____
Postal Code Phone Number