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Adolescent Pregnancy and Loneliness

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This is to certify that the thesis prepared by Estelle M. Brodeur entitled Adolescent Pregnancy and Loneliness has been approved by her committee as satisfactory completion of the thesis requirement for the degree of Master of Science.

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ADOLESCENT PREGNANCY AND LONELINESS

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University

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ABSTRACT

ADOLESCENT PREGNANCY AND LONELINESS

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This descriptive study explored loneliness among pregnant adolescents in a southeastern metropolitan area. Numerous psychosocial variables of the special population of pregnant teens remain to be studied. One such variable is loneliness, a feeling often experienced by adolescents. The present study hypothesized that loneliness may occur during adolescent pregnancy. To date, one study exists (DiIorio & Riley, 1988) of loneliness and adolescent pregnancy.

The problem statement was: Does loneliness exist among pregnant adolescents? Three research questions were addressed:

Within this sample:

1. To what extent does loneliness exist?

2. Is loneliness more frequent during certain ages?

3. Do pregnant black and white adolescents differ in the extent to which they experience loneliness?

Participants between the ages of 14 and 18 receiving prenatal care in public health clinics and a university-affiliated obstetric clinic were selected for the study. The final sample size was 78. The loneliness study was conducted as part of a larger longitudinal study, Nursing Role Supplementation for Adolescent Parents (NIH #1R01NR01939-01A1).

The dependent variable, loneliness, was measured by the Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980), a 20-item Likert-type instrument. Possible scores on the tool ranged from 20 to 80, with 80 constituting the loneliest end of the continuum. The extent of loneliness was determined by the summation of numerical responses.

Data were analyzed by two methods: (a) analysis of variance (ANOVA), to determine any differences between age and loneliness score, and (b) the t-test for two independent samples, in order to examine differences in mean loneliness scores between blacks and whites in the sample.

Scores ranged from 25 to 58. "Low" to "moderate" loneliness existed among the sample; however, loneliness did not exist in greater amplitude than among nonpregnant adolescents in other studies reviewed. No significant relationship was found between age of participants and loneliness scores. Furthermore, differences in loneliness

scores between blacks and whites were not statistically significant.

Finally, pregnancy may not intensify loneliness for adolescents. On the other hand, pregnancy did not diminish loneliness among pregnant adolescents in this sample.

CHAPTER ONE

Introduction

Adolescent pregnancy is a major concern of United States society today. Although birth rates among teens have declined during this decade, American women of all races under 20 years of age maintain the highest pregnancy rate among developed countries with available data (Trussell, 1988). Many aspects of this problem are being studied, from contraceptive use to adolescent fatherhood. This investigator is concerned with the experience of loneliness in the population of pregnant adolescents. Although loneliness can be viewed as a normal subjective response to the lack of meaningful social relationships, it is a painful experience which has been linked to numerous mental problems (Bragg, 1979; Brennan & Auslander, 1979; Cutrona, 1981; Horowitz, 1982; Ouellet & Joshi, 1986; Ostrov & Offer, 1979). Researchers have devoted much time to studying loneliness among many age groups during the past decade, however, few have investigated this experience among persons both young and pregnant. The exception is DiIorio and Riley (1988), who found an inverse relationship between both self-concept and loneliness and future time perspective and loneliness.

The investigator's interest in this subject is born out of working with adolescents intermittently for 10 years in a variety of settings. Adolescents have the highest incidence of self-reported loneliness than any other age group (Perlman & Peplau, 1982; Rubenstein & Shaver, 1982). The interest in studying pregnant adolescents and loneliness stems from research showing that this population is at risk for mental health problems (Beardslee, Zuckerman, Amaro, & McAllister, 1988; Colletta, 1983; Cutrona, 1981). Early detection of loneliness and prevention strategies could deter such problems, as chronic loneliness, depression, and suicide.

> Empirical evidence. . .is beginning to document the harmful effects of persistent loneliness on mental health. Persistent loneliness can set the stage for depression, increase the risk of suicide, and in other ways jeopardize psychological well-being. It is these harmful mental health consequences of loneliness that are a prime target for intervention (Perlman & Peplau, 1982, p. 14).

Adolescence has been described as a particularly lonely period in the life span; numerous physiological, psychological, and social changes occur. Even more changes ensue when pregnancy is added to this phase. According to Brennan (1982), "Loneliness is often seen as emerging from changes that disrupt social relations or create social

deficits. The developmental changes that occur at adolescence appear to be particularly disruptive in this sense" (p. 269). Some changes and processes identified by Brennan are separation from parents, identity formation, new intimate relationships, sexual desires, cognitive development, physical maturation, increased choices available, struggle for acceptance, and increased social expectations.

DiIorio and Riley (1988) address the dynamics of adolescence and pregnancy:

> Widespread legitimate concern over the high frequency of adolescent pregnancy in this country threatens to dilute the attention pregnant teenagers receive relative to psychosocial development. Yet it is certain that young women experiencing the dual stressors of adolescent development and pregnancy deserve intensive supportive care (p. 110).

Loneliness during adolescent pregnancy presents implications for practice and study among nurses, social workers, teachers, clergy, sociologists, psychiatrists, psychologists, and others interested in adolescent mental health. Supporting the person during this period of transition and change is the focus of intervention. From a nursing perspective, there are numerous implications for practice stemming from a study of loneliness in adolescent

pregnancy. Support groups for this population can increase the sense of belonging with others, as well as universality that is, the feeling of "being in the same boat" with one's peers. Assisting an adolescent to identify her support systems is an important aspect of this process. Groups can also provide access to education on issues such as prenatal self-care, the birth experience, infant care and effective parenting (DeIorio & Riley, 1988). School programs might center on retaining pregnant adolescents and providing individual and group counseling.

Problem Statement

Does loneliness exist among pregnant adolescents? Due to the exploratory nature of the study, this question needed to be addressed before relational statements could be developed.

Definition of Terms

Pregnant adolescent: girls in their third trimester of pregnancy, ages 14 to 17, with the exception of 18 year olds if they were in school. These adolescents attended outpatient prenatal clinics in four county health departments, four city health departments, and one university-affiliated obstetric clinic.

Loneliness - a subjective experience; a phenomenon experienced by an individual when there is a deficit

in their significant relationships. Loneliness was measured by the Revised UCLA Loneliness Scale (Appendix A).

Research Questions

Within this group of pregnant adolescents:

1. In what amount does loneliness exist?
2. Is loneliness more frequent during certain ages?
3. Do pregnant black and white adolescents differ in the extent to which they experience loneliness?

Research Plan

The research design was pre-experimental and descriptive; a "one-shot case study" (Campbell & Stanley, 1963, p. 6). Data were collected during the fall of 1989 from a larger longitudinal intervention study (i.e., Nursing Role Supplementation for Adolescent Parents, Bernardine A. Clarke, Principal Investigator, NIH Grant #1R01NR01939-01A). The nonprobability sample of 78 was gathered from eight area health departments and a medical center in a large southeastern city. Informed consent and socioeconomic data were obtained through the larger longitudinal study previously cited (Appendices B and C).

The instrument utilized in data collection was the Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980).

CHAPTER TWO

Review of the Literature

Because of tremendous interest generated in loneliness during the past three decades, literature on the subject is vast. This literature review is concentrated on the past 10 years, with a few exceptions. Loneliness remains an individual experience, difficult to describe both subjectively and objectively, yet felt by many.

Loneliness continues to be examined in many populations, for example: elementary students, adolescents, college students, widows, the elderly, and chronically mentally ill persons. Numerous variables such as social support, self-esteem, locus of control, neurochemistry, self-disclosure, gender, depression, and altruism have been studied in combination with loneliness.

Adolescent pregnancy remains a debated topic and also one written about frequently. Unfortunately, as Davis (1989) contends: "In teenage pregnancy we have a problem about which everyone has an opinion, but apparently no one has a solution" (p. 20).

The researcher will discuss the topic of adolescent pregnancy and loneliness in eight divisions: (a) teenage pregnancy, the extent of the problem and trends; (b) the rationale of studying adolescent pregnancy and loneliness;

(c) the concept of loneliness; (d) a sampling of empirical research on loneliness; (e) the concept of adolescence and loneliness; (f) empirical research on adolescence and loneliness; (g) studies on pregnancy and loneliness; and (h) the conceptual framework.

Teen Pregnancy

Extent of the Problem

In 1987, nearly one million American women under 20 became pregnant. Of 15 to 19 year-olds in the United States today, 10% become pregnant each year; 5 out of 6 of these pregnancies are unplanned (Trussell, 1988). Moreover, pregnancy rates are underestimated by as much as 10-15% for two reasons: (a) U.S. data are not available for spontaneous abortions, and (b) the data reflect ages upon pregnancy resolution, not age at conception (Trussell, 1988). The latter is particularly salient for data on younger teens.

Failure to use contraception on a regular basis is the primary cause of teen pregnancy in this country. Nearly 50% of 15-19 year-olds are sexually active; however, just a little over 30% use birth control consistently. This lack of contraceptive behavior stems from the adolescent's belief that there is a small chance of becoming pregnant. The other factor leading to pregnancy is poor planning--adolescents tend to be poor predictors of intercourse (Trussell, 1988).

The adolescent birth rate has experienced a slight decline in the past 20 years (see Figure 1). This is partially due to the decrease in number of adolescents. The 10-14 year-olds, however, are not experiencing this decline--their rates are remaining stable at 1.3 births per 1,000 (Moore, 1988).

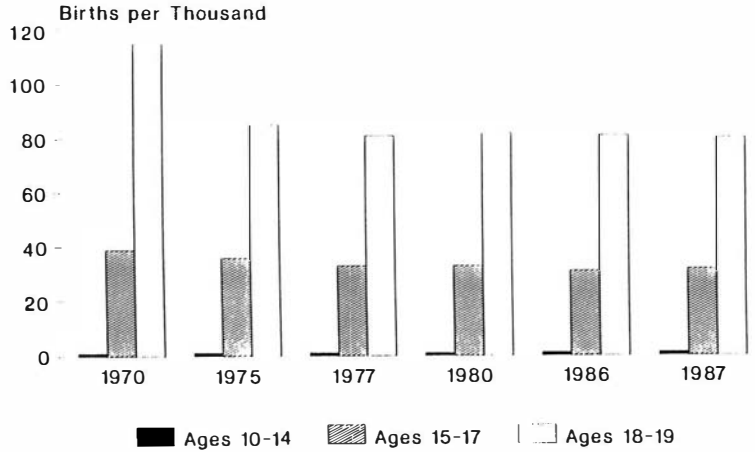
There are differences in birth rates among white and black teens. Blacks are two times more likely to give birth than whites (see Figure 2). Teen pregnancy is a problem, nonetheless, among both whites and blacks. Although the birth rate for black teens is twofold that of whites, the number of white births to teens exceeds the number of black births to teens (see Figure 3).

Trends

In the past 15 years, trends of adolescent pregnancy have changed dramatically. Abortion is one of the most striking trends (see Figure 4), and a controversial issue of public concern. Approximately 42% of nonwhites and whites end their pregnancies in abortion; however, nonwhites have higher rates of abortion and birth due to their higher pregnancy rate (Moore, 1989).

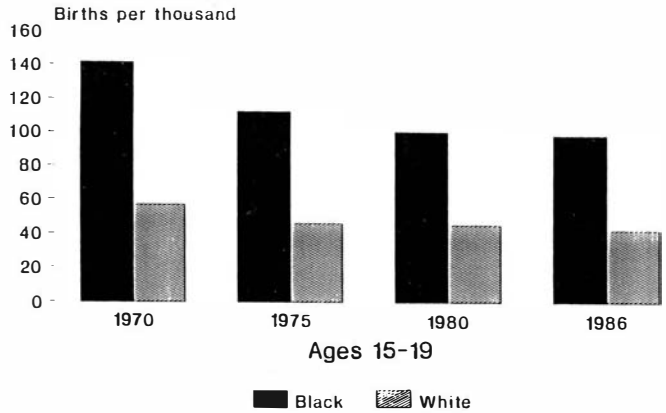
Single teen mothers giving birth constitute another trend (see Figure 5). In 1970 for all races, 30% of teen mothers giving birth were unmarried; in 1987, 64%. Since 1955, the rate of out-of-wedlock births has tripled among

Adolescent Birth Rate
All Races



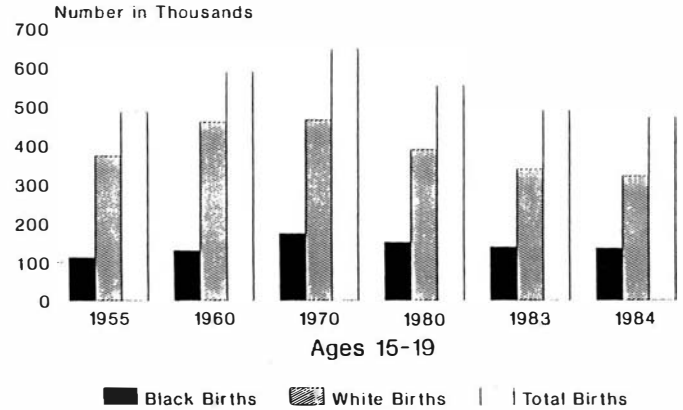
Source: Moore, 1988,1989

Adolescent Birth Rates
By Age and Race



Source: Moore, 1988

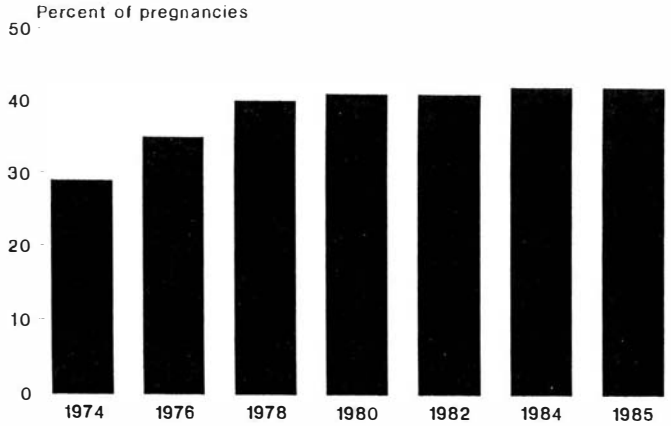
Births to Adolescents
By Race



Source: Furstenberg, 1987

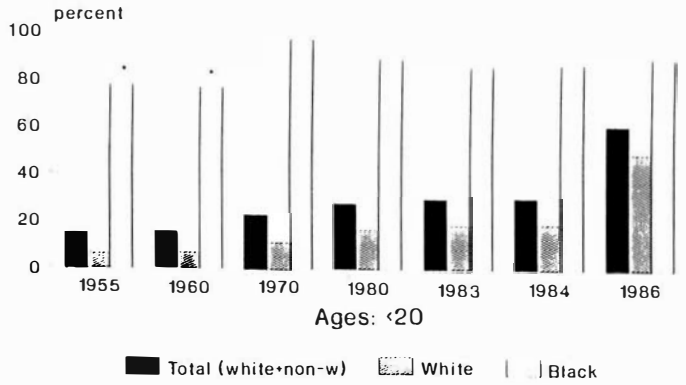
Pregnancies Ended in Abortion

All Races, Ages 15-19



Source: Moore, 1989

Proportion of Adolescent Births
to Single Mothers



Sources: Furstenberg, 1987; Moore, 1988, 1989
•Includes all non-whites

white 15-19 year-olds, yet only increased by 12% among blacks and all other nonwhites (Furstenberg, 1987).

According to Furstenberg, Brooks-Gunn, and Morgan (1987), chronic unemployment, low educational attainment, and welfare dependency of the adolescent mother have been misinterpreted in the past. Furstenberg et al. (1987) found variable outcomes for the sample (N=300) of predominantly black girls giving birth between 1965 and 1967. By 1984, 70.5% had completed high school, 67.8% were currently employed, 29.1% had received welfare in the past year, 52.8% had incomes of less than $15,000 per year, and 23.6% had incomes greater than $25,000.

The U.S. Compared to Other Countries

As cited previously, American girls under 20 have the highest pregnancy rate in the world among developed nations with available data (Trussell, 1988).

> Although the reasons for adolescent pregnancy are diverse and complex, varying among different cultural ethnic subgroups and influenced by the culture of poverty, our society's attitudes about sexual activity and contraception complicate the prevention of adolescent pregnancy because it is viewed as a cultural and moral issue as well as a health issue. These attitudes are very

different in the United States than in many European nations (McAnarney & Hendee, 1989, p. 74).

Sweden, Canada, England and Wales, France, and the Netherlands have lower pregnancy rates for several reasons. Firstly, adolescents in those countries tend to use contraceptives more frequently and use more effective methods such as oral contraceptives. Contraceptives are more widely available to teens than in the U.S. and less expensive--often free. In addition, mandatory sex education in schools for children of many ages is more widespread (Trussell, 1988).

Why Study Adolescent Pregnancy and Loneliness?

Adolescence alone is not an obstetric risk factor for adverse maternal and neonatal outcomes of pregnancy, as was thought in previous decades. Most of the problems associated with obstetric and neonatal complications can be attributed to lack of prenatal care and socioeconomic status. "Adolescents who receive early and adequate prenatal health care should be at no greater risk of experiencing an adverse obstetric outcome than are adult women of a similar socioeconomic background" (McAnarney, 1989, p. 99).

The psychosocial needs of the teenage mother are distinct. At the five-year follow-up of a longitudinal study of 300 teen mothers in the Baltimore area, Furstenberg et al. (1987) found most of the women were confronting

the issues of raising a child, going back to school, and finding employment. "Many of the women interviewed in 1984 said that in retrospect, they did not understand how they were able to get through those difficult years" (Furstenberg et al., 1987, p. 143).

Depression and Adolescent Pregnancy

Depression constitutes a psychosocial problem of adolescent mothers. A discussion of three empirical studies follows (Beardslee, et al., 1988; Colletta, 1983; Cutrona, 1982). The Cutrona study pertains to loneliness as well.

The Beardslee Study

In a descriptive study of 18 women, ages 18 to 21, obtaining prenatal care at Boston City Hospital from 1984 to 1987, Beardslee et al. (1988) assessed the incidence and timing of depression among young mothers. All participants gave birth to their first child between the ages of 15 and 17; their second child within four years of birth of the first child. Twelve "...had met criteria for a serious psychiatric disorder at some point in their lives" (p. 63). This psychiatric variable was not described further. Subjects were interviewed three to five months postpartum via structured format and an affective disorders instrument.

The researchers found that 56% (N=10) of the mothers had experienced depressive disorders during their lifetimes, with a total of 19 episodes. At the time of the interview,

33% were diagnosed as depressed. Four of the 13 episodes of major depression occurred before the pregnancy and during adolescence; four during the first pregnancy; three during the second, and two between pregnancies.

Beardslee et al. (1988) concluded:

> A final but important focus of research should be the development and evaluation of programs designed for early identification and management of depression among adolescent mothers....Due to the apparently high prevalence of depression among adolescent mothers, early identification and treatment programs need to be integrated into ongoing service programs for adolescent mothers. Those programs that usually emphasize health and social services need to integrate a mental health component to address this important but previously unaddressed problem among adolescent mothers (p. 65).

The Colletta Study

In another study, Colletta (1983) investigated the relationship between depression and maternal behavior of young mothers. Other variables were maternal stress and support networks. The sample (N=75) consisted of girls 15 to 19; 60% white, 40% black. Participants were identified by birth records in an outlying county from Washington, D.C.

The mean age was 15.6 years at the birth of the first child. Eighty-six percent had one child 1 to 3 years of age; 58% had not completed high school; 76% were unemployed; 68% were single, separated, or divorced; 48% were on welfare.

Using structured interviews and questionnaires, Colletta (1983) determined 59% of the participants were depressed. Demographic variables related to depression were: marital status ($p < .01$), years of education ($p < .05$), and maternal age ($p < .05$). Socioeconomic status, race, and childrens' characteristics were not significantly related to depression.

The rate of depression was highest among the girls who were 14 to 17 years of age, single, with fewer years of education. The depressed mothers in this category tended to be hostile, rejecting, and indifferent to their children. Stress was most strongly related to depression among the 14 to 17 year-olds, for married mothers, and those mothers who had not completed high school. Less depression was found among those who had high levels of support, including emotional support and material aid.

Colletta (1983) stated:

> Our data on the factors that place adolescent mothers at risk indicate that resources should be concentrated on those who are in the youngest age group, have failed to finish high school, and who are isolated from the help

> they need to maintain their mental health and to care for their children (p. 308).

The Cutrona Study

One doctoral study linked postpartum depression and loneliness. Cutrona (1982) studied the learned helplessness model of depression during the postpartum period. Eighty-five primiparous mothers were followed from the third trimester of pregnancy through the second postpartum month. Depressive attributional style was measured according to inadequate social support, stressful life events, hormonal sensitivity, and psychiatric history. The learned helplessness model held only limited support.

Social support was found to be the strongest predictor of depression in the sample. Deficits in significant interpersonal relationships were associated with levels of postpartum depression.

Finally, "women who scored high on loneliness during pregnancy were more depressed than other women after the birth of their baby" (Cutrona, 1982, p. 3413-B).

Summary

Adolescent mothers in the three previous studies reported a high incidence of depression. Assessment could lend itself to early identification of and intervention for loneliness during the adolescent's pregnancy, thus perhaps preventing or decreasing depression among this population.

The Concept of Loneliness

Early Views

The past 30 years have been a period of extensive loneliness research, varying in perspectives and theoretical frameworks. First, psychiatrists examined loneliness from a framework borne out of their clinical experience, many viewing the phenomenon as a pathological state. Sullivan (1953) regarded loneliness as originating during infancy and developing throughout the lifespan. He saw adolescence as a period characterized by a search for intimacy and fears of exclusion from one's significant peer group. Hildegard Peplau (1955), a noted nurse scholar, expanded on Sullivan's interpersonal theory. She considered loneliness a "...result of early life experiences in which remoteness, indifference, and emptiness were the principal themes that characterized the child's relationships with others" (Peplau, 1955, p. 1476).

More interpretations of loneliness followed. Fromm-Reichman (1959) professed: "Loneliness seems to be such a painful, frightening experience that people will do practically everything to avoid it" (p. 1). Leiderman (1969) remarked: "In its normal manifestation, it [loneliness] is probably clearly related to feelings of nostalgia. In its more pathological manifestations, it can be associated with feelings of anxiety, guilt, or hostility" (p. 391).

Peplau's Cognitive Model

Letitia Anne Peplau, a psychologist and niece of Hildegard Peplau, is a leading contributor to the field of loneliness research. L. A. Peplau and her colleagues at UCLA developed the cognitive model of loneliness, which states individuals use affective, behavioral, and cognitive cues to arrive at a label of lonely for self. According to this model, loneliness may vary according to social groups, period in the lifespan, era, and culture (Peplau, Miceli, & Morasch, 1982).

The cognitive approach regards loneliness as an interaction between a person's actual network of social ties and that person's standard of relationships. Peplau et al. (1982) do not suggest, however, that persons lower these standards for relationships. Instead, these theorists argue that appraisal of one's ideals is reasonable.

Those of the cognitive school view low self-esteem as a risk factor in developing loneliness. "Lonely people often feel worthless, incompetent, and unlovable. Indeed the link between severe loneliness and low self-esteem is one of the most consistent findings of loneliness research" (Peplau et al., 1982, p. 143).

Perlman and Peplau (1982), in a National Institute of Health publication, state that persistent, severe, and chronic loneliness places a person at risk for depression, suicide

and other mental health problems. A proactive approach must be the focus of prevention, according to the authors.

Blai (1989), in his review of the literature, also stated:

> Much of the loneliness research strongly suggests that loneliness exists in all segments of society. Feelings of loneliness are an alarm signal that the lonely individual's social relations are seriously deficient. In addition, when persistent, loneliness can be detrimental to one's mental health. It can be a precursor for depression; it may jeopardize a person's psychological sense of well-being; and it may increase the risk of suicide. These potentially harmful dysfunctions associated with loneliness are the principal targets for preventive mental health interventions (p. 163).

Weiss's Model

Robert Weiss (1982), one of the first loneliness theorists, identified what he terms the loneliness of social isolation, produced by the lack of an obtainable support system. This loneliness is due not only to the possible absence of a friendship community, but other social

communities as well (Weiss, 1987). Weiss distinguishes between being alone and being lonely; loneliness is being without meaningful relationships--not just any relationships.

> Loneliness is caused not by being alone but by being without some definite needed relationship or set of relationships....It may also be a response to the absence of the provisions of meaningful friendships, collegial relationships, or other linkages to a coherent community (Weiss, 1973, p. 17).

Weiss (1973) identifies two theories of loneliness, i.e., situational and characterological. The latter, drawn from Bowlby's (1969) work on attachment theory, suggests those with certain patterns of interaction with others are more at risk for loneliness. Weiss commented, nonetheless, that the characterologic view could lead to blaming the victim. Weiss's (1973) situational view sets forth that any person is at risk for loneliness if they experience "any severe disruption of social life...[or]...anything that leads to loss of contact with those who share one's concerns may give rise to it" (p. 145).

In a special issue of the Journal of Social Behavior and Personality on present loneliness research, Weiss discusses his questions about the loneliness of social isolation. This view of loneliness needs further research,

he suggests, reasoning loneliness may be diminished by varying social groups such as work-related friendships. Also, persons may vary their sense of community according to life situation and age. "Furthermore, I believe that my initial thought, in the 1974 [sic] book, in which I more or less identified the loneliness of social isolation with the absence of a community of friends, has been shown to be faulty" (Weiss, 1987, p. 12). Weiss suggests a phenomenological approach to studying loneliness; that is, describing a situation apt to produce loneliness and how it feels.

Furthermore, according to Weiss (1973), in our society loneliness is often viewed as self-indulgent, self-pitying, or weak. Loneliness is sometimes envisioned as a problem among generally unattractive people, in a physical and emotional sense.

Wood (1986) has a similar outlook on society's views. She contends that to admit one is lonely is somehow saying one is defective in some way. As did Weiss and Peplau, she also perceives social relations as a central focus of loneliness.

Empirical Studies on Loneliness

The Rubenstein and Shaver Study

In 1980, Rubenstein and Shaver conducted a classic survey of persons reading the New York Daily News and the Telegram

(Worcester, MA) Sunday supplement. The readers were between the ages 18 and 88 (mean age = 35.4), of numerous religions, ethnicity, and marital status. The measurement consisted of an 84-item questionnaire divided into sections on demographics, family background, social involvement, personal satisfaction, and loneliness.

Rubenstein and Shaver found the following: (a) that elderly persons were less lonely than other age groups; (b) that lonely persons in their sample suffered low self-esteem; (c) that lonely persons were dissatisfied with their social ties in terms of their quantity and quality of relationships, and (d) that lonely persons attributed their loneliness to being bored, alone, or without a spouse or lover.

The Francis Study

Francis (1976) studied loneliness and developed a 16-item rating scale, the first objective loneliness measure. She used the term "secondary" loneliness to refer to "...that phenomenon experienced as the result of temporary separation...from persons and things to whom one is closely attached" (p. 153). The sample consisted of 113 hospitalized medical patients, 16-83 years of age.

Francis (1976) found that loneliness varied according to the amount of emotional or "cathectic" investment subjects had regarding the separated objects or persons. Similar to Rubenstein and Shaver's (1980) findings, the participants

in the Francis study, 50 years of age or younger, were lonelier than the older group. Women were more lonely than men and blacks were lonelier than whites ($p < .05$).

The Horowitz Study

Horowitz, French, and Anderson (1982), in their research of a prototype of lonely persons, conducted a study of 40 UCLA college students selected on the basis of their scores on the Revised UCLA Loneliness Scale (Russell et al., 1980). Possible scores range from 20 to 80. Thirteen had high scores (51-71), 14 moderate (36-41), and 13 low (22-28). The students were asked to describe in their own words the best example of a lonely person and to include age, sex, feelings, thoughts, and behaviors of this person.

Horowitz et al. (1982) found that the features of a lonely person could be divided into three categories: (a) feelings of separation from others and being different, isolated, inferior, and unloved; (b) the person's actions causing avoidance of social contact and isolation of self from others; and (c) feelings of depression, paranoia, and anger.

The Zakahi Study

Zakahi (1987) studied the effect of self-disclosure and gender on loneliness. He discussed one's ability to self-disclose, or disclose to another, personal information about oneself. Self-disclosure is one indicator of

interpersonal skills and the ability to form relationships. The variables of self-disclosure were: intent to disclose, depth of disclosure, honesty of disclosure, amount of disclosure, and positiveness.

The sample (N=287) consisted of college students (females = 184, males = 103) in a midwestern university. The Revised UCLA Loneliness Scale (Russell et al., 1980) and a measurement of disclosure were utilized.

Zakahi (1987) found that gender accounted for 6.5% of the variance in loneliness scores and was significant ($p < .01$). Men scored higher on loneliness. Persons of both sexes who disclosed a great deal, honestly, positively, and with intent (control over the disclosure) were less lonely. No significant interactions were found between gender and self-disclosure on loneliness. The self-disclosure variables did not account for the loneliness among men in the sample.

The Jones and Moore Study

Jones and Moore (1987), in a longitudinal study, investigated the degree of association between loneliness and various components of social support. Their sample contained unmarried college students who were U.S. citizens between the ages of 18-21. The students were tested twice; the first time (N=289; 173 women, 116 men) in the beginning of the first semester, the second time (N=142, 92 women,

50 men) eight weeks later. The study only reports on those participants completing both sessions. The measurements were the Revised UCLA Loneliness Scale (Russell et al., 1980) and a social support questionnaire.

The researchers found that males in the first testing reported a greater proportion of men in their social network ($p < .001$), a smaller proportion of reciprocal relationships ($p < .05$), and less density in social networks ($p < .05$). Gender was not significant otherwise.

Jones and Moore (1987) also found a significant inverse relationship between the accessibility of social support and loneliness, both concurrently and over time. The four social support variables most strongly related to loneliness were: (a) satisfaction with one's network ($p < .01$); (b) size of the network ($p < .10$); (c) density of the network (proportion of the network who are important to one another, $p < .10$); and (d) the proportion of those felt to be helpful, reciprocating, and serving as confidants and friends.

The Ouelett and Joshi Study

In 1986, Ouelett and Joshi conducted a correlational study examining the relationship between loneliness and depression and loneliness and self-esteem. Eighty-one French-Canadian university undergraduate students (N=29 men, 52 women) with a mean age of 21.4 comprised the sample. The

participants completed the Beck Depression Iventory (Beck, Ward, & Mendelson, 1961) and the Revised UCLA Loneliness Scale (Russell et al., 1980).

In this study, loneliness was significantly associated with depression and self-esteem ($p < .001$). Subjects who were lonely were also relatively depressed and had significantly low self-esteem. Men in the sample were significantly more lonely than the women ($p < .05$).

The Bragg Study

Bragg compared loneliness and depression in his 1979 doctoral dissertation. He explored the relationship between loneliness and social and demographic characteristics, in order to identify those variables which may help to differentiate loneliness and depression. In addition, the degree to which loneliness is associated with depression was assessed.

The sample was composed of 333 UCLA freshmen. Three questionnaires were completed, including the Beck Depression Inventory (Beck et al., 1961) and the Revised UCLA Loneliness Scale (Russell et al., 1980). Bragg compared the nonlonely, depressed group with the lonely depressed group to assess the relationship between causal attributions of loneliness and depression. Loneliness was unrelated to demographic variables, but was related to social variables such as number of college acquaintances and dating. There

was a significant correlation (r = .49) between loneliness and depression. Depression was correlated with anger and dissatisfaction with "...nonsocial aspects of life" (Bragg, 1979, p. 6109-B). Loneliness was associated with low initiation of contact with friends.

> The attributions of the depressed lonely students differed significantly from those of the nondepressed lonely....In particular, the depressed lonely were more likely to attribute their loneliness to their physical appearance, their personality, and their fear of rejection than were the nondepressed lonely (Bragg, 1979, p. 6108-B).

Summary

Several common findings are apparent in the literature. The variables which occur with loneliness are the following: low self-esteem, feelings of separateness from others, dissatisfaction with social relationships, and depression. On the other hand, there are inverse relationships with loneliness and two variables mentioned in the previous review, i.e., (a) self-disclosure and (b) social support. Regarding age, loneliness tends to decline over the life span. Concerning gender, however, the findings are equivocal.

The Concept of Adolescence and Loneliness

Many people believe the elderly population is the loneliest age group (Perlman & Peplau, 1982), however, adolescents have the highest incidence of self-reported loneliness (Brennan & Auslander, 1979; Rubenstein & Shaver, 1980). In a classic 1979 survey of over 9,000 adolescents, ages 10-18 from 10 U.S. cities, Brennan and Auslander found 10% to 15% of the subjects were "seriously lonely." Forty-six percent of the boys and 61.3% of the girls agreed with the statement, "I often feel lonely."

> Why are adolescents so lonely?
>
> Adolescents may not be more lonely than people at other points of transition in the lives, but there are common elements to the adolescent process that give loneliness at this stage a specific quality. Characteristically, loneliness during adolescence is stamped with issues of mourning one's own identity as a child and giving up certain forms of childhood attachments and beliefs. The process of separating and maturing is tinged with loneliness (Ostrov & Offer, 1978, p. 36).

Ostrov and Offer argue that loneliness is brought about during adolescence due to the numerous bio-psycho-social changes,

and that the normal adolescent will feel intensely lonely occasionally.

> The normal person may gain distance from needs for other people's esteem by increasing competence and internalization of approval-giving functions, but no person can eliminate entirely the need for other people. Therefore, everyone is susceptible to loneliness. The degree, frequency, and quality of a person's loneliness will be a function of what developmental tasks the person is coping with, his degree of emotional health, and the society in which he lives. This is as true among adolescents as among people at every other stage in life (Ostrov & Offer, 1978, p. 45).

Empirical Studies of Adolescence and Loneliness

The Ostrov and Offer Study

In 1978, Ostrov and Offer published an eight-year survey of 5,000 12 to 20 year-olds from the U.S., Ireland, and Australia. The researchers used the Offer Self-Image Questionnaire (OSIQ)(Offer, Ostrov, & Howard, 1977), a six-point scale consisting of 130 items measuring the degree of agreement with statements such as: "I am so very lonely."

Normal, disturbed and delinquent teens of both genders were employed in the sample. The sample was obtained from public schools, psychiatric hospitals and residential centers for teens.

The findings were as follows. No significant differences in frequency of reported loneliness according to gender were found in the U.S. sample. Secondly, a greater proportion of 12-15 year-olds reported loneliness than the 16-20 year-olds ($p < .05$). Disturbed individuals of both genders were the most lonely ($p < .005$ for boys); disturbed girls were the loneliest group ($p < .001$). The term disturbed was not defined by the authors.

The authors differentiated between loneliness and depresson; loneliness has hope and is ameliorated by the needed relationship. Ostrov and Offer (1978) also stated loneliness is on a continuum from the normal to the pathological, however, they did not define pathological loneliness except to describe the youth as fearful of adolescence, guilt ridden and socially isolated.

The Goswick and Jones Study

Goswick and Jones (1982) studied the question: "Which types and what aspects of the adolescent's relationships are implicated in the development of loneliness?" (p. 373). They used Weiss' (1973) view of loneliness as a theoretical

framework and the Revised UCLA Loneliness Scale (Russell et al., 1980). The participants were 192 college students ages 17-20 and 92 high school students, aged 15-17. Both groups were 50% each gender and the race was not given.

Goswick and Jones (1982) found that loneliness of the college students was related to alienation, parental disinterest, negative school attitudes, and feelings of inferiority. All of these variables, with the exception of parental disinterest, were positive predictors of loneliness among the high school group.

For the college students, the following variables were negatively correlated with loneliness: social regularity, social facility, perceived approval, and social involvement. Social facility, social acceptance, and social integration were the negative predictors among the high school students.

The 1983 Mahon Study

Mahon has completed several studies of loneliness during adolescence. In 1983, she investigated developmental changes and loneliness during adolescence, comparing the differences in loneliness among adolescent boys and girls according to gender and stage of adolescence (N=470; 209 from an urban university, 1970 from an urban high school, 82 from an urban junior high). Fifty-eight percent of the sample were female. Mahon divided the same into three groups: early (ages 12-14), middle (ages 15-16), and late stage (ages 17 and above)

adolescents. No information was given on race. The Revised UCLA Loneliness Scale (Russell et al., 1980) was used.

Hypothesis 1, that there are significant differences in loneliness among early, middle and late groups was supported. Adolescents in the early group were significantly more lonely than the other two groups ($p < .01$). Girls 13 years old were the loneliest group. There were no significant differences in loneliness scores according to gender as well as interaction differences in loneliness between age and sex among the three groups. Mahon found that loneliness scores declined with age in her sample.

The Mahon and Yarcheski Study

In a 1988 comparative study, Mahon and Yarcheski tested Weiss' (1973) situational and characterological explanations of loneliness. Their research question was: "What is the relative magnitude of effect of the situational set and the characterological set on loneliness in early adolescents?" The sample consisted of 112 seventh and eighth graders attending an urban elementary school (N=53 males, 59 females ages 12 to 14, mean age 12.8). Seventy-six percent were white; 24% unspecified minorities. The investigators utilized the Revised UCLA Loneliness Scale (Russell et al., 1980) and multiple other scales. The variables for testing situational theory were as follows: perceived paternal expressiveness, perceived maternal expressiveness, close friend solidarity and perceived social support. For testing characterological

theory the variables were self-disclosure, shyness, self-esteem, and emotional reliance on another.

Via hierarchical analysis, Mahon and Yarcheski (1988) found the situational theory to hold greater explanatory power in relation to loneliness than the characterological set. The situational set explained 62% of the variance in loneliness when entered in the analysis first ($p < .0001$), compared with 33% for the characterological set ($p < .0001$). When entered second, the characterological set accounted for 5% of the loneliness variance ($p = .001$), compared with 34% for the situational ($p = .0001$). In addition, social support was found to be the most significant variable in reducing loneliness during early adolescence ($p < .0001$). Among the characterological variables, shyness ($p < .001$) and self-esteem ($p < .001$) were found to be the strongest predictors of loneliness.

The Yarcheski and Mahon Study

Yarcheski and Mahon, in 1984, explored the influence of chumship relationships and altruistic behavior on loneliness in early adolescents using Sullivan's (1953) Interpersonal Theory. The investigators used the Revised UCLA Loneliness Scale (Russell et al., 1980). The subjects (N=116; 12-14 years old; 55% female, 45% male) were students in a metropolitan New York parochial school. The races were: 72% white, 22% black and 6% Hispanic or Asian.

The first hypothesis, stating that early adolescents without a close chum would have a higher level of loneliness than early adolescents who have a close chum, was not supported ($p = .71$). The second hypothesis, that early adolescents who had weak altruistic behavior would have a higher level of loneliness than early adolescents who have strong altruistic behavior, was supported ($p = .05$). The most lonely in the study were those who identified as having close chumships and weak altruistic behavior ($p = .0001$). The least lonely were those with close chumships and strong altruistic behavior ($p = .0001$).

The Marcoen and Brumagne Study

Marcoen and Brumagne (1985), a Belgian research team, studied differences in loneliness among 393 fifth, seventh, and ninth graders. They also used Weiss' (1973) theories of loneliness and Sullivan's Interpersonal Theory (1953). Specifically, the pair examined the difference between what they termed "parent-related loneliness" and "peer-related loneliness." The measurement was a 28-item, Likert-type scale devised by the authors. Two out of 6 hypotheses were supported. Girls in the sample experienced feelings of parent-related loneliness less frequently than boys ($p < .01$). Adolescents viewed as socially sensitive peers within the class group experienced peer-related loneliness less frequently ($p < .0001$).

The Davis and Franzoi Study

Davis and Franzoi (1986) completed a longitudinal investigation of adolescent loneliness, self-disclosure, and private self-consciousness. The purpose of the study was to test a theoretical model linking loneliness, self-disclosure, and private self-consciousness.

The 1986 study was built on an earlier study exploring the causal relations among the above variables (Franzoi & Davis, 1985). In the 1985 study, the sample embodied 442 Michigan high school students with a final subject pool of 177 males and 173 females. The ages, grades, and races were not cited. In the 1986 study, the same high school was employed, with 406 students; 207 males, 199 females. The final subject pool included 171 males and 161 females. Data were not analyzed for all the original subjects due to gaps in responses on questionnaires.

Private self-consciousness was defined as ". . . the dispositional tendency to focus attention on the more private and covert aspects of the self" (Davis & Franzoi, 1986, p. 596). An assumption was that a high degree of self-consciousness, or self-awareness, will enable one to more willingly self-disclose to peers, thus feel less apart from others. Perspective-taking was defined as the individual's propensity towards empathy. Loneliness was measured by the Revised UCLA Loneliness Scale (Russell et al., 1980).

Both hypotheses were supported. The first being private self-consciousness leads to greater self-disclosure to peers; the second, greater self-disclosure reduces loneliness. Davis and Franzoi (1986) found that greater disclosure to peers was significantly and negatively associated with loneliness ($p < .01$). A greater degree of private self-consciousness and was associated with higher levels of peer disclosure ($p < .05$). Males scored higher on the loneliness scale than females ($p < .05$).

The researchers concluded that their study builds on the Goswick and Jones (1982) study and stated:

> . . . the affective tone of the adolescent's relationship with parents, not disclosure per se, is seen to have a small but reliable influence on reported loneliness; not surprisingly, warmer and more loving relationships with parents lead to reduce feelings of social isolation (Davis & Franzoi, 1986, p. 608).

The 1982 Mahon Study

Mahon (1982) also examined self-disclosure and loneliness. The purpose of this study was to explore the relationships between self-disclosure, interpersonal dependency, and life changes to loneliness in a sample of 209 urban university students between the ages of 18 and 25 (57% females, 43%

males). Nearly 60% were 18-20, 40% were 21-25. The races were 78% white, 13% black, 7% Spanish, and 2% unknown. The Revised UCLA Loneliness Scale (Russell et al., 1980) was used to measure loneliness.

Self-disclosure accounted for 11.29% of the variance in loneliness scales and interpersonal dependency accounted for 5.71% of the variance in loneliness ($p < .005$). Mahon (1982) concluded:

> Self-disclosure appeared to be the best single predictor of loneliness. However, interpersonal dependency added to the prediction of loneliness over and above that of self-disclosure. Life changes did not add to the prediction of loneliness" (p. 346).

Regarding quantity and quality of relationships, those identifying the following were more lonely: those having fewer friends ($p < .005$), those dissatisfied with friendships ($p < .005$), those less active in social clubs and organizations ($p < .005$), and those lacking close family relationships ($p < .01$). There were no differences regarding gender and the degree of loneliness.

The Avery Study

Avery (1982), in a descriptive study, examined the relationship between sex-role orientation and loneliness among 225 high school students (N=137 males, 88 females, ages

12-18). Avery defined androgyny as those persons with "high levels of both masculine and feminine characteristics" (Avery, 1982, p. 452). Loneliness was measured by the Revised UCLA Loneliness Scale (Russell et al., 1980).

Males in this sample experienced more loneliness than females ($p < .001$), but there was no effect of age on loneliness scores ($p > .05$). Androgynous persons were less lonely than nonandrogynous persons ($p < .0001$).

The Woodward and Frank Study

Woodward and Frank (1988) studied loneliness and coping strategies among rural adolescents. The following three research questions were asked:

1. What is the relationship between self-esteem and loneliness?

2. What facets of self-esteem significantly affect loneliness?

3. What coping strategies and resources do adolescents use in order to decrease their feelings of loneliness?

These investigators used the Loneliness Inventory (Woodward, 1967) in order to measure loneliness. The sample consisted of 387 4-H children (this was not defined) from rural Nebraska (females = 67.4%, males = 32.6%). Ages ranged from 8-20 with a mean age of 13.96.

Woodward and Frank (1988) compared their sample with other populations and concluded that only rural adolescents were less lonely than high school girls. They did not, however, name the studies with which they compared their data. There was a significant negative correlation between loneliness and self-esteem scores ($p < .0001$). Some facets of self-esteem which affected loneliness were: feelings of being a good person ($p < .01$), persons who felt they often did a good job ($p < .01$), persons who felt they had good qualities ($p < .05$), and persons who felt useful ($p < .0001$). Examples of coping strategies used more than 50% of the time were: keeping busy, listening to music, watching television, playing sports and playing with pets. Resources used more than 50% of the time were such things as church activities, social clubs, music and sports. The human resources were friends, family, and teachers.

Summary

Many similarities exist in the literature on adolescent loneliness and loneliness among the general population. Again, several variables tend to be associated with higher levels of loneliness among adolescents as well as adults--low self-esteem, dissatisfaction with social ties, decreased social activity, and feelings of inferiority and alienation. Age findings are similar also; younger adolescents tend to experience loneliness more frequently when compared to older

adolescents. Moreover, social support and self-disclosure are inversely related to loneliness. In the studies cited, gender was either not significant or indeterminate. Specific variables examined among the adolescent samples reviewed, but not studied among the adult samples mentioned, which were associated with lower levels of loneliness were androgyny, altruistic behavior, and a close relationship with one's parents.

Adolescent Pregnancy and Loneliness

The Loos and Julius Study

Loos and Julius (1989), in a qualitative exploratory study, interviewed 11 hospitalized women 26 to 38 weeks pregnant. The ages were as follows: two were 17-19, eight were 20-27, and one was between 30 and 35. The purpose of the study was to determine the needs of hospitalized pregnant women by exploring their perceptions of their hospital experiences through a phenomenologic approach. The investigators utilized a questionnaire devised for the study, along with an interview.

Using Francis' (1976) description of secondary loneliness, Loos and Julius (1989) found 10 patients ". . . expressed feelings of loneliness related to partner, children, and friends" (p. 54). Feelings of boredom and powerlessness were also noted.

The DeIorio and Riley Study

DeIorio and Riley (1988) completed the only empirical study of loneliness and adolescent pregnancy. Their purpose was to examine the relationship between self-concept and future time perspective, or the ability to control one's future, to loneliness. Erikson's framework of development and concept of identity diffusion was used. Seventy-nine pregnant adolescents utilizing public health departments in the southeast U.S. consented to participate. Forty-eight percent were 18-19; 11.4% were 15 or younger. Other demographic variables were the following: blacks comprised 74% of the sample; single mothers 70%; 49.5% lived with 5-8 family members; 51.9% were in school; 34% on welfare; and 49% were in their second trimester. Data on other trimesters were not provided. The Revised UCLA Loneliness Scale (Russell et al., 1980) was the loneliness measure. Internal consistency of the UCLA Scale in this study was computed at a coefficient alpha of 0.77.

Three hypotheses were proposed and supported: (a) there is a negative relationship between self-concept and loneliness among pregnant teens ($p < .001$); there is a negative relationship between future time perspective and loneliness among pregnant teens ($p < .001$); and (c) self-concept and future time perspective in combination are more predictive of loneliness than either alone ($p < .00001$). The loneliness

scores were the following: the range = 23-59; mean = 42.4; standard deviation = 8.1. Furthermore, the investigators commented that ". . . teenagers in this sample who envisioned more predictable, structured, and controllable futures . . . expressed fewer feelings of loneliness" (DiIorio & Riley, 1988, p. 113).

Self-concept was the best predictor of loneliness, explaining 30% of the variance in loneliness scores. Thirty-eight percent of the variance was due to a combination of self-concept and future time perspective.

In addition, they found that none of the nine sociodemographic variables accounted for no more than 1% of the variance in loneliness: age, race, marital status, number of family members in the household, school attendance, welfare status, use of birth control, weeks of pregnancy, and desire for pregnancy. Socioeconomic status accounted for 10% of the total variance of loneliness.

In conclusion,

> the present study suggests that not all pregnant teenagers are lonely, possess diminished self-concept, or have a constricted future time perspective. Those who are lonely, however, tend to exhibit poor self-concepts and constricted future time perspective. Thus,

> the need to intervene and promote psychologic health among this group is apparent (DiIorio & Riley, 1988, p. 114).

Conceptual Framework

Adolescent pregnancy can be viewed in situational terms. That is, envisioning adolescence as a time of social, psychological, and physical change, it follows that perhaps adolescence, compounded with pregnancy, bears the potential for situational loneliness.

This conceptual framework combines Weiss' (1973) situational view of loneliness and the model by Peplau et al., (1982). Weiss sets forth that persons in any situation where they are apt to feel apart from others are at risk for loneliness. Similarly, Peplau states that individuals in deficient social situations may encounter loneliness. In addition, she contends persons cognitively appraise their relationships with others and evaluate whether or not these relationships are up to their set standards.

Many factors may alter the pregnant adolescent's sense of belonging. It is possible, because of the peer group alterations a pregnant adolescent may encounter, that she becomes lonely. She may feel apart from her friends as her pregnancy becomes more physically apparent. Perhaps she feels other teens at school are ridiculing her. Perhaps she is not receiving the emotional support she needs from family.

Perhaps the father of the baby is not significant in her life. Perhaps because of her bodily changes, she suffers a diminution in self-esteem. Any or all of these changes and perceptions may lead to loneliness.

CHAPTER THREE

Methodology

The purpose of this study was to investigate loneliness among pregnant teens. Self-reports of loneliness are greatest among adolescents, hence, pregnancy during this developmental phase may intensify loneliness. Only one research team has studied loneliness during adolescent pregnancy (DiIorio & Riley, 1988), therefore, the present study was of a descriptive nature. The design was pre-experimental; a "one-shot case study" (Campbell & Stanley, 1963, p. 6).

The study sought to answer the following research questions. Within this sample of pregnant adolescents:

1. To what extent does loneliness exist?
2. Is loneliness more frequent during certain ages?
3. Do pregnant black and white adolescents differ in the extent to which they experience loneliness?

The Participants

The population consisted of pregnant teens. The sample contained pregnant teens utilizing area obstetric clinics for prenatal care between September 1989 and February 1990. The data were collected as part of a larger longitudinal study

previously cited (NIH Grant #1RO1NRO1939-O1A). The criteria for subjects' inclusion in the larger study were the following:

1. In the third trimester of pregnancy (26-40 weeks).
2. Fourteen-17 years and 18 if still attending school.
3. First pregnancy carried to term.
4. Able to read, write, and speak English.
5. Intent to utilize well child care (if in experimental group) in one of the clinics. The loneliness study utilized subjects from both groups.

The larger parent study used cluster sampling, a successive type of random sampling (Woods & Catanzaro, 1988), therefore it was representative of the pregnant teens utilizing public clinics in the area. The particular sample for this study was a purposive sample. The final sample size was 78.

In order to determine eligibility, the participants were identified first by chart review using the above sampling criteria. Their clinic appointment times were then determined in order for the researcher to identify the times for data collection.

Setting

The investigation was conducted in the metropolitan areaof a Southeastern city. A total number of nine clinics were utilized; five from two city health departments, three from two county health departments, and one from a large university affiliated teaching hospital. These were all extremely busy

clinics, providing prenatal, postnatal, and family planning services for all age groups.

Obstetric clinics were open Monday through Friday during business hours. Patients sat in the waiting areas until their names were called by the nurse or secretary. The waiting areas were often crowded and noisy. Time spent in the clinics by the patients varied from one to three hours.

Instrumentation

The loneliness measure employed was the 20-item Revised UCLA Loneliness Scale (Russell et al., 1980) (Appendix A). A sociodemographic data form (Appendix B) designed by the investigators of the larger parent study was also used. The participants completed the loneliness scale via paper and pencil. The Revised UCLA Loneliness Scale is a Likert-type scale. It consists of a series of statements requiring a response of agreement or disagreement varying in intensity. The subject's score is a summation of item scores. The items are divided into positive and negative statements. Higher levels of loneliness are associated with higher scores (Russell et al., 1980).

Reliability Data

Regarding stability, when first developing the tool, Russell, Peplau, and Ferguson (1978) reported a test-retest reliability of $r = .73$ over a two-month period. A high internal consistency, $r = .96$, was also established.

In 1980, Russell, Peplau, and Cutrona conducted two studies in order to revise the scale. Both revealed high internal consistencies of r = .91 when correlating the scores on the original scale with the revised scale. The investigators reported an internal consistency of r = .94 for the revised scale.

Other investigators have also reported reliability data for the instrument. DiIorio and Riley (1988) found a reliability of r = .77 in their study of pregnant teens, loneliness and future time perspective. In 1988, Mahon and Yarcheski reported a coefficient alpha of r = .88 among their sample of 12 to 14 year-olds. In another study of the same age group, Yarcheski and Mahon (1984) reported another high internal consistency of r = .81. Lastly, Mahon (1983) described alpha coefficients of r = .83 (ages 12-14), r = .86 (ages 15-16), and r = .88 (ages 17 and above).

Validity Data

Russell et al. (1978) reported construct validity based on a sample of 239 UCLA students. Responses to a question on current loneliness were correlated with the scale score, revealing an alpha coefficient of r = .79. In addition, participants scoring higher on the loneliness scale recounted a greater degree of loneliness over others. Twelve students, self-identified as lonely, and taking part in a three-week loneliness discussion group, were compared with 35 psychology

students. The former group mean loneliness score was 60.1, the latter 39.1; thus loneliness was higher among the sample of 12.

To further document validity in 1978, the researchers compared loneliness scores with associated emotional states. Scores were correlated with feelings of depression ($r = .49$) and anxiety ($r = .35$). Among 133 subjects in the sample studied, scores on the UCLA scale were significantly correlated with feeling restless ($r = .38$), bored ($r = .36$), self-enclosed ($r = .54$), empty ($r = .58$), and awkward ($r = .46$). Discriminant validity was provided by findings that loneliness scores were not correlated with descriptions of self such as "hard working" and "having wide interests."

Russell et al. (1980) reported concurrent and discriminant validity for the revised measurement. The researchers conducted two studies for this purpose. The sample sizes were 162 and 237, respectively. All participants were college students. In order to test concurrent validity in Study 1, other emotional states were measured and correlated with loneliness scores. The latter were significantly correlated with scores on two depression measurements ($r = .62$ and $r = .55$) and a measurement of anxiety ($r = .32$). Loneliness scores correlated with feelings of depression, emptiness, isolation, hopelessness, abandonment, self-enclosure, and not feeling sociable or satisfied. In addition, the researchers stated, "Loneliness scores were not significantly

correlated with such conceptually unrelated affects as feeling creative, embarrassed, sensitive, surprised, or thoughtful" (p. 475).

The purpose of the second 1980 study was (a) to further assess concurrent validity of the revised scale, and (b) to assess discriminant validity of the scale by demonstrating that loneliness as measured by this scale is a distinct construct from other related emotional states.

In order to assess concurrent validity, Russell et al. (1980) examined the relationship between scores on the revised scale and measures of social activities and relationships. The investigators found that lonely students reported fewer social activities with friends ($r = -.28$). Also, lonely students reported fewer close friendships ($r = -.44$).

Discriminant validity was established by correlating the self-labeling loneliness index with the loneliness scores, then comparing these results to the correlation between loneliness scores and other measures of personality variables. Two examples given of the self-labeling index were: (a) "During the past two weeks, how lonely have you felt" and (b) "During your lifetime, how often have you felt lonely?" Scores on the revised scale were correlated more highly with the self-labeling index than with other personality variables such as affiliative motivation, social risk taking, negative affect, and social desirability.

Procedure

Data were collected by six nurses, including this investigator, involved in the larger longitudinal study. Subjects were approached in the waiting areas of the respective clinics six to eight weeks before their expected date of confinement. This investigator introduced herself by name and as a nurse involved in a project for teen mothers. The patient was then asked if she would like to hear more about the study. If so, she was asked to accompany the investigator to a private room available in the clinic where the study was explained in detail.

After the purpose and some details were explained to the adolescent, and any questions were answered, voluntary informed consent was obtained (Appendix C). Participants were assured anonymity. The patient was told the data collection would take about an hour and that it could be completed at a later date if necessary. The researcher informed the patient that she would still be seen in the clinic for her appointment, also that the researcher would alert the clinic nurses to our location in the clinic. If interrupted, data collection was completed after the patient was called in for her appointment or during her next appointment.

The participants were given a business card with the investigator's name, name of the larger longitudinal study,

and office telephone number. The demographic data form was then completed. Following this, a tape-recorded structured interview was completed as part of the larger longitudinal study. After the interview, the participants completed a measurement of social support for the parent study, then the Revised UCLA Loneliness Scale (Russell et al., 1980) for this study. Because of the UCLA scale's position in the data collection procedure, possible fatigue and boredom of the respondent could have led to measurement error.

Summary

This chapter detailed the descriptive study of adolescent pregnancy and loneliness. The research questions, population, sampling criteria, procedure, and setting were discussed. In addition, validity and reliability for the Revised UCLA Loneliness Scale (Russell et al., 1980) were reported.

CHAPTER FOUR

Data Analysis and Interpretation

This descriptive study sought to examine the extent of loneliness among a sample of 78 pregnant adolescents utilizing public obstetric clinics in a southeastern metropolitan area. Two other research questions were asked:

1. Is loneliness more frequent during certain ages within this group?

2. Do pregnant black and white adolescents differ in the extent to which they experience loneliness?

Loneliness was measured using the Revised UCLA Loneliness Scale (Russell et al., 1980), a Likert-type measurement. Data were collected between September 1989 and February 1990.

Analysis of the Data

Data analysis consisted of computing the summation of numerical responses on the UCLA scale (see Appendix A). Possible scores range from 20 to 80, with 80 constituting the loneliest end of the continuum. Four responses are possible: 1 = never, 2 = rarely, 3 = sometimes, and 4 = often. Ten of the items require reverse scoring. Because the increments between scores are equal and known, interval

level data are generated. The extent of loneliness is represented by the subject's total score on the UCLA scale.

The sample size of 78 allowed for the use of inferential statistics as well as descriptive statistics. Analysis of variance (ANOVA) was used in order to measure the difference between age groups and mean loneliness scores. In order to determine differences in loneliness among blacks and whites in the sample, the t-test for two independent samples was used.

Characteristics of the Sample

Characteristics of the sample (N=78) are shown in Table 1. The sample profile was a 16.8 year-old, black, unmarried Protestant in the ninth grade. Table 2 presents the frequency distribution of ages in the sample. The most frequent age was 17 years, the least frequent 14 years.

Loneliness Scores

Frequencies of loneliness scores are presented in Appendix D. Scores ranged from 25 to 58, with a mean score of 38.9. Three gaps in scores were apparent: (a) no scores between 25 and 28, (b) no scores between 45 and 48, and (c) no scores between 52 and 56. Forty-five scores were below the mean; 33 above the mean; therefore, the distribution was skewed to the left. On the higher end of the scale, 14 subjects, or 18% of the sample, had loneliness scores

Table 1

Sample Characteristics (N=78)

Age	Mean	16.8
	SD	1.2
Age of baby's father	Mean	19.1
	SD	2.3
Age of participant's mother	Mean	38.2
	SD	6.5
Race	Black (n)	82.1% (64)
	White (n)	17.9% (14)
Marital status	Single (n)	92.3% (72)
	Married (n)	6.4% (5)
	Divorced (n)	1.3% (1)
Ever failed a grade in school (N=77)	Yes (n)	54.5% (42)
	No (n)	45.5% (35)
Religious preference	Protestant (n)	56.4% (44)
	Catholic	2.6% (2)
	Other (n)	6.4% (5)
	None (n)	34.6% (27)
Participation in religious activities	Inactive (n)	46.2% (36)
	Infrequent/ occasional (n)	38.5% (30)
	Regular (n)	15.4% (12)
Highest grade in school	Mean	9.18
	SD	1.40
Primary household wage earner's educational level	Mean	10.6
	SD	2.0
Number in household	Mean	4.2
	SD	1.9
Know enough to raise a baby (N=77)	Yes (n)	74.0% (57)
	No (n)	26.0% (20)
Still "seeing" father of baby (N=77)	Yes (n)	71.8% (51)
	No (n)	28.2% (20)
Pregnancy planned	Yes (n)	11.6% (8)
	No (n)	88.4% (61)

Table 2

Frequency Distribution of Ages

Age	Frequency	Percent
14	8	10.3
15	12	15.4
16	16	20.5
17	31	39.7
18	11	14.1

of 48-58. If the scale were divided into three equal sections representing intensity of loneliness--low, moderate, and high--the percentage of scores falling into those categories would be 60% (n=47), 40% (n=31), and 0%, respectively. Horowitz (1982) classified loneliness scores among his sample of 40 UCLA college students into low (scores = 22-28), moderate (scores = 36-41), and high (scores = 51-71).

Statistical Analysis

Analysis of variance (ANOVA) was used in order to test the difference in mean loneliness scores among age groups in the sample. The level of significance was set at .05. The ANOVA revealed an F ratio of 2.06, with one degree of freedom. There was no significant relationship between participants' ages and loneliness scores. These findings differ from Mahon (1983), who showed early adolescents (12-14 years) significantly more lonely than middle (15-16 years) or late adolescents (> 17 years). Avery (1982), however, found no significant differences in scores among age groups in his sample of adolescents.

The t-test for two independent samples was utilized for comparing the difference in mean loneliness scores between black (N=64) and whites (N=14) in the sample. The p value was found to be 0.66. The difference in loneliness scores,

therefore, between the two races was not statistically significant.

Findings and Interpretation

Comparison with Earlier Studies

In general, among this sample of pregnant teens, loneliness did not appear to exist in greater magnitude than among nonpregnant teens. Although subjects in the present sample were not on the high end of the lonely continuum, they were at least as lonely as nonpregnant adolescents in the studies shown in Table 3. Mean loneliness scores in the studies reviewed and displayed ranged from 36.6 (Avery, 1982) to 42.4 (DiIorio & Riley, 1988).

Findings in the current study were similar to the results of DiIorio and Riley (1988), who studied loneliness and future time perspective among adolescents. The sample sizes and mean loneliness scores were comparable (see Table 3). DiIorio and Riley found no significant correlation between the following demographic variables and loneliness scores: age, race, weeks of pregnancy, marital status, number in household, school attendance, welfare status, desire for pregnancy, and use of birth control. One difference in the two studies was sample criteria. The present study included teens in their third trimester of pregnancy only; 48% of the DiIorio and Riley sample were between their 13th and 24th weeks.

Table 3

Loneliness Studies Compared*

	Age	Range of Scores	Mean Score	SD
Avery (1982) (N=225, both genders)	12-18	----	36.6	10.8
Mahon (1983) (N=470, both genders)	12-14 15-16 > 17	24-62 21-63 20-68	40.9 37.16 37.13	8.7 9.6 8.7
Yarcheski & Mahon (1984) (N=116, both genders)	12-14	21-62	38.67	8.5
Mahon & Yarcheski (1988) (N=112, both genders)	12-14	20-74	38.40	10.0
DiIorio & Riley (1988) (N=79, pregnant teens)	< 19	23-59	42.4	8.1
Brodeur (1990) (N=78, pregnant teens)	14-18	25-58	38.9	7.9

*All studies used the Revised UCLA Loneliness Scale to measure loneliness.

Other Possible Explanations

There are other possible reasons for these pregnant teens not experiencing loneliness to a greater extent than their nonpregnant adolescent counterparts. First, the pregnant subjects were interviewed during their third trimester. Possibly, by this period, families who may not have been supportive of the pregnant adolescent earlier in her pregnancy became supportive. If family members were initially unhappy about the pregnancy, perhaps, by the third trimester, they accepted the pregnancy. Moreover, family relationships may have become closer and more cohesive. Since social support has been shown to be inversely related to loneliness (Jones & Moore, 1987), these suppositions are reasonable.

Additional interpretations stem from the conceptual framework of this study. Adolescent pregnancy was viewed as a time of change with the potential for situational loneliness; a time when the adolescent may feel isolated or separate from others. Instead, pregnancy may foster a sense of belonging for the adolescent because now she is part of a new peer group and community--other teen parents. The mothers may have sought the friendship of their most supportive peers--other teen mothers. Perhaps, the adolescents were able to self-disclose to a greater degree with their peers during this time of change, thus decreasing

the likelihood of experiencing loneliness (Davis & Franzoi, 1986; Mahon, 1982).

In this sample, 72% of the adolescents were still "seeing" the father of the baby. These significant relationships may have also provided a sense of support, connectedness, and belonging to the mother. Perhaps the fathers' participation and support may have diminished post childbirth. During the latter stage of pregnancy, however, this joining by the father seemed to be present.

Instead of considering her pregnancy as a negative experience, the adolescent may have felt that it was indeed a positive one. In some instances, pregnancy may have even fostered self-esteem.

Seventy-four percent of the sample answered "yes" to the question: "Do you feel you know enough to raise a baby?" This suggested a sense of preparedness by the mother, rather than a feeling of having been overwhelmed.

Only 11.6% of teens in the sample stated that they planned their pregnancy. These results parallel the U.S. figure of 16% among 15-19 year-olds (Trussell, 1988).

Two findings in the sociodemographic data were of concern. First, 54.5% of the subjects had failed a grade in school. Second, the mean grade level of 9.2 was two levels below the appropriate one for a mean age of 16.8. Perhaps

being pregnant as a teen is seen as a success, in comparison with low academic achievement.

Validity of the UCLA Scale

Another possible explanation of the findings was the measurement tool itself. In light of the extensive use of the Revised UCLA Loneliness Scale for studies of loneliness and adolescence, it was a valid measurement of loneliness for pregnant teens. This, however, may not have been the case.

Summary

Viewed in situational terms, perhaps teen pregnancy is not a circumstance apt to produce more loneliness beyond that which occurs in normal adolescence. One working hypothesis of this study was accepted: "low" to "moderate" loneliness did exist among this sample of pregnant adolescents. Two hypotheses were rejected, i.e., loneliness is more frequent among certain ages, and, there is a difference in loneliness scores among black and white subjects.

CHAPTER FIVE

Summary and Conclusions

Summary

This descriptive study explored loneliness among pregnant adolescents in a southeastern metropolitan area. Numerous psychosocial variables of the special population of pregnant teens remain to be studied. One such variable is loneliness, a feeling often experienced by adolescents. The present study hypothesized that loneliness may occur during adolescent pregnancy. To date, one study exists (DiIorio & Riley, 1988) on loneliness and adolescent pregnancy.

The problem statement was: Does loneliness exist among pregnant adolescents? Three research questions were addressed:

Within this sample:

1. To what extent does loneliness exist?
2. Is loneliness more frequent during certain ages?
3. Do pregnant black and white adolescents differ in the extent to which they experience loneliness?

Participants between the ages of 14 and 18 receiving prenatal care in public health clinics and a university-affiliated obstetric clinic were selected for the study. The final sample size was 78. The loneliness

study was conducted as part of a larger longitudinal study, Nursing Role Supplementation for Adolescent Parents (NIH #1R01NR01939-01A1).

The dependent variable, loneliness, was measured by the Revised UCLA Loneliness Scale (Russell et al., 1980), a 20-item Likert-type instrument. Possible scores on the tool ranged from 20 to 80, 80 constituting the loneliest end of the continuum. The extent of loneliness was determined by the summation of numerical responses.

Data were analyzed by two methods: (a) analysis of variance (ANOVA), to determine any differences between age and loneliness score; and (b) the t-test for two independent samples, in order to examine differences in mean loneliness scores between blacks and whites in the sample.

Conclusions

Scores ranged from 25 to 58. "Low" to "moderate" loneliness existed among the sample, however, loneliness did not exist in greater amplitude than among nonpregnant adolescents in other studies reviewed. No significant relationship was found between age of participants and loneliness scores. Furthermore, differences in loneliness scores between blacks and whites were not statistically significant.

Finally, pregnancy may not intensify loneliness for adolescents. On the other hand, pregnancy did not diminish loneliness among pregnant adolescents in this sample.

Implications for Nursing

Nurses hold a myriad of opportunities for interventions with pregnant teens. The involvement of families in the teen's health care is essential, especially the caretakers of the adolescent and her child. The nurse needs to ascertain who are the supportive persons in the adolescent's life. The father of the baby is frequently forgotten yet extremely important. Involving this significant person in the care of the adolescent seems appropriate. In addition, the nurse may identify clients experiencing loneliness or diminished emotional and social support.

School, clinic, mental health, and community health nurses are in key positions to encourage school completion by the pregnant adolescent. Working toward the development of programs that allow for the special demands of teenage mothers in school is fundamental to the advocacy role of nurses.

Most importantly, the nurse needs to focus on the whole client and all aspects of her pregnancy. This approach includes identifying and building on strengths of the client as well as the positive aspects of the teen's experience

with pregnancy and motherhood. An integral part of this focus is actively listening to the adolescent.

Limitations and Recommendations for Further Research

A limitation of the study was the lack of white subjects in the sample. Samples more evenly divided among races are needed in order for validity of findings.

Suggestions for future investigations are the following:

1. Studies of adolescent pregnancy and loneliness, combining a phenomenologic approach with objective measures.

2. Studies of loneliness and depression among the adolescent population--both antepartum and postpartum.

3. Longitudinal studies of loneliness changes over time, from pregnancy into early motherhood.

4. A study of the relationship between loneliness and social support among pregnant teens.

5. A study examining the factors which ameliorate loneliness during adolescent pregnancy.

6. A study of how significant relationships of the adolescent change as a result of pregnancy and childbirth.

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APPENDIX A

THE REVISED UCLA SCALE

Teen Parent-Child Project
The Revised UCLA Scale

Participant # _ _ _ _

Date ___/___/___
M M D D Y Y

Directions: Indicate how often you feel the way described in each of the following statements. Use the scale below.

Never = 1 Rarely = 2 Sometimes = 3 Often = 4

Statement:

1. I feel in tune with the people around me ____
2. I lack companionship ____
3. There is no one I can turn to ____
4. I do not feel alone ____
5. I feel part of a group of friends ____
6. I have a lot in common with the people around me ____
7. I am no longer close to anyone ____
8. My interests and ideas are not shared by those around me ____
9. I am an outgoing person ____
10. There are people I feel close to ____
11. I feel left out ____
12. My social relationships are superfical ____
13. No one really know me well ____
14. I feel isolated from others ____
15. I can find companionship when I want it ____
16. There are people who really understand me ____
17. I am unhappy being so withdrawn ____
18. People are around me but not with me ____
19. There are people I can talk to ____
20. There are people I can turn to ____

APPENDIX B

SOCIODEMOGRAPHIC DATA FORM

Teen Parent-Child Project
Sociodemographic Data Form

page 1 - 4

Participant # _ _ _ _

Date _ _/_ _/_ _
MM DD YY

Clinic ID _ _

Clinic # _ _ _ _ _ _ _

Part A: Prenatal

Mother's DOB _ _/_ _/_ _
MM DD YY

Baby's Father's DOB _ _/_ _/_ _ or Age _ _ (yrs)
MM DD YY

Participant's Mother's Age _ _ (yrs)

Marital Status	1 single 2 married 3 divorced or separated 4 widowed	_
Educational Level	Highest grade completed	_ _
Did you fail a grade in school?	0 No 1 Yes	_
Ethnic background	1 Black 2 Caucasian 3 Native American 4 Other	_
Religious preference	1 Protestant (specify)_____ 2 Catholic 3 Jewish 4 Other (specify) _____ 5 None	_
Participation in religious activities	1 Inactive 2 Infrequent 3 Occasional 4 Regular	_
Primary Wage Earner	1 Mother 2 Father 3 Husband 4 Other _____	_
Educational level of Primary Wage Earner	Highest grade completed	_ _
Occupation of Primary Wage Earner	_____	code _ _

Socio page 2 - 4

Participant # _ _ _ _

With whom do you and your baby live ?

Adults	Children Age (yrs)	Children Age (yrs)
_ _ _ _	_ _ _ _ _ _ . _	_ _ _ _ _ _ . _
_ _ _ _	_ _ _ _ _ _ . _	_ _ _ _ _ _ . _
_ _ _ _	_ _ _ _ _ _ . _	_ _ _ _ _ _ . _
_ _ _ _	_ _ _ _ _ _ . _	_ _ _ _ _ _ . _
_ _ _ _	_ _ _ _ _ _ . _	_ _ _ _ _ _ . _

Number in household (including new infant) _ _

Who will provide financial support for you and the baby ?	1 Self 2 Father 3 Parents 4 Welfare/A.D.C. 5 Other	_ _ _ _

Obstetric History:

Grav _ _ **Para** _ _ **SAB** _ _ **TAB** _ _ **EDC** _ _ / _ _ / _ _
M M D D Y Y

First prenatal visit _ _ / _ _ / _ _
M M D D Y Y

Have you been involved in any of the following programs	Special projects (specify) _____ Parenting class (specify) _____ Baby care Prenatal classes Supplemental programs Other (specify) _____	NO = 0, YES = 1 _ _ _ _ _ _
Do you feel that you know enough to raise a baby ?	0 No 1 Yes	_
Where do you plan to take your baby for well child care ?	0 MCV 1 Bainbridge 2 10th St. 3 Calhoun 4 Harris 5 Henrico East HD 6 Henrico West HD 7 Chesterfield HD 8 Petersberg HD 9 Other (specify) _____	_

Socio page 3 - 4

Participant # _ _ _ _ _

Part B: Other

Are you still seeing the father of your baby	0 No 1 Yes	___
Was this pregnancy planned ?	0 No 1 Yes	___
Did you use any form of birth control ?	0 No 1 Yes	___
If yes what form of BC ?	1 OCP 2 foam 3 condom 4 other _____	___

APPENDIX C

CONSENT FORMS/CONTROL AND EXPERIMENTAL GROUPS

Teen-Parent Infant Project

Consent
(Control)

Dear Young Mother:

1. Introduction

Bernardine A. Clarke, R.N., M.S. and Sarah S. Strauss, R.N., Ph.D., of the Medical College of Virginia are conducting a project for teenage mothers and their babies. We would like to ask you to participate. The purpose of the project is to help young mothers get to know their babies and adjust to being a parent.

If you consent to participate, you will be visited several times during the next few months. A nurse will visit you each of the following times: once during your clinic visit and at home at 13 and 24 months, after your baby's birth. Each visit will last approximately one hours. Activities during the visits will vary. For example, you will be asked questions about your feelings as a new parent, complete a questionnaire about people who help you, and talk about your baby's growth and development. The nurse will ask your permission to tape record so that the information will reflect your thoughts clearly. Each visit will be arranged at an agreed upon time. The nurse will also need to look at your clinic/hospital chart.

2. Benefits

You may find the program helpful to learn about your baby and about mothering. Also, you may find the home visit a beneficial time to ask questions or express concerns. At each home visit a Polaroid picture of your baby will be taken and a toy/book will be given to your baby.

We hope to learn more about the needs of young families through this project. So, your participation may be beneficial to other young mothers. You may be assured, however, that your identity will not be revealed at any time during the research. Information collected (such as on the forms you complete) will be identified by a number only. All information that identifies you or your baby will be held in strictest confidence.

3. Alternative Therapies

There are no alternative therapies. The care you receive now or in the future at the Medical College of Virginia or Health Department Clinics will not be affected by your participation.

4. Risks, inconviences or discomforts

Participating in this project presents no risks to either you or your baby.

Participation in this project is voluntary. You may withdraw from the parenting project at any time by contacting us.

5. Cost of participation
There is no cost to this program.

Bernardine A. Clarke R.N., M.S.

OR

Sarah S. Strauss, PhD. , R.N.

Subject Statement:

I have read the above description of the study and I voluntarily consent to participate. I understand that I may withdraw at any time. I have had the opportunity to ask questions and have been given a copy of this consent.

Signed :_____
Mother

Date:_____

Signed:_____
Mother's Parent or Guardian

Date:_____

Teen-Parent Infant Project

Consent
(Experimental)

Dear Young Mother:

1. Introduction

Bernardine A. Clarke, R.N., M.S. and Sarah S. Strauss, R.N., Ph.D., of the Medical College of Virginia are conducting a project for teenage mothers and their babies. We would like to ask you to participate. The purpose of the project is to help young mothers get to know their babies and adjust to being a parent and make other important decision about their health.

If you consent to participate, you will be assigned a special nurse. She will visit in the clinic before the baby is born and at your home when the baby is two weeks old, 11 months and 21 months old. Each visit will last approximately one hour. She will also see you in clinic when you and your baby come for well baby check-ups. The check-ups will last about 30 minutes. Another nurse will visit in the prenatal clinic and at 13, and 24 months. Activities during the visits will vary. For example, you will be asked questions about your feelings as a new parent, complete a questionnaire about people who help you, and talk about your baby's growth and development. Other activities you might expect would be teaching your baby to play, and developing some plans for the future. At several of the visits the nurse will ask your permission to tape record so that the information you share will reflect your thoughts clearly. Each visit will be arranged at an agreed upon time. The nurse will also need to look at your clinic/hospital record.

2. Benefits

You may find the program helpful to learn about your baby and about mothering. Also, you may find the home visit a beneficial time to ask questions or express concerns. At each home visit a Polaroid picture of your baby will be taken and a toy/book will be given to your baby.

We hope to learn more about the needs of young families through this project. So, your participation may be beneficial to other young mothers. You may be assured, however, that your identity will not be revealed at any time during the research. Information collected (such as on the forms you complete) will be identified by a number only. All information that identifies you or your baby will be held in strictest confidence.

3. Alternative Therapies

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Bernardine A. Clarke R.N., M.S.

OR

Sarah S. Strauss, PhD. , R.N.

Subject Statement:

I have read the above description of the study and I voluntarily consent to participate. I understand that I may withdraw at any time. I have had the opportunity to ask questions and have been given a copy of this consent.

Signed :_____
Mother

Date:_____

Signed:_____
Mother's Parent or Guardian

Date:_____

APPENDIX D

DISTRIBUTION OF LONELINESS SCORES

Distribution of Loneliness Scores