

Social Support and Abuse During the Pregnant Year:

A Comparison of Teens and Adults

By

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Approval Page

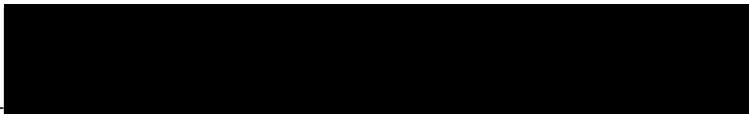
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Abstract

Title: Social Support and Abuse During the Pregnant Year:
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Little research has been done on what impact psychosocial factors have on teen births. The two factors explored in this study were abuse and social support during the pregnant year. The outcome criteria were birthweight and gestational age and results were considered separately and compared for adolescents and adults.

This study analyzed data originally collected in a prospective study designed to determine the relationships of sociodemographic, biomedical, psychosocial, and lifestyle behavior risk factors to maternal and infant pregnancy outcomes. Participants included 1932 pregnant women recruited from a metropolitan area in the northwest United States of these women, 559 were 13 to 19, and 1353 were 20 or over.

Teens were significantly more likely to have experienced abuse during the pregnant year than adults. Those who had been abused, both teens and adults were more likely to have low birth weight infants. Abuse during pregnancy was highest for the youngest of the adolescents while overall abuse was highest in the mid-adolescent group. Since little of statistical significance was seen in the social support data the manuscript prepared for publication is based on the abuse data. This document contains both the manuscript (in format for "Maternal Child Nursing") to be submitted for publication and the proposal literature and findings on social support.

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Introduction

In the United States today, teen pregnancy is an epidemic that has negative consequences for the adolescents and society as a whole. If the pregnancy has resulted in a child who is premature or has disabilities that require early medical intervention the consequences can be even greater. Despite this, little research has been done on what impact psychosocial factors have on teen births and controversy exists over whether or not adolescents inherently have higher risk pregnancies due only to their age.

The United States has higher teen pregnancy and birth rates than almost any other developed country (1). In 1990 there were an estimated one million pregnancies and 521,626 live births to women aged 15 to 19. The incidence of teen pregnancy varies from state to state from as low as 56.4 per 1,000 in North Dakota to 255.2 per 1,000 in the District of Columbia (1-4).

Nurses are often in the position of caring for adolescents, throughout their pregnancies, in a variety of settings. The support, protection, and teaching they receive from nurses may be the only resource they can depend on during a life-changing time. It is important therefore, for nurses to be aware of factors that can influence the course and outcomes of pregnancy in adolescents. A frighteningly prevalent factor is abuse.

Review of Literature

Controversy Over Age-based Outcome Differences:

The question of whether or not adolescents inherently have poorer birth outcomes is in dispute. Several studies have tried to control for confounding factors and determine age-based risk for teen pregnancy, with differing results. In 1993 Lubarsky et al studied a

group of 261 nulliparous women under age 15 matched with a randomly selected cohort of 261 nulliparous control women aged 20-29 (5). The controls were matched for race, infant gender and year of delivery. Multiple gestations and delivery immediately upon admission to the hospital were exclusion criteria. The population consisted primarily of low income, urban women. The two groups were found to have similar neonatal birth weights, equivalent use of epidural anesthesia, and no significant difference in their length of labor. The younger group, while receiving more magnesium sulfate for seizure prophylaxis, actually had less use of oxytocin augmentation during labor and significantly lower cesarean section and episiotomy rates.

A study from Satin, et al. (6) does not *entirely* concur though they had similar outcomes. Over a four year span they collected data from 16,512 nulliparous women and divided them into three study groups: middle school (11 to 15 years old, N = 1,622), high school (16 to 19 years old, N = 9,300) and women 20 to 22 years (N = 5,590) at age of delivery. There was a significantly greater number of black women in the two younger groups and significantly less prenatal care (defined by at least one prenatal visit) among the middle school group. The oldest group was found to have a higher level of cesarean delivery, and greater use of oxytocin augmentation of labor, but a lower rate of pre-eclampsia. There were no significant differences across the age groups for stillbirth or neonatal deaths. Where Satin's results differed from Lubarsky's was in the incidence of low birth weight. While rates for those between 16 and 22 were nearly identical, women less than 16 had a significant increase in the incidence of birth weights under 2,500 grams. Those in the middle school age group also had a significantly higher rate of

need for special nursery care for their infants.

Fraser, Brockert, & Ward in their 1995 study disagree completely (7). They studied 134,088 white, nulliparous women, who had single child deliveries between the years of 1970 to 1990 in Utah. While they acknowledge that teen mothers are more likely to be non-white, poor, less educated, unmarried, and less likely to receive prenatal care they attempted to control for these factors in their study so as to obtain results that reflect age as being the primary significant difference between their groups. All the subjects were white, and the confounding effects of marital status, educational level, and adequacy of prenatal care were eliminated by cross classifying births accordingly. They state that this should leave differences attributable to intrinsic biological risk associated with young age as the only variable. Despite having been selected as having the most favorable sociodemographic characteristics (i.e., married, adequate prenatal care, and age appropriate education) adolescents still had significantly increased incidence of both low birth weight and prematurity. This trend did not change throughout the years of the study. For those with lower socioeconomic status, the differences between age groups lessens, suggesting that age specific differences are a greater factor when environment is more favorable. They conclude that while efforts to improve the sociodemographic environment of teen pregnancy can decrease the incidence of poor outcomes, it will not eliminate the problem.

Goldberg and Klerman (8) respond to this study with three questions and what they think may be the answers. First, why does this dispute previous findings? They conclude that the relatively low teen pregnancy rate and homogeneously white

population in Utah biases the sample. Being a teen mother at all, especially one in "ideal" circumstances, is highly unusual in Utah. Second, they question the clinical validity of these findings, arguing the lack of ability to generalize to a non-Utah population. Finally, they question the biological validity of the study since, adolescents have younger and healthier ova and should have complete pelvic growth by two years past menarche.

The majority of the available research indicates that adolescents are not at greater risk for poor pregnancy outcomes based only on their physical and biological factors. Therefore other factors must contribute to their risk of poor pregnancy outcomes.

Domestic Violence During The Pregnant Year:

Incidence and Risk. Each year approximately 1.8 million women in the US are physically assaulted by their partners. According to a 1994 MMWR report, the rates of violence are consistently higher for young, unmarried women with less than a high school education and who had unintended pregnancies (3). An Australian study studied a sample of 1014 women who voluntarily filled out questionnaires at their prenatal clinical appointments. A total of 5.8% of the women stated they had been abused during their pregnancy, which closely matches that of the MMWR sample. However, nearly twice that many (11.2%) reported abuse in the last year. They also found a negative correlation between education and abuse. Adolescents were more likely to experience abuse than older women and suggest that this may result from child abuse in those adolescents still living in a parent's home in conjunction with partner abuse (9).

Many of the recent studies are from McFarlane, Parker and Soeken. In their 1995

publication they reported on the study of 1203 women from Texas and Maryland (10). They found an overall incidence of 16% of women had been abused during pregnancy. Possible reasons for this higher rate may include that 94.1% of their sample was below poverty, only 63.6% were married, and 29.6% were adolescents. This may also be because they asked about abuse several times during the pregnancy, giving each woman an opportunity to report abuse that had occurred since the previous visit. There was a significantly higher rate of abuse coming from partners (or ex-partners) than from any other source. One frightening statistic that they have shown is the significant increase in homicide risk factors for those abused during pregnancy as compared to those only abused outside of pregnancy.

Gielen, O'Campo, Faden, Kass, & Xue, studied 275 women drawn from the pregnant population receiving care at a large urban teaching hospital (11). They found 19% had been abused in the prenatal period. Being older and having strong social support from friends were protective factors. Gielen, et al (11) and Stewart (12) both point out the likelihood of increasing violence in the postpartum period and warn care providers to be alert for this also.

Abuse Among Adolescents. Parker, et al, with data from the study cited above (10), reported a significantly higher rate of abuse in the past year for adolescents (31.6%) than in the adult sample (23.6%). Abuse during the pregnancy was established both from initial interviews and repeat interviews during the second and third trimester. Again, the adolescents had a significantly higher rate of abuse (21.7%) during the pregnancy than the adult sample (15.9%). Severity of abuse was not significantly different between the

two groups (13).

Riddell reports that 29% of all high school girls report having been physically abused at least one time in their lives (14). The total incidence of high school girls reporting sexual abuse was 27%, while 7% of the girls reported having been sexually abused within the last year. While this report does not include statistics specific to abuse during pregnancy, as previous authors have cited the incidence of abuse during pregnancy increases as age and education level decrease.

Impact on Pregnancy Outcomes. Newberger, et al. postulated on direct and indirect reasons for the association between abuse and poor birth outcomes (15). The most direct way abuse could lead to low birth weight is abdominal trauma. Abdominal trauma can lead to placental abruption, premature rupture of membranes, early onset of labor, fetal fractures, rupture of maternal internal organs, or maternal pelvic fractures. Indirect effects of abuse may include: psychological stress, isolation and inadequate access to health/prenatal care, increases in health risk behaviors such as smoking or alcohol and illicit drug use, or inadequate nutrition as a consequence of financial privation. They emphasized the need for support and referral for women at risk to include shelter, medical and nutritional support.

Bullock and McFarlane's 1989 study was one of the first to study the effects of abuse on pregnancy outcomes (16). Controlling for smoking and alcohol consumption, they found significantly higher rates of low birth weight deliveries among abused women in the private hospital portion of their sample (N=300). In the public hospital portion (N=289) they noted no significant effect from abuse on birth weight. They hypothesize

that this is due to the large number of confounding factors, such as low socioeconomic status, that exist in the public hospital population, making it difficult to isolate the effect of battering.

The most recent report from Parker, McFarlane, & Soeken's data (10, 13) studied the effects of physical and sexual abuse on infant birth weight in both teen and adult pregnancies (17). They found that adolescents have a significantly higher rate of abuse in pregnancy, but adults reported more severity of abuse. Both groups of abused women entered prenatal care later than their non-abused counterparts. A significant proportion of the variability of birth weight was explained by abuse during pregnancy for both adolescents and adults.

Adolescent Development

Many of the references cited thus far have broken their sample into age based groups. Often these groups were simply either adolescents, aged 19 and under, and adults. However, several studies broke the groups down even further by separating young adolescents, those 13-15, from their older counterparts, aged 16-19. The following section will present a justification for these stratifications as well as a framework for the presentation of the data in this report.

The literature clearly outlines three adolescent developmental stages and four tasks that are as characteristic of adolescent development. The three stages of adolescent development include: (a) early adolescence, approximate ages 10-13, or middle school years; (b) middle adolescence, approximate ages 14-17, or high school years; and (c) late adolescent, approximate ages 18-21, after high school (18-21). The four tasks

adolescents must accomplish are: (a) achieving independence from parents, (b) adopting peer codes and lifestyles, (c) attention to and acceptance of one's body image, and (d) establishing identity, sexual, vocational, and moral.

Early adolescents take the first steps away from parental control but, often lacking an alternative support group, find themselves feeling alienated and alone. They may be preoccupied with self and acutely aware of emerging sexual anatomy and emotions. It is not uncommon at this stage to develop 'best' friends and "young teenage girls may develop deep crushes" (18, p.42). Goals set during this period may be unrealistic or idealistic, and lack impulse control. Thought processes tend to be concrete and they often lack the ability to perceive consequences to their actions.

"Middle adolescence is characterized by an increased scope and intensity of feelings, as well as by the rise in importance of peer group values" (18, p. 43). Conflicts erupt over control and self determination and the perceived need to be emancipated from parental control. At this stage there is a capacity for perceiving future implications of current acts, but concrete thought is often reverted to in times of stress. A feeling of immortality and omnipotence can lead to risk taking, evidenced by both sexual and substance use experimentation, that becomes prevalent at this stage.

In late adolescence, the body changes of puberty are usually complete. Personal values and identity are established and emancipation is completed. The peer group image is receding in importance in favor of individual friendships. Thinking about the future is rational and realistic and intimacy and commitment are sought rather than romantic fantasies.

Conceptual Framework

Several studies have found an increase incidence in low birth weight and pre-term births among adolescents. Studies have also reported a higher rate of abuse in adolescents than adults during pregnancy, and abuse during pregnancy has been related to both pre-term birth and low birth weight. Therefore, it is hypothesized that abuse has been an unmeasured factor contributing to low birth weight and premature births among adolescents. In an effort to test this, we asked: what is the incidence of abuse in pregnant adolescents, and what is the impact of abuse on birth outcomes?

Research Methods

Design

This study analyzes data originally collected in a prospective study designed to determine the relationships of sociodemographic, biomedical, psychosocial, and lifestyle behavior risk factors to maternal and infant pregnancy outcomes (22). This study, the Biopsychosocial Model to Predict Low Birth Weight and Adverse Pregnancy Outcomes, was funded by the National Institute of Nursing Research.

Settings & Participants

Participants included 1932 pregnant women recruited from a metropolitan area in the northwest United States. Pregnant women were enrolled from one of six prenatal clinics, three of which were affiliated with a University Perinatal Program. Women were recruited as close as possible to their first prenatal visit. Inclusion criteria included the ability to speak English, and having a first prenatal visit before the 28th week of pregnancy. The questions eliciting the presence of abuse were asked, on the average,

during the 16th week of pregnancy. Of these women, 559 were 13 to 19, and 1353 were 20 or over.

Instruments

Abuse. The Abuse Assessment Screen (AAS) developed by Parker and McFarlane was used to measure abuse (23). It consists of the following questions: a) Within the last year have you been hit, slapped, kicked, or otherwise physically hurt by someone? b) Since you've been pregnant, have you been hit, slapped, kicked, or otherwise physically hurt by someone? and c) Within the last year, has anyone forced you to have sexual activities? The AAS questions have been used in numerous studies (10, 13, and 17), including both adults and adolescents, and significant criterion-related validity has been established for the three questions used in this study. Women were considered abused during the pregnant year if they answered yes to any of the three questions.

Birth Outcomes. Outcome data were collected by medical record and birth certificate review. The values considered for this project include actual birth weight in grams and weeks gestation. Low birth weight (LBW) is defined as <2,500g. Pre-term birth is defined as <36 weeks gestation.

Procedures

Participation in the study was voluntary. Written informed consent was obtained from each participant. The study purpose was completely explained to all subjects. All participants were interviewed individually and told they could choose to not respond to any questions at their discretion. Confidentiality was maintained by the assignment of a

study identification number to all data records and all records were kept in locked file cabinets. This study was reviewed and approved by committees on human research at all participating facilities. Data was collected by research assistants (RA's) who were graduate nursing students. The RA's achieved a 95% inter-rater reliability.

Results

The difference in reported abuse between young adolescents and adults was remarkable. Adolescents on the whole were significantly more likely to experience abuse during pregnancy than women 20 or over. In the entire teen population, 37.6% reported having been abused in the past year as compared to only 22.6% of the adults. When this is broken down into developmental-stage based age groups, early adolescents aged 13 to 15 in the study were nearly twice as likely, 41.4% to have suffered abuse during the pregnant year as the adult group ($p < 0.001$). In the group with the highest rate of reported abuse, mid-adolescents ages 16 to 17, the abuse rate of 51.3% more than doubles that of the older population ($p < 0.001$). Even those in late adolescence experience more abuse than their adult counterparts (Figure 1). When broken down even further, the highest abuse is clearly seen in the 17 year old group with a dramatic drop at age 18 (Figure 2).

As several previous studies have noted, we found no statistically significant differences in the rates of poor birth outcomes between the age groups. However, those in the 13-15 year old group did have the highest percentage of LBW (Figure 3). In every age group the incidence of LBW was higher in those who had been abused. (Figure 4). Although much less likely to have been abused during the pregnant year, adults

experiencing abuse were significantly more likely to have LBW infants ($p=0.05$).

The overall incidence of pre-term birth was low in this sample (Figure 3). Again, though no statistically significant difference is seen between abused and not abused women, there is a higher incidence of pre-term birth in abused adolescents both over all, and in the early and mid-adolescent groups. It is interesting that for both late adolescents and adults, though not statistical, this is inverse and those reporting abuse were less likely to deliver pre-term (Figure 5).

Discussion

The highest incidence of abuse occurred among the early to mid-adolescents, women who are likely to be still living in their parents' home, and possibly experiencing child abuse in the home. Compounding this in the middle adolescent years, ages 16 to 17, is the strong influence of peers and the high prevalence of risk taking and experimental behaviors. It seems logical that the sudden drop in abuse at age 18 is a result of women moving out of the home and therefore away from the additive danger of child abuse. Those in late adolescence also have a greater ability to make decisions and to anticipate the consequences of their behavior thereby avoiding potentially dangerous situations.

Why did abuse, while less prevalent in the adult women, have a more significant impact on their birth outcomes? The reports of abuse in the teen population undoubtedly include child abuse, a factor that would increase the incidence in relation to the adult figures but does not explain why it would have less impact. Perhaps for adolescents, the abuse is considered more as a normal part of every-day life and therefore not as

influential. Another factor may be the severity of the abuse was greater in the adult population, an unmeasured factor in this study, but reported in another (17).

It is clear that these adolescent women reported more abuse during the pregnant year than adults. This supports what previous authors have said regarding the increased prevalence of abuse in those below the age of 20 and having less than a high school education. Previous researchers have shown that for both adolescents and adults, abuse decreases their likelihood of obtaining prenatal care, increases the risk of harm to mother, and increases the risk of low birth weight and prematurity.

The frequency of abuse in teen pregnancy should be a warning to any nurse who sees pregnant adolescents. All nurses who have occasion to interact with pregnant adolescents or teen moms should be ready to assess for and anticipate the effects of abuse on their patients. Though this study does not indicate that abuse has a statistically significant impact on teen birth outcomes, the clinical significance is clear. Abuse is likely something pregnant adolescents are experiencing. If you care for pregnant adolescents, in an outpatient prenatal setting, in labor and delivery, postpartum, or in primary care settings such as a pediatrician's office or school, keep the risk of abuse in mind and be prepared to assess your patients at risk. The AAS used to identify abuse in this and other studies (23) can easily be applied in a variety of clinical settings and is a tool concrete enough to be understood by adolescents at any developmental level.

With the likelihood that child abuse is occurring, the question of whether or not to report the abuse becomes an issue. Be aware of abuse reporting laws in your state and be prepared to make the difficult decisions to report or not any abuse you identify. If you

feel that reporting the abuse will endanger your patient or be an unacceptable breach of confidentiality, provide her with information on obtaining help, such as shelter information and hotline numbers. You should be prepared to assist her in making a plans to stay safe, and always be certain that the time she spends with you is safe. Most importantly, keep in mind the importance of your relationship with her, knowing the importance of health care during pregnancy, and that you may be the only safe source of support.

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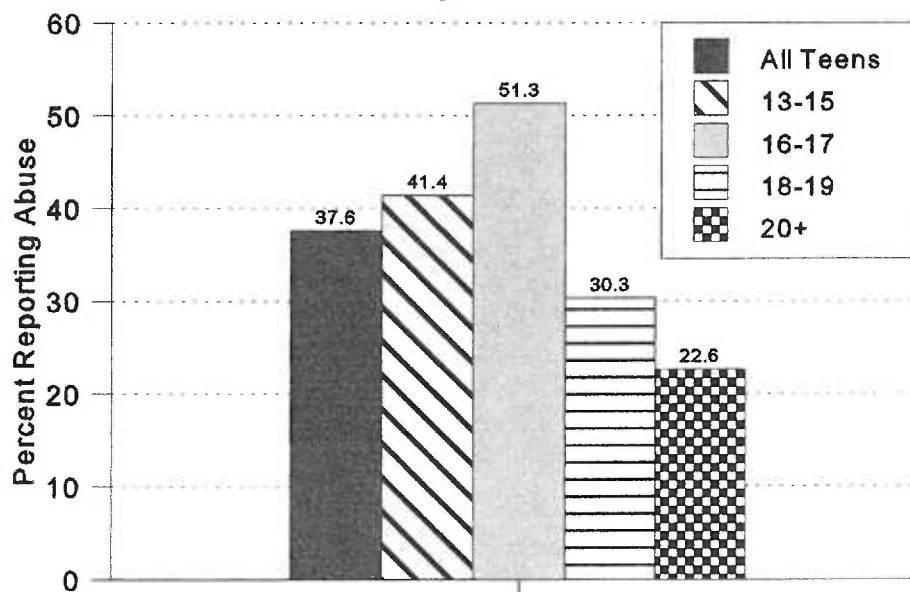
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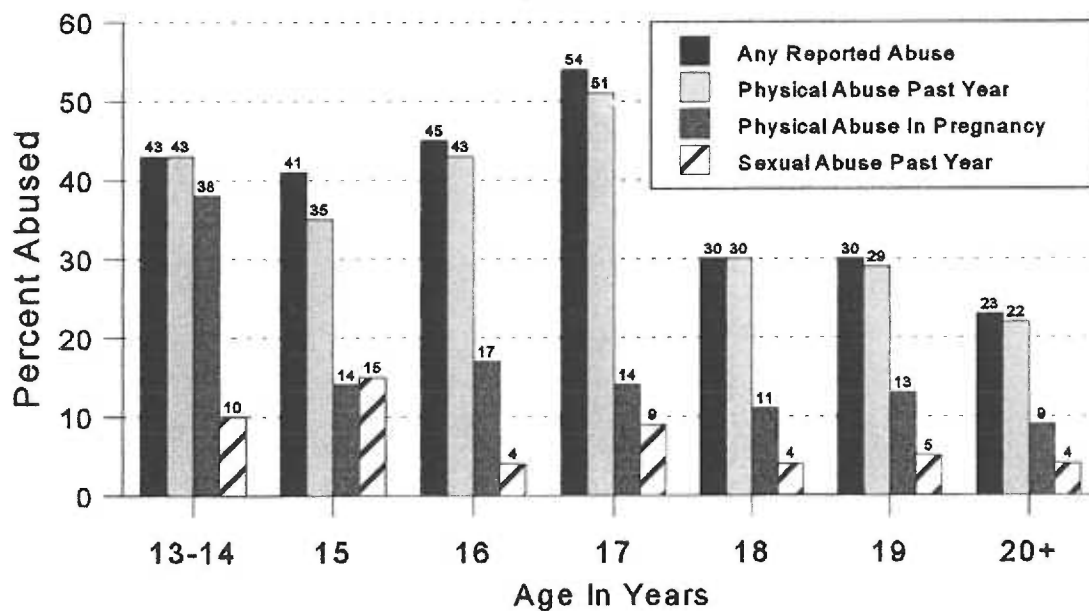
Abuse Incidence by Age Group

Figure 1



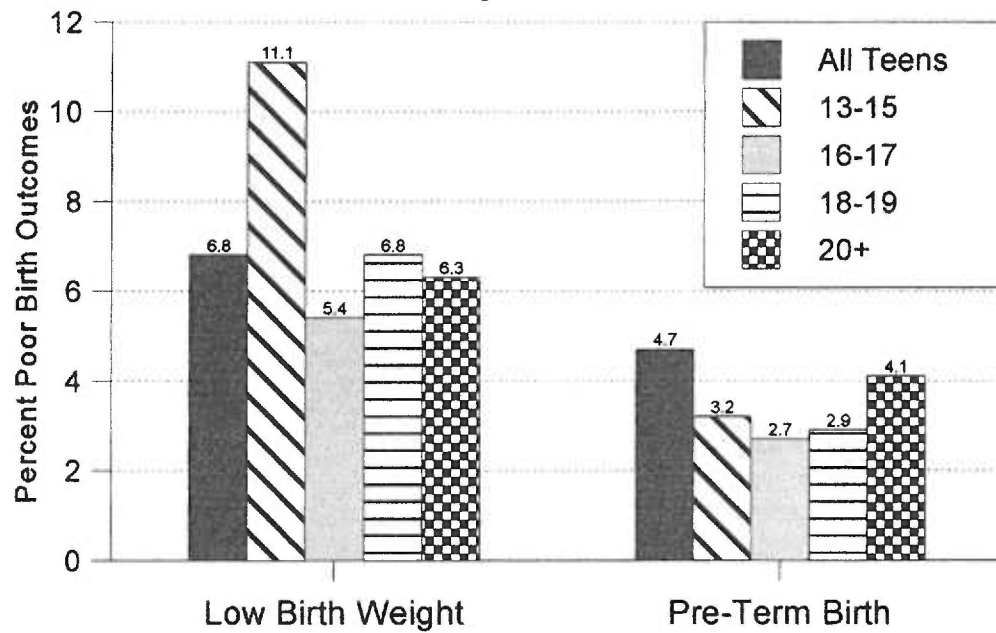
Incidence of Abuse by Age

Figure 2



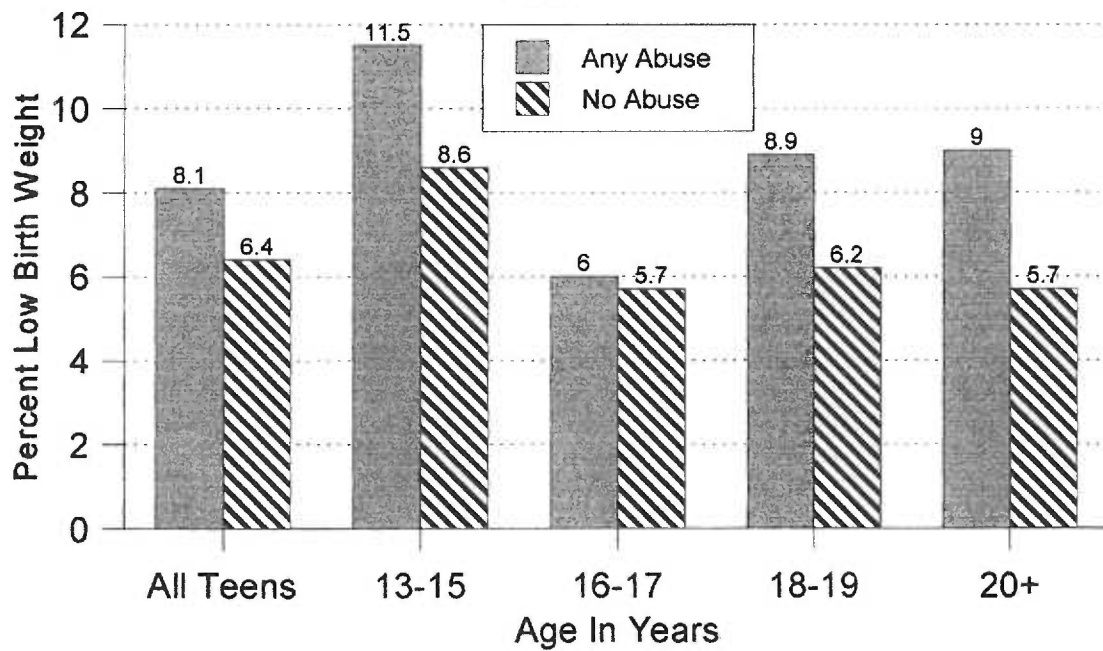
Birth Outcomes by Age

Figure 3



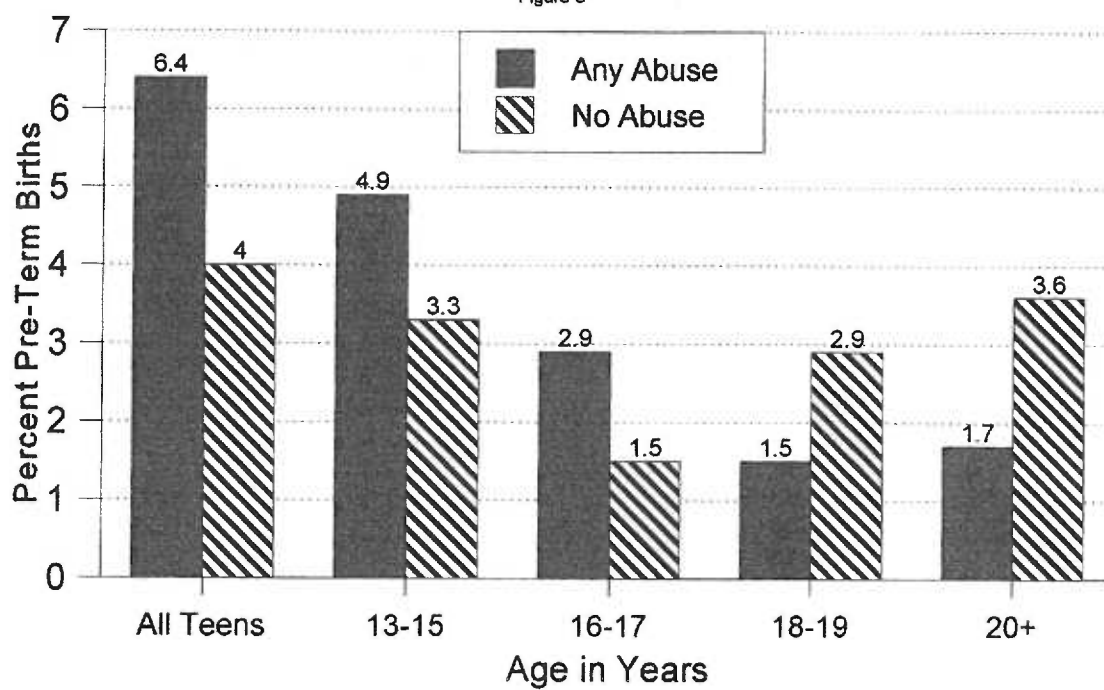
Low Birthweight for Abused and Unabused Women

Figure 4



Pre-Term Births for Abused and Unabused Women

Figure 5



Appendix A
Prenatal Psychosocial Profile

Prenatal Psychosocial Profile

Assessment of Support

This next set of questions asks how satisfied you are with the amount of support you receive from your partner and/or other people.

A19. First of all, do you have a partner?

☐ 0. No (*ask only about support from others*)

☐ 1. Yes

I will read you a list of statements describing types of support. On a scale of 1 to 6, with 1 being very dissatisfied and 6 being very satisfied, I want you to tell me how satisfied you are with the support you receive from (*your partner/other people*).

	Partner						Other People					
	Very Dissatisfied			Very Satisfied			Very Dissatisfied			Very Satisfied		
A19A. Shares similar experiences with me	1	2	3	4	5	6	1	2	3	4	5	6
A19B. Helps keep up my morale	1	2	3	4	5	6	1	2	3	4	5	6
A19C. Helps me out when I'm in a pinch	1	2	3	4	5	6	1	2	3	4	5	6
A19D. Shows interest in my daily activities and problems	1	2	3	4	5	6	1	2	3	4	5	6
A19E. Goes out of his/her way to do special or thoughtful things for me	1	2	3	4	5	6	1	2	3	4	5	6
A19F. Allows me to talk about things that are very personal and private	1	2	3	4	5	6	1	2	3	4	5	6
A19G. Lets me know I am appreciated for the things I do for him/her	1	2	3	4	5	6	1	2	3	4	5	6
A19H. Tolerates my ups and downs and unusual behaviors	1	2	3	4	5	6	1	2	3	4	5	6
A19I. Takes me seriously when I have concerns	1	2	3	4	5	6	1	2	3	4	5	6
A19J. Says things that make my situation clearer and easier to understand	1	2	3	4	5	6	1	2	3	4	5	6
A19K. Lets me know that he/she will be around if I need assistance	1	2	3	4	5	6	1	2	3	4	5	6

Prenatal Psychosocial Profile

A35A. Within the last year, have you been hit, slapped, kicked or otherwise physically hurt by someone?

- ☐ 0. No
☐ 1. Yes

A35B. Since you've been pregnant, have you been hit, slapped, kicked, or otherwise physically hurt by someone?

- ☐ 0. No
☐ 1. Yes

A35C. Within the last year, has anyone forced you to have sexual activities?

- ☐ 0. No
☐ 1. Yes

A20L. Did this interview bring up any concerns or questions that you would like to discuss with your prenatal care provider?

- ☐ 0. No
☐ 1. Yes

A20M. Would you like me to approach your prenatal care provider with this concern or question for you?

- ☐ 0. No
☐ 1. Yes

Offer participant a card with community resources for abused women.

Appendix B
Outcome Measures

Outcome Measures

Labor & Delivery Complications and Use of Anesthesia & Analgesia

C49. Onset of labor spontaneous

- ☐ 0. No (labor induced)
☐ 1. Yes (labor spontaneous)

C50. Delivery assisted (vacuum, forceps)

- ☐ 0. No
☐ 1. Yes

C51. Cesarean delivery

- ☐ 0. No
☐ 1. Yes (unscheduled)
☐ 2. Yes (scheduled)

C52. First stage of labor longer than normal (*For primiparas greater than 22.9 hours for first stage; for multiparas greater than 13.1 hours for first stage*)

- ☐ 0. No
☐ 1. Yes
☐ 2. Not applicable

C53. Second stage of labor longer than normal (*For primiparas greater than 105 minutes for second stage; for multiparas greater than 32 minutes for second stage*)

- ☐ 0. No
☐ 1. Yes
☐ 2. Not applicable

C54. Epidural analgesia

- ☐ 0. No
☐ 1. Yes

C55. Narcotic analgesia

- ☐ 0. No
☐ 1. Yes

C56. High blood pressure during labor/delivery (*>139 over 89 over a period of at least 2 hours*)

- ☐ 0. No
☐ 1. Yes

C56a. High blood pressure treated with Magnesium Sulfate?

- ☐ 0. No
☐ 1. Yes

C57. Membranes ruptured longer than 24 hours before delivery

- ☐ 0. No
☐ 1. Yes

Outcome Measures

Study ID# _____

SOURCE. Source of outcome data
☐ 1. Medical records
☐ 2. Birth certificate $\Rightarrow \Rightarrow$ Delivery Hospital _____

OUTCOME. Outcome Status
☐ 1. Live birth
☐ 2. Still birth
☐ 3. Abortion
☐ 4. Maternal death
☐ 5. Request to withdraw
☐ 6. Lost to follow-up
☐ 7. Other _____

ORDER. Birth order
☐ 11. Single birth
☐ 12. First of twins
☐ 22. Second of twins

C35. Number of prenatal visits this pregnancy? _____

Infant birthweight

C36. Actual birthweight in grams _____

Infant Complications

C38. Actual weeks gestation _____

C40. Actual one minute Apgar score _____

C42. Actual five minute Apgar score _____

C44. Crown/heel length in centimeters _____

C45. Head circumference in centimeters _____

C46. Intrauterine growth retardation

- ☐ 0. No
☐ 1. Yes

C47. Meconium staining at delivery

- ☐ 0. No
☐ 1. Yes

C48. Admit/transfer to Neonatal Intensive Care Unit

- ☐ 0. No
☐ 1. Yes-Transient admit $\leq 3-4^{\circ}$
☐ 2. Yes-Prolonged admit $> 4^{\circ}$

Complete other side

Appendix C
Sociodemographic Survey

Sociodemographic Survey

Ask Only if Question #9 was Yes.

A10. Does the work involve heavy, physical labor?

☐ 0. No

☐ 1. Yes

A11. Is the work stressful?

☐ 0. No

☐ 1. Yes

A12. Do you have to commute more than 30 minutes one way to work?

☐ 0. No

☐ 1. Yes

A13. How many times have you been pregnant, including this pregnancy? _____.

A14. How many times have you given birth, including any still born births? _____.

A15. How far along are you today? (in weeks) _____. (Lifestyle Behavioral Risk Factor)
(If not sure, complete after exam)

A16. Have you had any prenatal care for this pregnancy prior to today's visit?

☐ 0. No

☐ 1. Yes (if yes, record dates and number of visits) _____

A16A. Record: Weeks gestation at first visit _____

A17. Was this pregnancy planned?

☐ 0. No

☐ 1. Yes

☐ 2. Yes and No (please explain) _____

Sociodemographic Survey

Study ID# _____

Date _____

- A1. Today's Date ____ / ____ / ____
Mo Day Year
- A2. Date of Birth ____ / ____ / ____ Age _____
Mo Day Year
- A3. What is your current partner status? Are you (*read choices*):
- ☐ 1. Married living with your partner
 - ☐ 2. Married living alone
 - ☐ 3. Single living with your partner
 - ☐ 4. Single living alone
- A4. How many years of education have you completed? (*GED = 12 years*) _____
- A5. Did you drop out of high school?
- ☐ 0. No
 - ☐ 1. Yes
- A6. What is your race?
- ☐ 1. Caucasian
 - ☐ 2. African American
 - ☐ 3. Native American
 - ☐ 4. Hispanic
 - ☐ 5. Asian
 - ☐ 6. Other (*please specify*) _____
- A7. What is your total family income each month? _____
- A8. How many people currently reside in your household? _____
- A9. Do you work outside the home?
- ☐ 0. No (*Go to question A13*)
 - ☐ 1. Yes (*Go to question A10*)

Complete other side

Appendix D
Social Support Literature and References
From Original Proposal

Social Support and Pregnancy

It has been suggested that pregnancy outcomes can be improved by adequate social support during pregnancy. Social support can act as a buffer to the stresses many women experience during pregnancy, and be a factor in a woman's self-esteem and self-efficacy (Curry, 1990). This support may be in the form of spousal or partner support or may come from care providers or other significant persons.

Impact on Pregnancy in General. In 1990 Oakley, Rajan, & Grant reported their study of 509 women who had previously given birth to a low birth weight (LBW, <2500g) baby. The women were all pregnant again and were recruited for the study at an average of six weeks gestation. The average age of the women was 28 years old. They were randomized into two groups: an intervention group that received a social support intervention along with standard antenatal care and a control group that received only standard antenatal care. The groups were matched for maternal age, number of previous LBW births, smoking, live-in partner or not, partner's employment, and race. They considered their population to be "highly disadvantaged", most being of low socioeconomic status. Twin gestations were excluded. The mean gestational age at birth was the same for both control and intervention groups while the birth weight was an average of 38g higher for the experimental group. Mothers in the experimental group were significantly less likely to have antenatal hospital admissions, and were more likely to have spontaneous onset of labor and spontaneous vaginal delivery. The percentage of babies sent to the neonatal unit was the same in both groups. These authors concluded that while there is advantage in social support, it cannot outweigh the disadvantages of

poverty and (more importantly) smoking.

In a sample of 129 low income pregnant women, Collins, Dunkel-Schetter, Lobel, & Scrimshaw (1993) examined the effects of prenatal social support on maternal and infant health. Part of a larger study on psychosocial factors in pregnancy, the subjects were interviewed on multiple occasions throughout pregnancy. Women's satisfaction with the support they were receiving was computed both over all and in four subcategories: baby's father support, health care provider support, network resources, and depression. Women who had more support had babies with higher Apgar scores and fewer difficulties in labor. Women with more extensive social networks delivered babies of significantly higher birth weight.

Hagoel, et al. (1995) hypothesized that undesirable pregnancy outcomes were only partially dependent on biomedical risk during pregnancy and that they could be mediated by social activity and perceived stress. The study sample consisted of 233 Jewish women planning to deliver at the Carmel Hospital in Haifa, Israel. The women filled out questionnaires in their second trimester of pregnancy and outcomes were collected from medical chart records. All the women were married. The actual number of negative outcomes in the sample was low making results somewhat questionable. However, women with low scores for social ties were at 3.2 times greater risk for medical problems at delivery than those with high scores. The variable of social ties was statistically significant in explaining negative pregnancy outcome.

Social Support and Teen Pregnancy. There is not a great deal written on the effects of social support on teen pregnancy. May (1992) concludes that low income

pregnant teens have significantly smaller social networks and less emotional and tangible support. Burke & Liston (1994) observed that teens view the father of the baby and their own mothers as the most significant source of support in their pregnancy, but fail to say if that support effected the pregnancy outcome.

The only article found that actually links social support in teens to pregnancy outcome is Turner, Grindstaff, & Phillips' (1990) Canadian study of 251 pregnant teens. This was a longitudinal prospective study of pregnant adolescents living in Middlesex County in southwestern Ontario. Their mean age was 17.6 years old, and 22% were 16 or younger. The subjects were interviewed twice: once as soon as possible after pregnancy was first confirmed and again four weeks postpartum. Subjects were only referred to the study after their prenatal care provider had obtained informed consent. They readily admit that generalizability of their study is limited by their inability to know how many refused to participate or chose to terminate their pregnancy and thus were not included in the study.

Social support from family and friends was measured by a scale with established reliability and validity, the Provisions of Social Relation Scale. For measuring husband/boyfriend support they created a Likert scale of their own. Only two items were correlated significantly with birth weight (which was controlled for gestational age): smoking and support from the family. Smoking as a predictor of lower birth weight was notably less significant than the positive effects of family support. Neither support from friends nor partner support made any statistical difference.

Summary. Although the type of social support, outcome criteria and statistical

significance varies from report to report, similar conclusions are found. Social support has some positive impact on birth outcome. In teens the only significant support appears to be that of a supportive family.

Conceptual Framework

The concept of social support is defined as perceived encouragement, positive interaction and assistance from another person or persons during a time of physical, mental, emotional, or spiritual need. This has been documented as an important factor in health outcomes and as having a positive effect on birth outcomes. Measuring perceived social support in prenatal patients may provide us one more piece of the puzzle needed in order to improve birth outcomes.

Instruments

Social Support. Data on social support was obtained by the PPP (Appendix A). The PPP includes the 11 question Support Behaviors Inventory (SBI) (Brown, 1986). The SBI scale asks women to indicate how satisfied they are with perceived support from partner and others. The scale includes items such as “keeps up my morale”, “lets me know I am appreciated for things I do”, and “takes me seriously when I have concerns”. Women were asked to rate first their partner (if applicable) and then other people on a Likert-type scale of 1 (very dissatisfied) to 6 (very satisfied) for each item. Item responses were totaled to give a total score for partner and a total score for other people. The “other people” category is not broken down into separate groups for family, friends or others. Brown's 1996 study showed a Cronbach's alpha for partner support of 0.97, and a Cronbach's alpha for support from others of 0.98.

Evidence for construct validity was reported by Curry, Campbell, and Christian (1994). As hypothesized, support correlated positively with self-esteem, and negatively with stress. Decreased support was correlated with increased stress and self-esteem was positively correlated with support. In the initial study of ninety-one women Cronbach's alpha for both partner support and support from others was 0.90 or above. A second study was conducted in order to obtain test-retest reliability. The second sample contained eighty-eight women, demographically similar to those in the first testing. The correlations were 0.78 for partner support and 0.84 for support from others. This data suggests that the PPP is consistent, repeatable and stable.

References

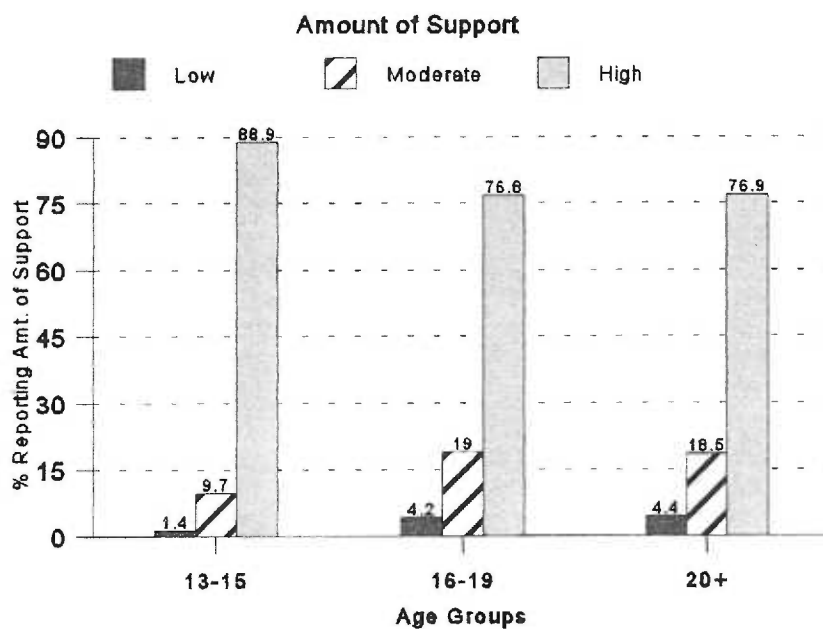
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Appendix E

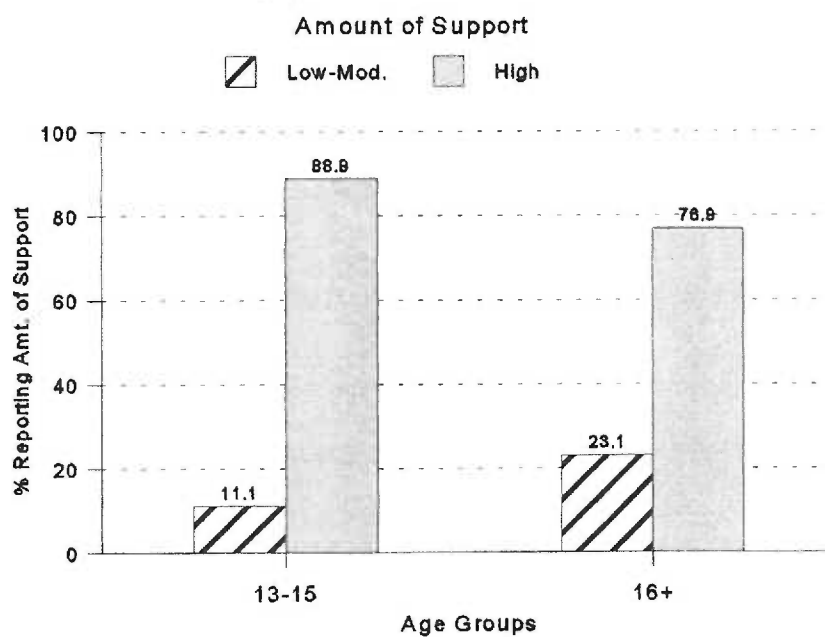
Social Support Data

Presented in Masters' Research Project Defense

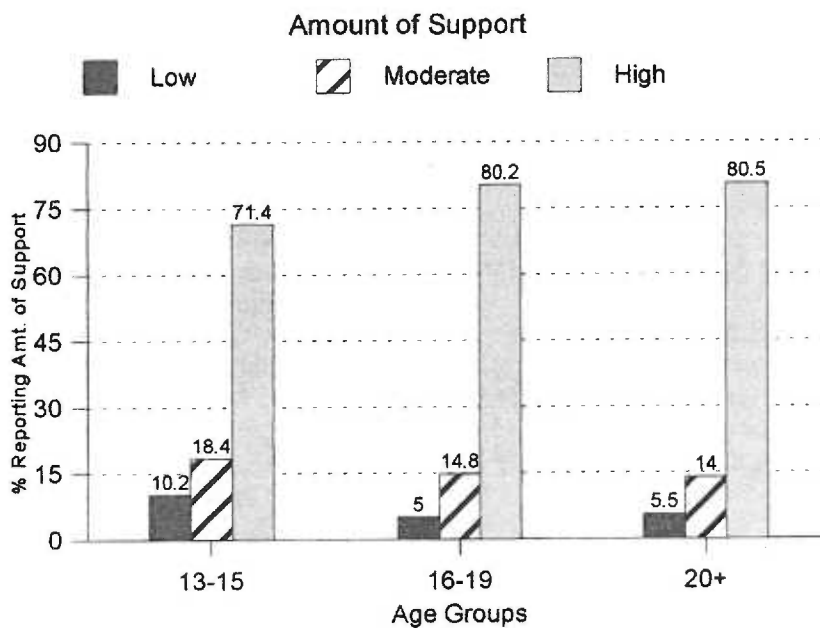
Support From Others



Support From Others



Support From Partner



Support From Partner

