

## Social Support and Pregnancy

### A Comprehensive Review Focusing on Ethnicity and Culture

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In the 1970s, following the publication of influential papers by authors such as Caplan (1974), Cassel (1976), and Cobb (1976), investigators began to study social support (Norbeck, 1988). One oft-cited early study highlighted the potential importance of social support in pregnancy by considering social support as an element of "psychosocial assets" and showing that pregnant women with a combination of high life stress and few psychosocial assets experienced more pregnancy complications than did women with low life stress and a higher level of psychosocial assets (Nuckolls, Cassel, & Kaplan, 1972). Since then, a number of studies have attempted to clarify the role of social support in pregnancy outcomes.

Social support in pregnancy is a particularly promising area of investigation because pregnancy and birth are clearly biopsychosocial events. Psychosocial factors such as stress or social support have been shown to significantly influence pregnancy outcomes, independent of biomedical factors or variables (Lobel, 1994; Elbourne & Oakley, 1991). These and other socioenvironmental influences are now recognized by scientists in multiple disciplines as potent variables in understanding maternal and infant health. In addition, pregnancy is more easily studied than many health events. It is of standard and reasonably short duration, and it has a number of objectively defined and reliably measured outcomes, such as infant birthweight or neonatal complications. Research on pregnancy is also

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optimized by the large numbers of women who become pregnant and deliver infants.

Although the role of social support in pregnancy outcomes has been empirically investigated, little attention has been paid to theoretical frameworks or conceptual issues that might guide research on this issue. In particular, the roles of the couple, the family, and the woman's sociocultural context have received relatively little systematic research attention. Inasmuch as pregnancy generally evolves in the context of a continuing relationship between a man and a woman, each of whom has a social network, it is inherently an event involving families. Furthermore, the couple and their families exist in a cultural milieu, wherein cultural values and norms influence their attitudes and behavior. Nevertheless, pregnancy is too often conceptualized as though the woman were an isolated individual.

This chapter reviews past research on social support during pregnancy in two sections: (1) research on social support and birth outcomes and (2) research linking social support to maternal emotions and behavior in pregnancy. With these reviews as an empirical basis clearly documenting the importance of support in pregnancy, a third section of the chapter examines ethnic and cultural issues integral to understanding social support processes in pregnancy.

Though there is a growing awareness of the importance of culture to fully understanding psychological processes in general (Markus & Kitayama, 1991), research on pregnancy has not yet incorporated theoretical approaches that conceptualize cultural variables.

There are well-established differences between ethnic groups in the United States in birth outcomes. For example, the rate of low-birthweight births among African-Americans is twice that of European-Americans with births to Latina women giving birth in the United States often falling in the middle (National Center for Health Statistics, 1992). Social support is one of many possible mediators of this ethnic difference. Although it is important to distinguish culture and ethnicity, ethnic differences in birth outcomes may be clues to cultural influences in pregnancy that are worthy of direct consideration. Thus, it is critical in research on social support and pregnancy to integrate ethnic and cultural perspectives into one's approach.

Our emphasis in this chapter is on Latino or Hispanic culture because our work has focused on this group in particular. Latinos are currently the largest group of immigrants to the United States, and they constitute a near majority of the population in southern California where our research is conducted. Although there is little empirical research on ethnicity and support in pregnancy *per se*, we include that which is available in this chapter. We conclude the chapter with a call to integrate a cultural perspective with research on close relationships in the study of social support in pregnancy.

#### **EFFECTS OF SOCIAL SUPPORT DURING PREGNANCY AND BIRTH ON BIRTH OUTCOMES**

Historically, social support research has suffered from definitional problems. At present, the term "social support" is still defined in a variety of ways, but

principally either as *available* or *perceived support* or as *enacted* or *received support* (Dunkel-Schetter & Bennett, 1990). Our approach to the study of social support in pregnancy emphasizes the latter of these—the support that is actually provided to women during the prenatal period or during labor (Collins, Dunkel-Schetter, Lobel, & Scrimshaw, 1993). Three types of support arise most often in the research literature: (1) emotional support, (2) informational support, and (3) instrumental or tangible support, the latter including task and material forms of assistance (Dunkel-Schetter, Folkman, & Lazarus, 1987; Schwarzer, Dunkel-Schetter, & Kemeny, 1994). A variety of measures are used to assess these various support concepts. This variety will be evident in the literature reviewed and, as will be seen throughout the chapter, contributes to an inability to formulate generalizations about the effects of support.

Studies on social support in pregnancy and during birth can be divided into three categories: (1) correlational studies that examine the relation between a woman's prenatal social support and her pregnancy outcomes; (2) intervention studies that investigate the benefits of social support programs made available to women throughout their pregnancies; and (3) studies of social support interventions that focus on the presence of a supportive companion during labor and delivery. We review each of these three literatures in detail, and we highlight methodological issues to be addressed in future studies.

### Correlational Studies on Prenatal Social Support

Correlational studies generally assess various aspects of a pregnant woman's social support network and their relation to her pregnancy and birth outcomes. Life events, used to measure stress levels, are often assessed as well, in order that interactions between stress and social support can be investigated (e.g., Magni, Rizzardo, & Andreoli, 1986; Norbeck & Anderson, 1989a). Some studies prospectively compare the outcomes of high-risk subgroups to those of low-risk subgroups (e.g., Kemp & Hatmaker, 1989; Lightfoot, Keeling, & Wilton, 1982; Williamson & LeFevre, 1992). Others retrospectively compare the characteristics of women with poor outcomes to those of women with good outcomes (e.g., Berkowitz & Kasl, 1983; Magni et al., 1986). Still others concentrate specifically on subgroups considered to be at high risk for poor birth outcomes, such as pregnant teenagers (e.g., Barrera & Balls, 1983; Boyce, Schaefer, & Uiti, 1985; Turner, Grindstaff, & Phillips, 1990). In general, inconsistencies in the definition and measurement of social support, and in outcome measures, make the results of this line of research mixed or difficult to interpret. It appears, however, that some types and sources of social support may lead to better pregnancy outcomes. Moreover, social support appears to affect different subgroups of women in different ways.

One important finding of this line of research is that different functional aspects of received social support (as opposed to "perceived support," or support perceived to be available) have different effects on pregnancy outcomes. Norbeck and Tilden (1983) measured the three most commonly cited functional aspects of received support—informational, emotional, and tangible—as well as life stress and "emotional disequilibrium" (anxiety, depression, and low self-esteem) in a group of women at low risk for pregnancy complications. They found an inter-

action between tangible support and life stress; women who reported low tangible support and high stress during pregnancy experienced more infant and gestation complications (e.g., premature labor, low Apgar scores), and women who reported low tangible support and low stress during pregnancy experienced more labor and delivery complications (e.g., prolonged labor, cesarean delivery). Psychological support, a combination of emotional and informational support, had an indirect effect on pregnancy outcomes; it was found to be inversely associated with emotional disequilibrium, which, in turn, was associated with infant complications. In general, evidence suggests that tangible support and emotional support are most likely to be beneficial in pregnancy (see also Boyce et al., 1985; Collins et al., 1993; Pascoe, Chessare, Baugh, Urich, & Ialongo, 1987; Williamson & LeFevre, 1992), whereas the benefits of informational support are likely to be dependent on who is the provider and the context in which it is offered (for a discussion, see Dunkel-Schetter, Blasband, Feinstein, & Herbert, 1992). It should be noted that the majority of participants in this study were European-American (61%), although it included smaller numbers of African-Americans, Latinas, and Asian-Americans.

Other aspects of received support, such as its source, quantity, and quality, also seem to affect outcomes differently. One group of researchers (Collins et al., 1993) measured received social support, satisfaction with received support, amount of support from different sources (i.e., the baby's father, health care providers), and network resources (number of kin and friends, father's presence in the home), and compared them in relation to birth outcomes. In this study, more received support was associated with higher Apgar scores and better labor progress. Greater *satisfaction* with support predicted additional variance in Apgar scores and also predicted less postpartum depression. Women who received support from the baby's father specifically suffered less postpartum depression. Also, those with a greater number of network resources had babies with higher birthweights. Thus, like the study of Norbeck and Tilden (1983), this study found different effects for different functional aspects of social support. These findings are often difficult to interpret. Why, for instance, should task and informational support be associated with Apgar scores (i.e., physician ratings of the infant's status moments after birth) but the combination of task and material support be associated with labor difficulties? The answer may lie in a better understanding of the mechanisms through which social support works (Collins et al., 1993).

Complicating matters are indications that different subgroups of women appear to respond differently to social support (Andresen & Telleen, 1992; Collins et al., 1993; Oakley, 1988; Olds, Henderson, Tatelbaum, & Chamberlin, 1986; Sarason & Sarason, 1993). Pregnant teenagers, for example, are one subgroup that appears to be especially affected by the quality and quantity of their social support networks. In one prospective study (Barrera & Balls, 1983), pregnant teenagers with small social networks and a higher incidence of negative life events gave birth to infants with lower Apgar scores. Among teenagers who were less satisfied with the support they received, a greater number of negative life events also predicted more birth complications. More recently, Turner et al. (1990) found that family support is especially crucial to the pregnancy and psychological outcomes of teenagers. Specifically, the Canadian teenagers in this study who

reported higher levels of family support had babies with higher birthweights and experienced less postpartum depression. Furthermore, low-socioeconomic status (SES) teenagers showed these effects regardless of stress level, whereas higher-SES teenagers showed these effects only when their life stress level was high.

Another prospective study also supported the importance of the family to pregnant teenagers (Boyce et al., 1985). In this study, teenagers who perceived their family and friends to be more helpful had fewer neonatal complications. Those who reported higher levels of "permanence and continuity" also experienced fewer neonatal complications. According to the researchers, assessing teenagers' sense of permanence and continuity captured a form of subjective experience rarely measured in studies of social support and health. Boyce et al. (1985) define the sense of permanence as "the belief or perception that certain central, valued elements of life experience are stable and enduring" (p. 1280). Thus, there are a handful of studies on pregnant teenagers showing that low social support combined with low SES or high life stress or both is associated with adverse psychological and infant outcomes in this age group.

Ethnic group membership and cultural differences also seem to moderate the effects of social support. One study, for example, found that African-American women who received more support from their partners and mothers had fewer pregnancy complications and fewer preterm births (Norbeck & Anderson, 1989a). In contrast, European-American women who reported both high stress and high support from their mothers actually had longer labors, and those who reported high stress and high support from their relatives were more likely to require a cesarean delivery. Interestingly, no effects were found for Latina women, leading the investigators to propose that this group of recent immigrants may possess characteristics that protect them from pregnancy complications. Other studies have also reported different effects for different ethnic groups (e.g., Berkowitz & Kasl, 1983; Casper & Hogan, 1990), as well as for women living in different cultures (Thorpe, Dragonas, & Golding, 1992). However, there are few studies directly investigating ethnic and cultural differences in support beliefs, expectations, and norms during pregnancy. Further research in this area may reveal mediators of ethnic differences in pregnancy outcomes (for a discussion, see Jacobson, 1986).

In summary, correlational research on social support in pregnancy presents a complex set of findings. Different dimensions of social support (e.g., function, quality, quantity, and source) appear to have distinct effects on the physical and psychological outcomes of pregnancy. Moreover, characteristics of the support recipient (e.g., her context, age, ethnicity, and stress level) appear to influence the effects of social support. Clarification of the role of different dimensions of social support, the context in which it is provided, and characteristics of its recipients and providers needs to be accomplished in a more systematically rigorous manner. Interestingly, these are issues that have been raised previously regarding social support in general (Cohen & Syme, 1985; Sarason & Sarason, 1993). It is also important to realize that social support may not always be beneficial. In one study, family enmeshment (an extreme form of cohesion) was negatively related to birthweight (Ramsey, Abell, & Baker, 1986; see also Norbeck & Anderson, 1989a).

### Prenatal Social Support Interventions

Interventions implemented to improve the social support of pregnant women typically involve home visits by a midwife, nurse, or social worker who provides some combination of emotional support (e.g., Bryce, Stanley, & Garner, 1991; Spencer, Thomas, & Morris, 1989), informational support (e.g., Olds et al., 1986; Piechnik & Corbett, 1985; Sokol, Woolf, Rosen, & Weingarden, 1980), and instrumental assistance (e.g., Spencer et al., 1989). Some interventions include telephone contact available 24 hours a day or a special support office reserved for the use of pregnant women in a particular program (e.g., Heins, Nance, McCarthy, & Eford, 1990; Oakley, Rajan, & Grant, 1990; Villar et al., 1993). Others attempt to strengthen the woman's existing social network by requiring a support person (often her partner, a family member, or a friend) to be present at each home visit (e.g., Olds et al., 1986; Villar et al., 1993). Interventions of this type have been invoked most often for women who are socially or medically at high risk for poor pregnancy outcomes (e.g., Bryce et al., 1991; Forde, 1993; Heins et al., 1990; Oakley et al., 1990; Olds et al., 1986; Sokol et al., 1980; Spencer et al., 1989; Villar et al., 1993). Studies of these interventions are often experimental or quasi-experimental and tend to evaluate the interventions in terms of improvements in labor, delivery, and infant outcomes.

Methodological inconsistencies in this area of research have resulted in somewhat uneven findings (Oakley, 1985, 1988). Nonetheless, some studies evaluating social support interventions have found important benefits. In one study, Oakley et al. (1990) randomly assigned working-class British women with a history of low-birthweight babies to one of two groups: (1) an intervention group that received regular home visits from a midwife or (2) a control group that received standard prenatal care only. The midwives visited women in the intervention group at 14, 20, and 28 weeks, called or briefly visited between these scheduled visits, and were on call to the women 24 hours a day to supply as much support as they requested. Midwives did not provide clinical care, but instead provided emotional and informational support by encouraging the women to discuss any topic they wished. Delivery records indicated that women in the intervention group had significantly larger babies. Infants in both groups required resuscitation at about the same rate, but babies of mothers in the intervention group required less invasive methods of resuscitation. Intervention mothers were less likely to require antenatal hospital admission, more likely to have spontaneous onset of labor and spontaneous vaginal deliveries, and less likely to use epidural anesthesia. In addition, mothers and babies in the intervention group were healthier.

Other investigators, however, have not found such impressive effects. Heins et al. (1990) randomly assigned women at high risk for low-birthweight babies to an intervention or control group. Mothers in the intervention group were visited every 1-2 weeks by nurses or nurse midwives who offered emotional and informational support; they assessed and educated women on risks associated with nutrition, substance abuse, stress, activity level, and social support. In addition, they

taught women the signs and symptoms of preterm labor and offered 24-hour telephone support. Overall, the birth outcomes of the two groups (measured in terms of birthweight and incidence of preterm birth) did not differ. One subgroup, however, did seem to benefit. African-American women with high-risk scores at the beginning of their pregnancies had a lower incidence of very-low-birthweight babies. These results suggest the possibility that interventions may be more effective for some at-risk subgroups of pregnant women than for others.

One group that appears to benefit from additional support is teenage mothers, especially those who are very young. Piechnik and Corbett (1985) found that nonwhite adolescents under the age of 15 who received support from a multidisciplinary team gave birth to larger babies than control adolescents of the same age and race. Similar findings were reported by Olds et al. (1986). In this study, women considered high risk based on their meeting at least one of three criteria—under 19 years old, single-parent status, or low SES—were randomly assigned to a control group or to an intervention group that received home visits from nurses who provided parent education, information about community services, and enhancement of the women's existing support networks. Among the benefits reported for the intervention group was the finding that nurse-visited young adolescents under age 17 had babies of higher birthweight than young adolescent controls. In addition to offering evidence that younger women may benefit more from additional social support, these studies also suggest that the effectiveness of support interventions may differ depending on a woman's ethnic group (Heins et al., 1990; Piechnik & Corbett, 1985). In both of these studies, the young, ethnic-minority women benefited significantly from additional support, whereas the young European-American women did not.

Many studies do not obtain significant results because of methodological problems that exist in research on interventions. Specifically, the studies that do not show results sometimes suffer from small sample sizes (e.g., Blondel, Breart, Llado, & Chartier, 1990) or insufficient statistical power to detect differences (e.g., Bryce et al., 1991; Spencer et al., 1989), or they employ weak manipulations (e.g., Blondel et al., 1990). Others do not use random assignment (e.g., Forde, 1993; Larsson, Spangberg, Theorell, & Wager, 1987; Piechnik & Corbett, 1985; Sokol et al., 1980) or have differential attrition. For example, one study reported that almost 60% of the women randomly assigned to the intervention group refused the intervention (Spencer et al., 1989). Another study began the intervention so late in the pregnancy that some mothers received no home visits, and some women in the control group received home visits who shouldn't have (Blondel et al., 1990). Unfortunately, these methodological weaknesses are common in studies that fail to show benefits of supportive interventions.

In addition, studies seeking to determine the effects of social support interventions on high-risk groups sometimes use such broad criteria for defining risk that the rate of perinatal complications reported for their "high-risk" group hardly differs from the rate reported for the general population (e.g., Spencer et al., 1989). Thus, some studies that profess to study women with high-risk

pregnancies are not actually doing so, and the potential benefits of interventions aimed at this group may be underestimated. On the other hand, selection of truly "at-risk" subgroups may be more difficult than it seems. For instance, one researcher found that assessment of poor psychosocial conditions using a questionnaire was not sufficient to identify women most likely to benefit from additional support (Forde, 1993). His method of assessing risk, based on a "subjective and intuitive combination of all accessible clinical information" (p. 131), is probably too unwieldy or ambitious for most applications, but it points to a possible weakness in this line of research that should be corrected. In sum, this area of research requires further systematic investigation before we can confidently identify which, if any, risk factors differentiate women most likely to benefit from additional support.

Finally, differences in the definitions and operationalizations of social support reduce the likelihood of seeing consistent results in this line of research. For instance, although both emotional and instrumental support have been found to be helpful in many circumstances, and information or advice is often helpful when it comes from a credible source, one group of researchers actually discouraged their midwives from providing instrumental or informational support because doing so was not part of the intervention protocol and they feared it would interfere with other aspects of the support intervention (Bryce et al., 1991). Interventions offered in other studies vary in the support components included, but not in a way that allows us to systematically evaluate the differences or effects.

To summarize, studies assessing social support interventions have reported many benefits for mothers receiving the intervention, including improvements in birth outcomes (Heins et al., 1990; Oakley et al., 1990; Olds et al., 1986; Piechnik & Corbett, 1985; Sokol et al., 1980), specifically, lower perinatal mortality (Sokol et al., 1980); less utilization of labor and delivery interventions such as epidural anesthesia or oxytocin (Oakley et al., 1990); and better infant health (Oakley et al., 1990). Other benefits of interventions include improvements in maternal health, health habits, and knowledge (Oakley et al., 1990; Olds et al., 1986; Villar et al., 1993); more utilization of community services (Olds et al., 1986); and more satisfaction with maternity care (Blondel et al., 1990; Larsson et al., 1987). However, methodological flaws weaken the conclusions that can be drawn from this line of research. Future studies must use adequate sample sizes, sound research designs, and interventions that have sufficient impact, lest benefits that might otherwise emerge go unnoticed. When investigating women at high risk for pregnancy complications, investigators must ensure that the criteria used to select high-risk groups appropriately differentiate them from low-risk pregnant women. In addition, further research is needed to determine which elements of social support interventions are most effective and under what circumstances (e.g., in what subgroups) benefits are most likely to occur. The suggestion made by several researchers, that the type of support needs to match the stressor for maximal impact, seems critical here (Cohen & McKay, 1984; Dunkel-Schetter et al., 1992). Psychological and behavioral outcomes also need to be assessed more frequently, coincident with a focus on birth outcomes (Elbourne, Oakley, & Chalmers, 1989).



### Social Support during Labor and Delivery

The presence of a supportive person during labor and childbirth seems to have an unambiguously and consistently positive effect on perinatal outcomes. In one recent study (Kennell, Klaus, McGrath, Robertson, & Hinkley, 1991), women admitted to a United States hospital in active labor were randomly assigned to one of three groups. The first group received continuous support from volunteers known as *doulas* trained to assist during labor and delivery and to use various support techniques. The doulas offered emotional and informational support by soothing and touching the women, explaining events to them, and, when necessary, translating medical instructions. The second group received no support, but was unobtrusively observed while receiving routine hospital care. The third group served as a control group and received routine hospital care only. The results confirmed the benefits of social support during labor and delivery. Women in the supported group had shorter labors and were less likely to use epidural anesthesia, less likely to receive medication to augment labor, and less likely to require cesarean or forceps deliveries. The infants of mothers in the supported group benefited as well; they were less likely to require prolonged hospital stays or special tests. Interestingly, women in the observed group showed some positive effects as well, leading Kennell et al. (1991) to speculate that a laboring woman may benefit simply from feeling less "alone and needy" (p. 2201).

As this study suggests, the positive effects of support during labor do not require that the support provider be someone with whom the woman has had a close relationship. In fact, positive effects have been observed whether the support person was a family member, a friend, the woman's husband, or a complete stranger. Pascoe (1993) compared duration of labor for three groups of women: (1) those who received no support during labor; (2) those who were supported by a relative or friend; and (3) those who were supported by a trained birth companion who had not met the woman before admission to the hospital. The mean duration of labor for the latter two groups was almost identical. In this study, the labors of supported women averaged 10½ hours, as compared to 16 hours for unsupported women. The significant difference in labor duration remained even after the analyses controlled for maternal age, education, marital status, race, amniotomy, and labor induction.

Perhaps the most impressive finding of this line of research is that the presence of a companion who is not trained, skilled, knowledgeable, or even familiar to the pregnant woman but simply offers emotional support is sufficient for very dramatic results to occur. For instance, in a study of Guatemalan women randomly assigned to either a supported labor group or an unsupported labor group, the supported women developed fewer problems during labor (including those requiring cesarean section or labor augmentation), were less likely to have infants who had to be transferred to the neonatal intensive care unit, and had shorter labors (Klaus, Kennell, Robertson, & Sosa, 1986). As in the previously mentioned study by Kennell et al. (1991), the untrained female support volunteers were strangers to the women and simply sat with them, rubbed their backs, held

their hands, and provided explanation and encouragement. Other studies have shown similarly positive results with a stranger acting as the support person (Sosa, Kennell, Klaus, Robertson, & Urrutia, 1980; Wolman, Chalmers, Hofmeyr, & Nikodem, 1993).

In sum, the presence of a supportive companion during labor and delivery—whether someone trained or not trained, familiar to the laboring woman or not—has been shown to decrease the duration of labor (Kennell et al., 1991; Klaus et al., 1986; Pascoe, 1993; Sosa et al., 1980), to reduce perinatal complications (Kennell et al., 1991; Klaus et al., 1986; Pascoe, 1993; Sosa et al., 1980), and to lead to better infant outcomes among women from different cultural and racial backgrounds, including Guatemalans, European-Americans, African-Americans, and American Latinas (Kennell et al., 1991; Klaus et al., 1986). Evidence suggests that support during labor and delivery may also improve psychological and behavioral outcomes of pregnancy; supported women may experience decreased postpartum depression and anxiety and increased self-esteem in the weeks following delivery (Wolman et al., 1993). They may also have more positive interactions with their infants in the hours following delivery (Sosa et al., 1980).

This research domain may benefit from an examination of the long-term behavioral and psychological consequences of support during labor and delivery for mothers, children, and their families (Kennell et al., 1991). In addition, Kennell et al. (1991) note a need to investigate how support offered by husbands or partners differs from support provided by trained volunteers or professional labor coaches. Finally, the mechanisms through which support during labor and delivery works have yet to be elucidated (Kennell et al., 1991; Klaus et al., 1986; Pascoe, 1993). In the meantime, serious consideration should be given to implementing labor support programs for women (Kennell et al., 1991), given the gains that can be attained with what is a simple and low-cost intervention (Kennell et al., 1991; Pascoe, 1993).

#### **Conclusion: Review of Research on Social Support and Birth Outcomes**

The three research areas just reviewed—correlational studies of prenatal social network support, prenatal social support interventions, and social support during labor—comprise a broad and complex body of research. We have noted differences in how various dimensions of social support influence pregnancy outcomes and how subgroups of women respond differently to social support. The findings of the studies reviewed are generally positive; social support seems to be beneficial. In some subgroups especially (e.g., young women and members of particular ethnic groups), the presence and involvement of supportive others is associated with better outcomes for mother and baby. Social support from partners and family members may be particularly important to pregnant women (Casper & Hogan, 1990; Kemp & Hatmaker, 1989; Norbeck & Anderson, 1989a,b; Ramsey et al., 1986; Turner et al., 1990). It is important to note, however, that support from family members may also have negative consequences, although this question has received little or no attention in pregnancy research (e.g., Lightfoot

et al., 1982; Norbeck & Anderson, 1989a; for a discussion of support type/provider interactions, see Dunkel-Schetter et al., 1992). This area deserves close examination.

Methodological problems exist, however, that make it difficult to draw more specific conclusions. In particular, inconsistencies in outcome measures used from one study to the next complicate our ability to summarize findings across studies. Some researchers group together outcomes that may actually be heterogeneous (Norbeck & Tilden, 1983). More problematic, however, are inconsistencies in the way social support has been defined, measured, and operationalized (Barrera & Balls, 1983; Collins et al., 1993; Norbeck & Tilden, 1983). Each group of researchers tends to use different measurement instruments, some of which are more refined or validated than others (Norbeck & Tilden, 1983; Sarason & Sarason, 1993). In addition, a number of social support dimensions have been found to have effects that are distinct and independent of each other, for instance, the quality vs. quantity of support, or different functional types of support (Collins et al., 1993). Researchers studying social support in pregnancy need to be aware of these distinctions and to make use of them if there is to be consistency across studies and investigators. There is a profusion of instruments, but the field would benefit greatly if researchers relied only on psychometrically sound instruments. Use of more objective measures, rather than relying solely on self-reports, would also benefit the field. Empirical investigations are needed in areas that have been underresearched, in particular studies of three issues: (1) the characteristics of the support provider, the support recipient, and the stress context in which support is offered (Collins et al., 1993; Norbeck & Anderson, 1989b); (2) mechanisms through which social support works to improve birth outcomes (Collins et al., 1993; Oakley, 1985); and (3) consideration of simultaneous effects of social support on psychological and medical outcomes (Collins et al., 1993). Also largely ignored in this body of literature—or studied in only a rudimentary way—are close relationship issues, the role of the family, and the woman's sociocultural background. Social support is too often studied as though it were a process that occurs entirely within the individual instead of as an interpersonal exchange (Collins et al., 1993). We return to this topic at the end of the chapter.

#### **ASSOCIATIONS OF PRENATAL SOCIAL SUPPORT WITH MATERNAL EMOTIONS AND BEHAVIOR DURING PREGNANCY**

Pregnancy researchers have been concerned with examining not only the relationship between social support and birth outcomes, but also the impact of social support on psychological and physical health during pregnancy. Pregnancy can be a challenging and stressful period for women due to fluctuations in their appearance, physiology, emotional well-being, and close relationships (Gjerdingen, Froberg, & Fontaine, 1991). Support is believed to play an important role in mitigating the physical and emotional strain women often experience during pregnancy. It has also been found to bolster positive health behaviors and lifestyle

changes. Studies in several areas suggest ways in which support aids women in coping physically and psychologically during pregnancy. These areas of research examine the effects of social support on stress, anxiety and depression, utilization of prenatal care, and health behaviors during pregnancy, and may shed light on some of the mechanisms linking social support to birth outcomes.

### **Social Support and Prenatal Stress, Anxiety, and Depression**

Several studies have shown that social support, in general, is related to lower levels of stress, anxiety, and depression during pregnancy (Albrecht & Rankin, 1989; MacDonald, Peacock, & Anderson, 1992; Norbeck & Anderson, 1989b; O'Hara, 1986; Tietjen & Bradley, 1985; Tilden, 1983; Zuckerman, Amaro, Bauchner, & Cabral, 1989). However, most of the studies were cross-sectional, making it difficult to infer causality. In a study of low-income Latina, African-American, and European-American women in mid- to late pregnancy, Norbeck and Anderson (1989b) found both direct and buffering effects of prenatal support (measured in both functional and structural terms) on anxiety (Norbeck, Lindsey, & Calieri, 1981, 1983). Overall support accounted for a significant share of the variance in anxiety in both mid- and late pregnancy. In addition, individuals high in stress and low in spousal support were most likely to experience anxiety during pregnancy. Unlike other studies in this area, this study was longitudinal and the findings were obtained after controlling for marital status and ethnicity. Tilden (1983) reported similar findings for the relationship between support (emotional, informational, and tangible) and emotional disequilibrium, a composite index of state anxiety, trait anxiety, depression, and self-esteem, in a multiethnic sample of 141 women of whom 60% were European-American, 15% African-American, 11% Latina, 4% Filipino, 4% Japanese, and 5% other ethnicities. Consistent with Norbeck and Anderson (1989b), there was not a significant statistical interaction between support and life event stress in effects on emotional disequilibrium.

In a sample of 47 predominantly European-American women, Albrecht and Rankin (1989) found that social support was related to state and trait anxiety. In this study, support was measured as intimacy, nurturance, social integration, self worth, and guidance. Overall support was strongly negatively correlated with trait anxiety and marginally negatively correlated with state anxiety. These negative correlations may suggest either that anxious individuals perceive less support in their relationships or that lack of support leads to greater anxiety. These analyses did not control for income, marital status, or other potential confounding variables. Overall, these studies suggest that overall support is related to state and trait anxiety; yet more controlled investigations are necessary to draw causal inferences.

Thorpe et al. (1992) compared the impact of support on emotional well-being in a sample of 200 Greek and 156 British pregnant women. Emotional well-being was a composite index of depression, anxiety, and somaticism. Social support was predictive of the emotional well-being of British women. However, it did not predict the well-being of Greek women during pregnancy. For Greek

women, stress (in the form of life events) was associated with emotional well-being. Social relationships appeared to be a source of stress for Greek women in this study, in that they reported stress in the families with whom they typically lived. The authors also indicated that social support may be appreciated less in Greece because Greek culture is a traditional one in which support is expected or assumed. This study points to the role of culture in understanding the relationship between support and emotional well-being.

Zuckerman et al. (1989) examined the effects of different types of support on depressive symptoms. In a low-income multiethnic sample, they measured tangible, emotional, and self-esteem support, as well as network members' feelings toward the woman's pregnancy. Total support and emotional support were negatively related to reports of depressive symptoms. Depression was also associated with women's perceiving their partners or families as unhappy with the pregnancy. These findings are consistent with the pattern of results from other studies on support and psychological functioning and thus further suggest that support facilitates greater psychological well-being during pregnancy. Like the other findings, however, the cross-sectional nature of these findings does not permit causal inferences to be made about the relation between support and indicators of psychological well-being.

Another set of findings has shown that marital status and spousal support are associated with lower levels of anxiety and depression (Hobfoll & Leiberman, 1987; Kalil, Gruber, Conley, & Syntiac, 1993; MacDonald et al., 1992; O'Hara, 1986; Tietjen & Bradley, 1985). In a study of 1431 white British pregnant women, MacDonald et al. (1992) observed that marital status is linked to life event stress and depression. They compared married women to cohabiting women, women living with other adults, and women on their own. Unmarried pregnant women tended to be less educated, of lower SES, younger, and more dependent on state support than married women. Married women were significantly less depressed during pregnancy than women in the other three groups, with women on their own experiencing the highest levels of depression. Those who lived on their own also experienced the most stressful life events, whereas married women had the least. Women living on their own during pregnancy were more likely to move, become homeless, have partners who were convicted or imprisoned, and have problems in their relationships with partners. Thus, women living alone during pregnancy (in Britain at least) are at greater risk of experiencing stress and depression than those living with others and, in particular, compared to married women.

The findings on marital status and psychological strain may be a function of the support women have received from their spouses during pregnancy. Several studies suggest that support from the spouse plays an important role in reducing stress, anxiety, and depression during pregnancy, compared to other sources of support. For example, one prospective study of 546 pregnant women found that women with supportive husbands had lower state and trait anxiety in each trimester (Kalil et al., 1993). Women with emotional confidantes, particularly female friends and relatives, had lower levels of anxiety as well.

In a prospective study of 99 predominantly European-American women, O'Hara (1986) measured the instrumental and emotional support women received from their spouses and confidantes. Depressed women reported significantly less support from their spouses, in particular instrumental support, and greater support from their confidantes, than nondepressed women. Support from spouses, particularly instrumental support, was negatively related to depression, whereas support from confidantes was positively related to depression in this sample. Tietjen and Bradley (1985) also found that spousal support, measured in terms of both amount of and satisfaction with support, was negatively related to prenatal depression. Satisfaction was also negatively associated with prenatal stress and anxiety. Support from network members, in contrast, was not significantly related to any indicators of well-being or adjustment.

The results of these studies suggest at least two potential relations between spousal support and depression. Depressed women may have more difficulty obtaining spousal support, or lack of spousal support may place women at greater risk of depression during pregnancy. There is some support for the latter relation in a large survey study addressing the support-adjustment relation (Kessler, Kendler, Heath, Neale, & Eaves, 1992). In this study, spousal support buffered the effects of stress on depression.

Two studies have attempted to understand how the relation between support and psychological adjustment differs for high- vs. low-risk women (Kemp & Hatmaker, 1989; Mercer & Ferketich, 1988). Kemp and Hatmaker (1989) found no differences in social support and anxiety between the two groups, yet found that satisfaction with partner support was associated with lower levels of anxiety in low-risk women only. For high-risk women, partner support was negatively correlated with norepinephrine levels, a presumed biochemical indicator of stress.

Mercer and Ferketich (1988) also found that support has different implications for high- vs. low-risk women. Consistent with the previous study, social support was associated with lower prenatal anxiety for low-risk women, yet not for high-risk women. Support was also a predictor of prenatal depression for low-risk women only. Thus, the findings from these two studies consistently reveal that for low-risk women, higher support is associated with greater psychological well-being. However, the relationship between support and well-being is not as clear for high-risk women. Mercer and Ferketich (1988) found that high-risk women reported more prenatal life event stress, anxiety, and depression, as well as more social support. These findings differ from those of Kemp and Hatmaker (1989), who observed no differences in social support and anxiety between high- and low-risk women. The results may be discrepant because the Mercer and Ferketich (1988) sample comprised older, middle- and upper-middle-class European-Americans whereas the Kemp and Hatmaker sample (1989) was composed of low-income African-Americans. Further research should be conducted to clarify these relations in high-risk women of different ethnic groups.

To summarize, it appears that support in general during pregnancy may be associated with greater psychological well-being. Marital status and spousal support are particularly important, in that they are strongly related to less stress,

anxiety, and depression even when other sources of support are available. Some mixed results were obtained in these studies though, probably due to the differences between studies in sample size and ethnic composition and in conceptualization and measurement of social support. Furthermore, demographic variables are not always controlled in these studies. For instance, social support has been shown to be greater for middle-class women and lower for working-class women (Quine, Rutter, & Gowen, 1993), but social class is rarely considered. In addition, all the studies except one (Norbeck & Anderson, 1989b) were cross-sectional and thus cannot speak to the issues of causality. Strengths of these studies, however, are the use of multiethnic samples and largely the same measures of stress and anxiety.

### Social Support and Prenatal Care

Another line of research has investigated the role of social support in the utilization of prenatal care (Giblin, Poland, & Ager, 1990; Higgins, Murray, & Williams, 1994; St. Clair, Smeriglio, Alexander, & Celentano, 1989; Zambrana, Dunkel-Schetter, & Scrimshaw, 1991; Zambrana, Scrimshaw, & Dunkel-Schetter, in press). Inasmuch as prenatal care is predictive of better birth outcomes, it may be an important mediator of the association between prenatal support and birth outcomes. Theorists have proposed that social support can help women overcome obstacles to obtaining care such as lack of money to pay for care, lack of transportation, and problems getting time off work, as well as psychological obstacles such as the desire to not be pregnant and fear of seeking care. These obstacles may be particularly relevant for low-income women from ethnic and immigrant groups, who often initiate prenatal care much later in pregnancy (Brown, 1988). This points to the importance of considering ethnic and socioeconomic differences in prenatal care, as well as the role of support in reducing these barriers. The following studies examine the impact of support from the baby's father and family on utilization of prenatal care by different ethnic groups.

Several studies have found that support from the baby's father has a strong influence on utilization of prenatal care among women of different ethnic groups (Giblin et al., 1990; Sable, Stockbauer, Schramm, & Land, 1990; Zambrana et al., 1991; Zambrana et al., in press). In a study with a sample of 107 Mexican-immigrant, Mexican-American, and African-American women, Zambrana et al. (1991a) found that a woman's having a relationship with the baby's father was the strongest predictor of initiation of care, whereas support from friends and family was not associated with utilization. Zambrana et al. (in press) conducted a larger study of 525 Mexican-American, 764 Mexican-immigrant, and 255 African-American women. For Mexican immigrants and Mexican-Americans, initiation of care was significantly and positively associated with living with the baby's father. In contrast, living with the baby's father bore no relation to initiation of care by African-Americans, and living with relatives was associated with slower initiation of care.

Others have also found that support from the baby's father contributed to prenatal care utilization in large samples of low-income women. Giblin et al.

(1990) assessed support comprehensively by asking about sources and types of support in a sample of 300 predominantly African-American women. After demographics, health behaviors, and other support factors were controlled, "intimacy" and "comfort," involving tangible and emotional support received from the baby's father, were the only significant support variables to predict prenatal care initiation. Given that this study measured support receipt from the baby's father as compared to cohabitation with him (Zambrana et al., in press), or to the existence of a relationship with him (Zambrana et al., 1991a), and not with a single-item measure of support (Sable et al., 1990), we can assert with greater confidence that support from the baby's father is related to prenatal care for African-American as well as Latina women. Sable et al. (1990) obtained similar findings in a sample of 1464 women. Support from the baby's father was a stronger predictor of prenatal care than was support from others. Women were shown to have greater risk of receiving inadequate care if they were African-American, single, less educated, poor, having unwanted pregnancies, and higher parity. Thus, support from the baby's father appears to be particularly beneficial to low-income African-American women, who tend to obtain inadequate care.

Support from the family appears to influence prenatal care significantly less than support from the father, even among low-income groups who might depend more on their families for help with child care, transportation, and expenses (St. Clair et al., 1989; St. John & Winston, 1989; Zambrana et al., 1991a). Zambrana et al. (1991a) found that family support was not related to prenatal care among 107 African-American, Mexican-American, and Mexican-immigrant women. In a survey study with 733 women, 20% of whom were Native American or African-American, St. John and Winston (1989) found that family support was marginally related to use of prenatal care. The family's feelings about the pregnancy, however, moderated obstacles to care such as difficulty in paying, not wanting the pregnancy, and personal inconveniences in utilization of prenatal care. The direction of the statistical interactions suggested that for a woman who faced great obstacles to receiving care, the family's happiness with her pregnancy had the strongest effects on her receiving care. Although the family's feelings are not synonymous with social support receipt, they do reflect to some extent the nature of the woman's social environment during pregnancy. These findings reveal that aspects of the woman's environment can reduce obstacles to care, although family support alone cannot account for differences in utilization of prenatal care.

St. Clair et al. (1989) also had mixed findings on the role of family support in the timing and use of prenatal care in a sample of predominantly single African-American women. They hypothesized that women who had more structural support during pregnancy would seek prenatal care later and have fewer prenatal visits. Structural support was measured in terms of density and closeness of the social network. They found, however, that women with larger networks of relatives and more frequent contact with friends initiated prenatal care earlier and had more prenatal visits; network size was the strongest predictor of prenatal care utilization. Women who sought care later reported stronger emotional intimacy with their relatives. Emotional intimacy with relatives was also a significant predic-



tor of the amount and timing of prenatal care. Given that these results were mixed, it is difficult to draw conclusions on family support from these findings.

In conclusion, the studies on prenatal care revealed that having a relationship with and receiving support from the baby's father were instrumental to obtaining adequate care for large multiethnic samples of different socioeconomic backgrounds. For Mexican-American, Mexican-immigrant, and African-American women, living with the baby's father and perceiving him as supportive were related to utilization of prenatal care. In studies that employed both functional and structural measures of support, family support did not appear to have as strong an impact on prenatal care utilization as spousal support. Limitations of these studies on prenatal care were that they relied on single-item measures of social support, did not control for demographics or structural barriers to care before assessing the role of support, and did not test for interaction effects between social support and obstacles to care in prenatal care utilization. Nonetheless, they are especially important because they studied large groups of ethnic-minority women in an attempt to explain differences in utilization of care in pregnancy.

### **Social Support and Health Behaviors during Pregnancy**

Few studies have explored the relationship between social support and health behaviors such as drinking, smoking, and substance use during pregnancy (Aaronson, 1989; Albrecht & Rankin, 1989; Giblin et al., 1990; MacDonald et al., 1992). Given that the measures and methodologies of these studies differ, it is also difficult to draw any firm conclusions from the literature. Nevertheless, conducting research in this area can provide insight into possible avenues of prevention given the established relationship between substance use and a range of poor birth outcomes. Alcohol use has been associated with birth defects and fetal alcohol syndrome, and cigarette use has been linked to low birthweight, spontaneous abortion, and premature delivery (Archie, 1992).

In a study of 529 white and middle-class pregnant women, Aaronson (1989) measured the impact of social support on cigarette, alcohol, and caffeine use. She employed a measure of overall social support, the Personal Resources Questionnaire (PRQ; Brandt & Weinert, 1981), as well as measures of how family members felt about abstinence from substance use and how many people in the home drank, smoked, or consumed caffeine. The latter two sets of measures were significant predictors of use of all three substances, but the measure of general social support was not. This study suggests that attitudes of others toward substance use, as well as the patterns of use or nonuse of substances by others, contributes to use or abstinence in pregnant women. Overall support, however, does not appear to reduce substance use. In contrast, Albrecht and Rankin (1989) found that overall support (as measured with the PRQ) and alcohol use were significantly negatively correlated in 47 predominantly European-American women. Thus, social support appears to play a role in reducing substance use in pregnant women; however, which types of support will be the most effective in doing so is still left unclear.

In their study of 1431 white British pregnant women, MacDonald et al. (1992)

investigated the relations between marital status and health behaviors during pregnancy. They measured cigarette, alcohol, and caffeine use at three time points and measured consumption during the week prior to the interview. They found that significantly fewer married women smoked during pregnancy compared to cohabiting women and those living with other adults. Women on their own were most likely to be smokers and to smoke heavily. In terms of alcohol use, women living with other adults abstained from drinking alcohol during pregnancy as compared to married women and others. Women on their own were also the most frequent drinkers. There were no major differences in caffeine consumption among these groups. One major strength of this study was its use of longitudinal measures of health behaviors; however, support was not measured and cannot be inferred from marital status.

Giblin et al. (1990) conducted one of the few studies that examined support and health behaviors in a sample of African-American women. They factor analyzed items assessing different types of social support, and three factors emerged: intimacy (relationship with the baby's father), comfort (tangible and emotional support received), and security (feelings of safety and stability). They found that use of street drugs was negatively correlated with all three factors, and smoking and drinking were not correlated with any of them. The authors proposed that the use of drugs may lead to greater social isolation rather than the reverse causal direction. There may also be a third variable operating here, with demographics such as low income and ethnicity producing a spurious correlation between social support and drug use. By controlling for these factors, future studies can draw stronger conclusions about the relationship between support and health behaviors.

In conclusion, several steps by future researchers would benefit future research on the link between social support and health behaviors during pregnancy. First, longitudinal studies with prospective designs would enable researchers to assess the substance use over time and to observe fluctuations in use that might occur during pregnancy. Second, the use of standard measures of social support and substance use would be preferable to the variety of ad hoc measures found in the previous studies. Reliability of self-reports of use of substances is a constant concern requiring extra care in measurement. Urine screening and blood tests for substances including tobacco, alcohol, and drugs are more reliable and can identify the degree of underreporting, although they are expensive to conduct and can raise ethical issues that must be addressed fully. Third, more statistical controls are necessary, given that studies on social support and prenatal care have obtained markedly different results when they controlled for demographic variables (e.g., St. John & Winston, 1989). Finally, studies should include large samples of women of diverse SES and ethnic backgrounds in order to understand how the relationship between support and substance use differs in various populations.

#### **Conclusion: Review of Research on Prenatal Social Support and Emotions and Behavior**

The studies reviewed in this section examined the relations among social support measures, various indicators of psychological adjustment, and important

behaviors during pregnancy. Support in general was associated with less stress, anxiety, and depression. Marital status and support from the baby's father were also related to the adjustment and behavior of women during pregnancy. Support from the baby's father tends to mitigate stress, anxiety, and depression and to improve prenatal care utilization in women from several ethnic groups. Family support and support from others is not as clearly related to positive adjustment, prenatal care, or health behaviors. In sum, it appears that general support and spousal support contribute most to positive attitudes and behavior during pregnancy.

### IMPORTANCE OF CULTURE IN UNDERSTANDING SOCIAL SUPPORT IN PREGNANCY

The foregoing literature review indicates that researchers are beginning to understand some of the significant benefits of support in pregnancy. However, we need to take a more sophisticated theoretical approach incorporating cultural variables to better understand racial and ethnic differences that have emerged in research. Cultural differences influence the definition and perception of social support, or the way individuals "give, get, accept, or reject it" (Jacobson, 1986, p. 259). Such differences may lead to profound disparities in the impact of apparently similar forms of support. According to Vaux (1985), "Social support processes are interwoven with the fabric of society and are undoubtedly related to macrosystem phenomena. That is, the extent, composition, and context of our social relationships are determined to some degree by cultural blueprints" (p. 90).

In particular, it is useful to consider value orientations as they shape the nature of close relationships in different cultures. In order to gain an understanding of the interaction between culture and support, it is important to compare support processes systematically across cultures that tend toward different value orientations. Therefore, in the following sections, we will discuss cultural issues, especially culturally variant value orientations, and how cross-cultural differences in value orientations affect close relationships, and potentially social support processes.

#### Background on the Study of Culture

Before we attempt to examine cultural differences in social support, it is important to conceptually distinguish among the three concepts of race, ethnicity, and culture, as these terms are often incorrectly used or used interchangeably. *Race* is defined by physical characteristics, usually common to an inbred, geographically isolated population, and is arguably arbitrary (Betancourt & Lopez, 1993; Jones, 1991; Zuckerman, 1990). If one considers the three conventionally distinguished "races" (Caucasoid, Negroid, Mongoloid), there is more within-group variability than between-group variability in behavior, indicating that racial groups are more alike than different (Zuckerman, 1990). Relying on race as a category can result in people's assuming that members of a group are more similar

to each other than to members of another group (Allen & Wilder, 1979; Holtz & Miller, 1985; Miller & Brewer, 1986) and viewing members of groups more in conventional stereotypes (Wilder & Shapiro, 1991). *Ethnicity* refers to groups with common nationality, culture, or language (Betancourt & Lopez, 1993). As groups come into increasing contact, however, these distinctions become increasingly blurred. Culture is often conceptualized as the human-made part of the environment, or as a system of meanings that emerge in adaptive interaction and are learned, socially shared, and transmitted from one generation to another (Betancourt & Lopez, 1993; Triandis, 1994). Finally, *acculturation* refers to the process by which an individual who has moved from one culture into another incorporates the beliefs and customs of the second culture into his or her existing structure of beliefs and customs (Berry, 1990; Mendoza & Martinez, 1981; Padilla, 1980). Thus, acculturation tends to diffuse the influence of a person's original culture.

Differences that emerge between racial and ethnic groups are often attributed to cultural differences. This is a false assumption, however, as race and ethnicity are not interchangeable with culture. Much research in cross-cultural psychology has focused on identifying differences among groups, but has failed to identify the specific aspect of cultures or the mechanisms that may influence the behavior (Betancourt & Lopez, 1993). As a result, our knowledge of culture in psychology mainly consists of documentation of group differences in behavior, but little understanding of the underlying elements of cultures that lead to such differences. This situation is analogous to trends in early research on gender. Instead, we must identify those aspects of culture that may influence the behavior of people with different racial and ethnic backgrounds, and study why such differences in behavior affect a variety of outcomes, including experiences in pregnancy.

One way of conceptualizing the differences among cultures is by examining *value orientations*. A value orientation refers to the priorities or preferences for particular goals, such as familism and tradition in Mexican-American culture and autonomy and achievement in European-American culture. Specific cultures, and the individuals in that culture, usually express the particular value orientations of the culture, which functions as a group ideology and guides individual behavior (Kluckhohn, 1951; Schwartz, 1990, 1992; Schwartz & Bilsky, 1987; Triandis, 1989, 1994). Two value orientations that have received considerable attention in the literature are individualism and collectivism.

*Individualism* has been described as an orientation that values the independent, autonomous, self-sufficient individual who has a unique set of internal attributes and acts according to these attributes. In an individualistic culture, personal goals are placed above group goals as a means of self-actualization (Hui & Triandis, 1986; Markus & Kitayama, 1991; Triandis, 1989, 1994; Triandis et al., 1986). The United States and other English-speaking countries have been found to be particularly high on individualism (Hofstede, 1980). In contrast, *collectivism* has been described as an orientation that values the interdependent individual—one who views the self in relation or connection to the group and subordinates personal goals to the goals of the group in the pursuit of the common interest of

the collectivity (Hui & Triandis, 1986; Markus & Kitayama, 1991; Triandis, 1994; Triandis et al., 1986). The countries of East Asia and Latin America have been found to be high on collectivism (Hofstede, 1980; Marin & Triandis, 1985).

Although cultures may exhibit similar patterns of attitudes and behavior due to these contrasting value orientations, most cultures incorporate different degrees of both individualism and collectivism. Given that humans are both individuals and members of groups, no one culture is entirely collectivist or individualist. Individualism and collectivism represent ideal patterns of social relations for different cultures. Individualism and collectivism have been viewed as "idealized cultural scripts" that lie on a continuum as end points for development and socialization (Greenfield, 1994). For example, individuals in some cultures may place greater importance on a few ingroups (e.g., the family and the organization in Japan), whereas others consider only one ingroup as extremely important (e.g., the family in Hispanic cultures) (Triandis, 1994).

In addition, individualism or collectivism can be viewed not only as a cultural variable expressed at the societal level, but also as an individual variable expressed as a personality attribute. Individuals in a society will differ in the degree to which they conform to the societal standard of individualism or collectivism. Therefore, individualism and collectivism can be viewed as individual variables in addition to being societal-level variables (Markus & Kitayama, 1991; Triandis, Bontempo, & Villareal, 1988; Triandis, McCusker, & Hui, 1990). Individualism refers to the aforementioned value orientation as expressed at the societal level. Corresponding to this value orientation is a personality attribute often found in individuals of individualist cultures referred to as *idiocentrism*. Similarly, the personality attribute that corresponds to cultural collectivism is referred to as *allocentrism*. Research indicates that within cultures, individuals who are allocentric tend to receive more social support than those who are idiocentric (Triandis, 1989, 1994). By making this distinction, we can then also consider the case of the allocentric person in an individualistic culture or of the idiocentric person in a collectivist culture (Triandis et al., 1990). This consideration becomes increasingly important as individuals from collectivist cultures immigrate to individualistic cultures and experience being allocentric in a society that values individualism. For example, a pregnant woman who has recently immigrated from Mexico to the United States may experience stress from having an allocentric orientation in an individualistic culture. However, she may receive more support from others in her cultural group than pregnant women who are not from a collectivist culture.

We wish to emphasize that there are advantages and disadvantages to both individualism and collectivism. Although a collectivist orientation stressing interdependence among members of the ingroup may lead to higher levels of social support for allocentric individuals, this support often comes at the expense of expressing one's individual needs and goals, which may change over time when one lives in an individualistic culture. In contrast, idiocentric individuals in an individualistic culture benefit from the expression of individual needs and goals, but at the expense of ties to an interdependent network of family and friends. These issues may be of special importance during pregnancy.

### **Social Support and Culture**

Like research in other areas, most social support research has not addressed the question of value orientations, but rather has separated individuals according to ethnic or racial background and made inferences about cultural differences. In order to understand the differences that do emerge, however, it is necessary to focus on value orientations. There is evidence to suggest that social support varies among cultures and ethnic groups as a function of collectivist vs. individualist value orientation. Given that the nature of our social relationships arises from the ways in which our cultures are structured and the norms that guide them, it is not surprising that these orientations are linked to cultural and ethnic differences.

The relationship between culture and social support becomes more complex when we consider individuals who immigrate to new countries. For immigrants, the interaction between these two variables is compounded by factors such as the stress of being a minority, isolation from one's own culture, language difficulties, and generation gap from ancestral country. Our ability to generalize from the ancestral culture may be limited depending upon whether the migration was voluntary or involuntary, the number of family members that immigrated, available community support, ability to maintain language, economic pressures, social pressures to alter traditional values, and urbanization. It is important, however, not to underestimate the possible influence of ancestral culture on patterns of social support in groups that have migrated. Much of the research indicates some stability in the norms and values regarding social support between Africans and African-Americans, between Asians and Asian-Americans, and between Latin Americans living in the United States and those living in their native country (Greenfield, 1994).

Given that immigrants come to their host countries under varied conditions, acculturation is another cultural variable that needs to be measured on an individual level. Measures of acculturation usually involve assessment of language preference and years since immigrating, as well as other variables. These measures allow researchers to assess the degree to which immigrants maintain the values and normative behavior of their ancestral cultures and accommodate to those of the new culture. In the following studies, some ethnic differences emerge in social support during pregnancy that are consistent with previous research on Latino culture. A few of the findings are paradoxical, however, contradicting common assumptions about Latino culture. Differences in acculturation may account for these inconsistencies; that is, acculturation may operate as a modifier of the relationship between ethnicity and social support. For this reason, we believe that measures of acculturation must be incorporated into future studies of ethnicity and social support to clarify the issues.

### **Latin Cultures and Social Support**

Early research on Hispanics in the United States and anthropological research in Latin America has indicated that a strong interdependent orientation

exists in Latin cultures (Marin & Triandis, 1985). The collective orientation of Latinos involves one primary group or collective—the extended family (Knouse, 1991). This is called *familism*, which places the family and community life as the primary source of identity and support, with values and behaviors reflecting the importance of the family for the individual as well as the relative emphasis and priority given to the needs of the family (O. Ramirez & Arce, 1981; Roland, 1988; Rothman, Gant, & Hnat, 1985; Zuniga, 1992). In the Mexican-American community, familism is characterized by an extended family system involving relatively strong and extensive bonds beyond the nuclear family, including grandparents, uncles, aunts, cousins, siblings, godparents, and friends (Chilman, 1993; O. Ramirez & Arce, 1981; Valle & Bensussen, 1985; Vega, 1990; Zuniga, 1992). Families usually live in nuclear households, with networks of families interconnected, resulting in clusters of interdependent nuclear families (Keefe, 1984; O. Ramirez & Arce, 1981; Sena-Rivera, 1979; Vega, 1990). Mexican-Americans have been shown to exhibit higher levels of familism than African-Americans or European-Americans (Keefe, Padilla, & Carlos, 1978; Mindel, 1980).

Traditionally, the Mexican-American family has been characterized as patriarchal. Although the ideal of patriarchy still exists in most families, the stereotype of a male-dominated family and rigid sex and age grading is no longer accurate (Baca-Zinn, 1980; O. Ramirez & Arce, 1981). Sex roles are not as rigidly defined, although fathers are regarded as more dominant and concerned with matters outside the home, whereas mothers are more concerned with matters within the home (Baca-Zinn, 1980; Chilman, 1993; Ybarra, 1982). Research suggests that the stereotype of *machismo* (absolute patriarchy, flamboyant masculinity, and sexual virility) is an exaggerated misrepresentation of the actual Latino male sex role (Mirande, 1977; Valdez, 1980; Ybarra-Soriano, 1977). That role is better defined in terms of respect, honesty, loyalty, responsibility, and courage (Alvarez & Bean, 1976; R. Ramirez, 1979). Furthermore, as more Latina women are working outside the home, more egalitarian family patterns are emerging, reflected by joint decision making and fathers contributing more at home (Baca-Zinn, 1980; Chilman, 1993; Cromwell & Ruiz, 1979; Mirande, 1979; O. Ramirez & Arce, 1981; Ybarra, 1982). Latino couples reporting more egalitarian roles also report more marital satisfaction (Bean, Curtis, & Marcum, 1977; Chilman, 1993).

The primary source of emotional support for Latinos often comes from within the extended family network (Keefe, Padilla, & Carlos, 1979). One study suggests that Hispanics are more willing to sacrifice for the family, exhibit strong feelings of attachment, loyalty, and solidarity with family members, and tend to socialize more with family and friends than with coworkers (Knouse, 1991). They emphasize personal cooperation and help and exhibit more positive behaviors in interpersonal situations than do European-Americans (Triandis et al., 1984). Furthermore, Latinos tend to have less extensive friendship networks than European-Americans, yet have deeper friendships with people of similar ethnic backgrounds. These friendships are an important source of social support.

Social support from the extended family plays a particularly important role in the process of immigration and acculturation. Latinos tend to migrate toward kin

networks to ensure links to their national and international community. Support can be critical to adaptation in terms both of developing relations with members of the host country and of accessing ethnic networks (Salgado de Snyder, 1987). Immigration results ipso facto in a strong reduction in interpersonal relationships, especially with those who are most supportive of the immigrants' beliefs and values. Thus, immigrants may lose support when it is most valuable (Baptiste, 1993; Salgado de Snyder, 1987). Some researchers have argued, however, that Mexicans experience a relatively stress-free migration due to available social support in the United States (Guendelman, 1988; Sabogal, Marion, Otero-Sabogal, Marin, & Perez-Stable, 1987). Nonetheless, research indicates that recent immigrants report less available support from friends and relatives and are less satisfied than Mexican-Americans and European-Americans and at higher risk for psychopathology (Vega & Kolody, 1985). Furthermore, women high in ethnic loyalty report having less social support, lower self-esteem, lower satisfaction with social support, and higher acculturative stress (Salgado de Snyder, 1987).

As Mexican-Americans undergo the process of acculturation, conflict arises over how to accommodate traditional Mexican values and American values. The brunt of this struggle falls mainly on first- and second-generation Mexican-Americans. Furthermore, the longer a family is in the United States, the more it must use the English language. Second-generation Mexican-Americans may lose their facility in Spanish, thus resulting in conflict and weaker ties to the family unit (Chilman, 1993; Rothman et al., 1985). In addition, acculturation may alter traditional support networks among Hispanic immigrant groups. Some researchers have argued that as Mexican-Americans become more acculturated and develop more extensive friendship networks, their degree of familism will decrease. However, support for this contention is mixed (Knouse, 1991; Sabogal et al., 1987; Triandis, Marin, Betancourt, & Chang, 1982), and Zuniga (1992) argues that one of the last value stances immigrants give up is their sense of familism and family loyalty. We believe that the concepts of acculturation and of individualism-collectivism are key to understanding social support patterns in Latino cultures.

#### **Research on Ethnic and Cultural Differences in Social Support in Pregnancy**

Pregnancy offers a unique opportunity to examine how the social networks of different cultures and ethnic groups respond to a woman during an important transition in her life, one that is often very challenging psychologically and physically. Because it is universal across cultures, and thus has relevance to all women, pregnancy differs from other culture-specific events. It also carries some symbolic value, in that it involves planning for the arrival of a new and unique member of the social system, which may carry different meanings in individualist vs. collectivist cultures. This event reflects the way a network responds to the inclusion of a new member and the changes in social structure that come with it. Thus, the social support provided during this event provides some insight into the nature of the culture; at the same time, knowledge of the values and practices of the culture will allow us to make some predictions about social support during



pregnancy. We have just discussed differences in social support in Latino populations and now will examine how these differences generalize to support during pregnancy.

Studies have revealed ethnic differences in social support receipt, satisfaction, need for support, and sources of support during pregnancy. Some studies have been conducted with solely or mostly Latina pregnant women (Engle, Scrimshaw, Zambrana, & Dunkel-Schetter, 1990; Scrimshaw, Engle, Arnold, & Haynes, 1987; Scrimshaw, Zambrana, & Dunkel-Schetter, in press; Zambrana, Dunkel-Schetter, Collins, & Scrimshaw, 1994; Zayas & Busch-Rossnagel, 1992). Three studies have measured support receipt during pregnancy with comparisons of Latinas, African-Americans, and European-Americans (Dunkel-Schetter, Lobel, Collins, & Scrimshaw, 1994; Norbeck & Anderson, 1989a; Wasserman, Rauh, Brunelli, Garcia-Castro, & Necos, 1990). Inasmuch as our focus is mainly on Latinas and comparative work, this section of the review may be incomplete with respect to studies of other groups.

### **Social Support during Pregnancy among Latinas**

A few studies have concentrated primarily on the Latina pregnant population and have begun to address differences in social support due to acculturation for this group (Engle et al., 1990; Scrimshaw et al., 1987, in press; Zambrana, Dunkel-Schetter, Collins, & Scrimshaw, 1994; Zayas & Busch-Rossnagel, 1992). They generally find that both the baby's father and female relatives provide the most support during pregnancy, yet there are some differences between Mexican-Americans and Mexican immigrants. Mexican-Americans receive more family support and Mexican immigrants receive more spousal support. Most research in this area has failed to measure support comprehensively by assessing all types of support, satisfaction with support, needs for support, and sources of support. Future research on support for Latina women could benefit from assessing social support in this multidimensional manner.

**Spousal Support.** Latina women are generally more likely to be married and to live with the baby's father than women from other ethnic groups. Studies of Latinas during pregnancy suggest that partners and spouses are critical sources of support to women of different national origins and ages. The role of the father as a major provider of support during pregnancy has been reported in studies of Mexican-American women (Lantican & Corona, 1992), as well as Puerto Rican, Central American, and South American women (Zayas & Busch-Rossnagel, 1992). Zayas and Busch-Rossnagel (1992) also found that 50% of both adolescent and older Latina mothers reported that the baby's father was supportive and involved in their pregnancies. Thus, support from the baby's father appears to be an important resource for Latina women in these descriptive studies; however, there are no comparison data to suggest that spousal support for Latinas differs from that for pregnant women of other ethnic groups.

In a study on acculturation and psychosocial mediators of birth outcomes

in Mexican women, Zambrana, Dunkel-Schetter, Collins, and Scrimshaw (1994) found that acculturation affected the amount of support from the baby's father. Based on interviews with 911 Mexican-American and Mexican-immigrant low-income pregnant women, the results indicated that Mexican-immigrant women were more likely to live with and be married to the baby's father than were Mexican-American women. Mexican-American women received less support from the baby's father and were more likely to experience stress than Mexican-immigrant women. This study also found that for both Mexican-American and Mexican-immigrant women, support from the baby's father was associated with significantly less stress, less substance use, and more positive attitudes toward pregnancy. More acculturated women reported more drug and alcohol use, felt more negative about their pregnancies, and experienced more stressful life events such as being fired from a job or being arrested.

The UCLA Birth Project was conducted with 291 low-risk primiparous women of Mexican origin, a majority of whom were recent immigrants. Significant associations between support from the baby's father and behaviors in pregnancy were reported in several papers (Scrimshaw et al., in press; Engle et al., 1990). For example, support from the baby's father was significantly positively related to the initiation of prenatal care and the number of prenatal visits (Scrimshaw et al., in press). Scrimshaw et al. (1987) also showed that support from the baby's father was related positively to duration of breast feeding. Thus, support from the baby's father appears to be linked to at least some healthier attitudes and behaviors during pregnancy for unacculturated Latinas.

*Family Support.* Studies that focus on support for pregnant Latinas reveal that the family, particularly female relatives, is a critical source of support in pregnancy. In a study by Lantican and Corona (1992), 42 Filipino and 42 Mexican-American women having their first birth completed the Norbeck Social Support Questionnaire (Norbeck et al., 1981, 1983), which involved ranking different sources of support. Mothers and sisters were listed as the major sources of affection, affirmation, and aid. Similar findings were obtained in a study of pregnant Latinas of mixed backgrounds and ages (Zayas & Busch-Rossnagel, 1992). For 24% of older women in the sample and 40% of adolescents, mothers provided support during pregnancy. Female relatives and friends were also found to be supportive of half of older women and two thirds of teens. Neither of these studies provides comparative data on ethnic differences. However, they are consistent with the finding of Norbeck and Anderson (1989a) that suggests that Latinas receive more support from their mothers as compared to African-Americans and European-Americans. Latinas also prefer to have their mothers or sisters with them during labor and delivery (Scrimshaw et al., in press). Since many studies do not ask specifically about support from female relatives during pregnancy, they may conceal these cultural variations in reliance on different sources of support.

Although Mexican-American women are less likely to live with and receive support from the baby's father than are Mexican immigrants (Zambrana, Dunkel-Schetter, Collins, & Scrimshaw, 1994), they are more likely to receive support from

their families. While immigrants often rely heavily on their spouses when they first arrive, their family network builds over time with the arrival of other relatives from Mexico and births in their own family. The UCLA Birth Project findings showed that support from family was associated with less prenatal and postnatal anxiety (Engle et al., 1990). Family support was also associated with less desire for pain medication during labor, expectations for a more active role during labor, and greater knowledge of childbirth. In particular, support from female family members is presumably associated with these aspects of labor and childbirth, given that these members are preferred companions during childbirth and have more knowledge than male relatives. Thus, family support from female relatives is a critical resource during pregnancy and delivery particularly for Mexican-American women.

### **Comparative Studies on Ethnic Differences in Social Support**

Norbeck and Anderson (1989a) conducted a comparative study with 208 low-income Latina, African-American, and European-American women to measure psychosocial predictors of pregnancy outcomes. Although the study was primarily concerned with the relationship between social support and pregnancy outcomes, exploratory descriptive analyses revealed different patterns of social support among women of these ethnic groups. A multidimensional measure of social support, the aforementioned Norbeck Social Support Questionnaire (Norbeck et al., 1981, 1983), was employed to assess the amount of emotional and tangible support received, as well as sources of support including the spouse or partner, mother, other relatives, and friends. Latinas reported the lowest levels of emotional and tangible support, whereas the means were somewhat higher for African-Americans and highest for European-Americans. Latinas also indicated receiving the least support from relatives and the least support from friends, and they had the smallest support network compared to African-Americans and European-Americans. In contrast, Latinas received greater spousal support and support from their mothers than women in the other two groups. These findings should be regarded as tentative, given that significance tests were not used to test ethnic differences in social support.

The lack of overall support received by Latinas in the Norbeck and Anderson (1989a) study may be related to the finding that they reported experiencing much less stress than European-American and African-American women during pregnancy. The authors proposed that because the lives of these women improved with immigration, they perceived less stress than they had preimmigration. However, acculturation was not factored in; thus, its impact on levels of stress or perceptions of support is unknown. An alternative explanation is that Latinas may underreport levels of support as compared to individuals from other cultures because such support is expected in more traditional cultures (Thorpe et al., 1992) and is not as salient. In other words, the frame of reference or the threshold for perceiving and reporting instances of support may be different in different cultures. We have also considered the possibility that individuals from collectivist

cultures do indeed *receive* less support but perceive that they have more. These possibilities merit investigation.

The UCLA Psychosocial Factors in Pregnancy Project, conducted by Dunkel-Schetter, Scrimshaw, and Lobel (Dunkel-Schetter et al., 1994; Lobel, Dunkel-Schetter, & Scrimshaw, 1991), involved a sample of 136 Latina, 53 African-American, and 52 European-American low-income pregnant women who were interviewed many times during their pregnancies. Measures of social support comparable to those in the preceding study were employed. Material, task, emotional, and informational types of support received were assessed (Collins et al., 1993). Subjects were asked who provided each type of support, how much they needed of each type, and how satisfied they were with each type of support received. The following results of tests of ethnic differences in social support have not been published previously.

Consistent with the findings of Norbeck and Anderson (1989a), Latina women received the least total support compared to African-American and European-American women in this study, and these differences were particularly strong for material and task help. European-Americans received the most total support and African-Americans received intermediary levels. However, African-American women received the most material support during pregnancy, followed by European-Americans and then Latinas. There were no ethnic differences found in emotional and informational support received or in levels of stress. Although it may appear that Latinas' networks were not providing an adequate amount of overall support, they reported significantly less need for support. Latinas also reported a marginally higher level of satisfaction with overall support (in particular informational support) than the other two groups. These findings suggest that Latinas may be receiving less overall support due to their having less need for support and their feelings of greater satisfaction with support received than women of other ethnic groups.

The findings from the UCLA Psychosocial Factors in Pregnancy Project on ethnic differences in total or overall support may also be related to ethnic differences in coping strategies used during late pregnancy. This study measured the extent to which pregnant women used planful problem solving, information seeking, visualization, and distancing to cope with the anxiety of impending childbirth. Latinas were the most likely to use distancing and the least likely to use information-seeking strategies compared to African-Americans and European-Americans. These findings suggest an additional factor in understanding the social support results reported above—specifically, that Latinas may be receiving somewhat less support during pregnancy due to their different attitudes and ways of coping with childbirth. In trying to understand the various patterns of support in different groups, it may be important to consider differences among different ethnic groups in attitudes toward pregnancy and toward methods of coping with the many stresses involved.

Consistent with the findings of Norbeck and Anderson (1989a), the results from the UCLA Psychosocial Factors in Pregnancy Project indicate that the baby's father was identified as the major provider of support to Latinas. Latinas reported

the highest levels of emotional support from the baby's father, followed by European-Americans and then African-American women. The findings on spousal support may be related to the finding that Latinas were significantly more likely to be married to and living with the baby's father, whereas African-American women were least likely to be married to or cohabiting with the father. African-American women received support primarily from relatives, whereas European-Americans depended on friends, relatives, and the baby's father for different types of support. A measure of satisfaction with health care provider support (emotional support, information, and overall care received) was also employed. Latinas reported the highest levels of satisfaction with health care provider support, followed by African-Americans and European-Americans.

The UCLA Psychosocial Factors in Pregnancy Project also included structural measures of support, including number of friends and relatives, frequency of contact with both, and satisfaction with relationships with friends and family (Collins et al., 1993). No ethnic differences were shown in family network size, frequency of contact with family members, or satisfaction with family relationships. However, Latinas reported the largest friendship networks and the most frequent contact with friends. This apparent conflict with other studies showing that Latinas rely more on family and less on friends may be due to having a more acculturated sample. Further investigation in this and other studies on acculturation will aid in our understanding of how support is related to acculturation and more directly to cultural norms and values.

Wasserman et al. (1990) investigated differences in support receipt among adolescent and adult mothers of Latina and African-American descent. They measured types of general support including guidance, tangible, emotional, and social support, as well as prenatal support, or support specifically related to the needs of pregnant women. Whereas the Latinas in the UCLA Psychosocial Factors in Pregnancy Project (Dunkel-Schetter et al., 1994) were of mixed national origins and acculturation levels, Latinas in this sample were primarily first-generation immigrants and were from either the Dominican Republic or Puerto Rico. Wasserman et al. (1990) hypothesized that Latinas, due to their low level of acculturation, would receive less support and have smaller social networks than African-Americans. Consistent with this hypothesis, the findings revealed that Latina women reported significantly less guidance, emotional support, and tangible support than African-American women. Differences were not found, however, in prenatal support or assistance in obtaining prenatal care. These findings again reveal that Latinas are likely to receive less support than African-American and presumably European-American women. However, the degree to which acculturation may account for these differences could not be determined, given that it was not measured directly.

In conclusion, differences in amount of support receipt and in sources of support are evident in both comparative studies of Latinas, African-Americans, and European-Americans and studies of Latinas who differ in levels of acculturation. Overall support appears to be lower for Latinas compared to other ethnic groups; however, they sometimes report less stress, less need for support, and

greater satisfaction with the support they receive. They may also be less anxious about pregnancy in particular, given more positive attitudes toward pregnancy in Latina women (Zambrana, Dunkel-Schetter, Scrimshaw, & Collins, 1995). In general, Latina women are more likely to be married to the baby's father and to receive more support from the baby's father than women in other minority ethnic groups. However, whereas Mexican immigrants report greater support from the baby's father, Mexican-Americans receive support from their families. Support from both the baby's father and the family is associated with positive attitudes and healthy behaviors in pregnancy. Thus, differences in support provision may vary due not only to ethnicity, but also to acculturation, which points to the importance of understanding the influence of culture in the provision of support.

In the previous sections, we outlined ethnic and racial differences in social support. Although the studies discussed did not include measures of culture, we can speculate about the ethnic differences that emerged on the basis of information about levels of acculturation and the value orientation of Latino cultures. For example, within Latina samples, both spousal support and family support were valued by, and were beneficial to, Mexican-immigrant and Mexican-American women. However, the Mexican immigrants received more spousal support, whereas the Mexican-Americans received more family support. This distinction may suggest that immigrants experience a reduction in the size of their social networks, but that their social networks grow as their time in the United States grows longer. Despite these changes during the acculturation process, familism appears to be valued by both groups.

When Latinas were compared to women of other ethnic and racial backgrounds, they were found to receive less social support than European-American and African-American women, yet to indicate less need for support and greater satisfaction with received support. Several explanations may account for this difference. First, Latinas may perceive their lives in the United States as better than their lives in Mexico and therefore experience less stress and need less social support. Second, Latinas may underreport their levels of received support, as compared to individuals from other cultures, because support is expected in collectivistic cultures and Latinas' thresholds for recognizing support may therefore be higher than those of women from other cultural groups. Third, Latinas report having smaller social networks than women from other groups and therefore may have less opportunity to receive support. Finally, it could be that other variables such as attitudes, ways of coping, or health behaviors mediate or modify the relations between ethnicity and social support during pregnancy. These competing explanations warrant investigation.

## CONCLUSION

Social support during pregnancy appears to exert beneficial influences on the behavior, emotions, and outcomes of pregnant women. However, precise

specification of these effects, particularly specification of the circumstances under which they are strongest, must await future research with clearer conceptualization of critical concepts, psychometrically sound measures, and rigorous research designs. This line of research has advanced to the point where different questions can now be asked: Who most needs social support during pregnancy? Which types of support are most beneficial to which groups of women? Who is best able to provide social support to women of different ethnic and cultural groups? Do women experiencing different stressors in pregnancy require different supportive interventions? How are supportive interventions best delivered? The benefits to finding answers to these questions are threefold. First, a greater understanding of support in pregnancy can contribute to advancement of basic scientific research on social support and health in general. Second, such information may contribute to efforts to reduce rates of adverse physical and psychological outcomes for mothers and infants. Finally, reduction of adverse outcomes such as low birth-weight may provide cost savings in medical care during labor and delivery and in pediatrics.

In this chapter, we emphasized the need for focusing on ethnic and cultural issues integral to social support processes during pregnancy. However, there is also a pressing need to integrate research on social support in pregnancy with existing knowledge of close relationships, particularly the marital relationship. Researchers of close relationships have highlighted the need to integrate these two bodies of work (Duck, 1990; Kelley et al., 1983). We wholeheartedly agree with this recommendation with respect to research on pregnancy in particular. The understanding of culture and the understanding of close relationships are inextricably tied by the concept of interdependence (Kelley et al., 1983). The level of interdependence valued in a particular culture is a primary determinant of the level of interdependence in relationships within that culture. This being the case, behavior in close relationships is influenced by culturally determined value orientations (Dion & Dion, 1993). Embracing the concept of *embedded contextualism*, and striving to understand the individual within the context of the family (or close relationship), and the individual and family within the context of their culture, will aid in the research process (Szapocznik & Kurtines, 1993).

Furthermore, research on close relationships indicates that support in different role relationships may be associated with different outcomes. For example, information or emotional support provided by a parent to a pregnant teen may be received differently than these forms of support from a peer. However, these social roles alone do not capture important aspects of relationships, including quality, level of intimacy, commitment, and satisfaction. Such qualitative aspects of relationships undoubtedly influence the nature of supportive interactions in important ways as well, and deserve further attention.

In conclusion, we believe that the study of pregnancy offers a superb venue for social support research to explore issues concerning the family. Yet only by blending knowledge from research in health psychology, cultural psychology, and close relationships can we hope to progress.

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