

THE TRANSITION TO PARENTHOOD: STRESS, RESOURCES, AND GENDER DIFFERENCES IN A CHINESE SOCIETY

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This study aimed to explore the parenthood transition in a Chinese cultural context. Three hundred sixty-four parents (201 females, 163 males) took part in this panel study conducted twice at 6 weeks before and 6 weeks after the birth of their children. Results showed that (a) in cross-sectional analyses, parenthood stress had consistent negative effects on mental health and marital satisfaction; (b) in prospective analyses, stress still had adverse effects on postnatal mental health or marital satisfaction after controlling for their prenatal baseline levels; (c) social support and marital congruence had beneficial effects on the parenthood adjustment; (d) compared to men, women reported higher stress, more psychological symptoms, lower marital satisfaction than men, but receiving more social support. These results are discussed in relation to existing Western theories and research, as well as the distinct characteristics of the contemporary Chinese society. Possible implications for community interventions are also suggested. © 2006 Wiley Periodicals, Inc.

INTRODUCTION

At the turn of the century, the traditionally conservative East Asia is undergoing profound economic and societal modernization. Consequently, the divorce rate has skyrocketed in this region. Even though Taiwan is a prototypical Chinese society with a strong

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Confucian family tradition, the latest official estimate indicates that for every three new marriages, one ends up in divorce (Executive Yuan, 2003).

Clearly, there is a pressing need for a greater understanding of the factors that precipitate marital distress and family breakdown to develop appropriate preventive community-based interventions. Previous work has suggested that the problems that lead to marital dissolution start early within relationships (Thornes & Collard, 1979). Consequently, early preventive regimes may be most likely to be effective, because they would address problems before conflicts have become serious (MacAllister, 1998). The birth of a first child (or the transition to parenthood) has been identified as one such critical event (Cowan et al., 1985), so preventive measures aimed at preparing and supporting couples at this stage in their relationship are likely to have long-term beneficial effects on the functioning of their developing family. The present study thus focused on examining the stress and its consequences of "becoming a parent" from prenatal to postnatal stages to further our understanding of mental health and family welfare issues involved in the actual transition to parenthood. Meanwhile, resources that may help couples through this transitional period were also examined to inform possible intervention programs. Our two-wave panel design also allowed comparisons of the prenatal stage (6 weeks before the child was born) and postnatal stage (6 weeks after the child was born) to provide scientific basis for possibilities of different interventions at different points of coping with distress. Another thrust of the present study was our exploration of possible sex differences to improve our understanding of men's experiences in the transition to parenthood.

In the West, decades of intensive research has established a firm scientific basis for systematic interventions on parenting and early parent-child interactions. Parent education and the use of formal social support systems are particularly emphasized. Parent effectiveness training (P.E.T.; Gordon, 1970) is a good example of a parent-training group program, which has proven very effective (Fritz, 1985). In cases of social support interventions, two types of formal support systems are generally distinguished: (a) general, and (b) specific to at-risk infants and families, such as low-income families and adolescent parents. General support systems are available to all members of the community, including health care facilities for both adults and children, counseling services for individuals and families, employment agencies, educational classes, social work services, and other welfare benefits. In addition, there are a variety of support systems of special relevance to at-risk infants and families. These programs serve the educational function of providing childcare information and directly alleviate parental stress associated with difficult infants. Support systems that serve an educational function include hospital-based courses in childcare and child rearing, nurse visiting programs, well baby clinics, follow-up programs, and parent discussion groups. Some programs also offer stress relief services, such as family and group day-care facilities, babysitting services, mother's helpers, housekeeping services, drop-off centers, crisis nurseries, and hot lines. The Prenatal/Early Infancy Project developed by Olds (1981) provides a good illustration of how formal and informal support can function together for adolescent mothers. This project has developed a model in which the hospital staff (formal system) identifies and trains members of the parents' informal social network (informal system) to assist at-risk families. Specifically, a nurse/home visitor provides home-based education for pregnancy management and child-rearing skills, while involving "significant others" to create a supportive environment for behavioral change on the part of parents, and finally linking families with other health and support services in the community.

All these well-established intervention programs have proven very effective and are widely available in the West (Parke & Tinsley, 1987), things are quite different in Taiwan.

Although Taiwan is a relatively affluent developing society, social welfare is a recent introduction and community services are largely underdeveloped. On issues of parenthood transition, health services are adequate—offering standard check-ups for all pregnant women paid by the national health insurance program. However, other interventions and support programs for expecting parents or families are almost nonexistent. The worst aspect is perhaps the lack of public recognition for the need of parent education and family support during the parenthood transition period. The Chinese culture has long viewed child rearing as a natural practice as old as humanity itself. Most people would argue that countless generations have been reared successfully using “old grandma recipes” handed down from generation to generation. However, as Taiwan undergoes dramatic societal modernization, cultural traditions are breaking down and family forms are fast changing; hence, it is no longer possible to learn all that one needs to know about parenting through modeling and experience. With the extensive urbanization and family nuclearization, today’s Taiwanese parents can no longer rely on the traditional extended social network for support and help. A crisis situation is in the making, and Taiwanese psychologists are pressed for rigorous academic research as well as the development of effective community interventions. As it is not a foregone conclusion that Western research findings can be generalized to a vastly different culture such as the Chinese culture, our study with Chinese parents is both important and pioneering.

THE IMPACT OF PARENTHOOD: MENTAL HEALTH AND MARITAL SATISFACTION

Becoming a parent can be a stressful transition (Santrock, 1995) that can incur costs on personal well-being. Abbot and Brody (1985) noted that a young child aged between 0–2 has the most adverse effect on the mother’s physical and mental health. In the West, extant work has focused on maternal postpartum depression; however, empirical evidence is inconclusive. Cooper et al. (1988), for example, found that antenatal and postnatal women were no more likely than a general population sample of nonpuerperal women to be depressed. On the other hand, Osofsky (1979) has suggested that postnatal anxiety may affect bonding between mother and child, but this suggestion has not been closely examined.

In contrast to the extensive study on women’s postpartum depression, men’s physical health rather than mental health seems to have received more attention in scientific research. Ferketich and Mercer (1989) found that men’s perception of their health was significantly poorer at 8 months postnatal than during their partners’ pregnancy. Furthermore, Quill, Lipkin, and Lamb (1984) found that men visited doctors more in the year after their children were born than during their partner’s pregnancy. The strong relationship between physical and mental health (Marks, Goldberg, & Hillier, 1979; Lu, Tseng, & Cooper, 1999) is suggestive that men experiencing a high level of physical symptoms may actually be having difficulties adjusting to their new role as a father. Thus, in the present study, we expanded the scope of personal well-being to include depression, anxiety, and somatic symptoms in examining the impact of parenthood transition.

Transition to parenthood has also been found to be associated with a dip in marital satisfaction (Argyle, 1987). This adverse effect of the arrival of a child on marriage is probably caused by the competition for limited resources between parenthood and marriage (Belsky, 1990). However, previous work has focused almost exclusively on mother’s reports of marital satisfaction; consequently, we know very little about men’s psychological experiences in their transition to fatherhood. One study did examine reports of both men and women and found that while women’s marital satisfaction declined 6 months

after childbirth, men's marital satisfaction declined between 6 and 18 months after their children were born (Cowan et al., 1985).

Thus far, extant literature in the West has suggested that the transition to parenthood may incur costs on personal well-being and suppress marital satisfaction. Specifically, we hypothesized that:

1. Parental stress was positively related to psychological symptoms and negatively related to marital satisfaction, when stress and outcomes were assessed at the same time. (Cross-sectional adverse stress effects)
2. Parental stress was still positively related to psychological symptoms and negatively related to marital satisfaction, even after the baseline levels of mental health or marital satisfaction were controlled. (Prospective adverse stress effects)

Resources for Coping With Parenthood Stress

However, becoming a parent is by no means all gloomy and negative. In the West, child-bearing is seen as a creative experience of marital bonding (Asis, 1986). In Asia, being a parent is a strongly sanctioned social value and a highly desired personal role. For both Chinese men and women, "parental role" was ranked the highest in importance among various adult roles (Lu & Lin, 1998). Thus, the critical question we need to address is why people fare differently with this transition to parenthood. In other words, individual differences in the context of parenthood transition need to be systematically examined. In the present study, we focused on social support and marital congruence as individual difference factors that may counter the adverse effects of parental stress.

Social networks are often mobilized to help people coping with the impending or newly acquired status of being a parent, especially for women. Previous research has noted that the frequency of contacts with families of origin and with other parents tends to increase over time from pregnancy through 9 months postpartum. Furthermore, the amount of emotional and material support received from families and friends is likely to be the greatest at 3 months postpartum, especially for first-time parents. Other services, such as babysitting, were also provided in some cases (Belsky & Rovine, 1984). Although evidence supporting the beneficial effect of social support on well-being is unequivocal (e.g., Wortman & Dunkel-Schetter, 1987), a lack of social support was linked to postpartum depression among women (Howell-White, 1991).

However, men and women may have different experiences of social support during their transition to parenthood. Compared to men, women more actively solicit social support (Lu & Argyle, 1992) and indeed receive more support from others (Lu, 1995). Specifically, mothers more than fathers seek social support as a means of adjusting to parenthood (Ventura & Boss, 1983). Furthermore, as mothers are more often the focus of social support provision, men's needs for understanding and support have largely been neglected.

Within the conjugal system, the psychological sense of unity, alliance, and partnership have been found to play a particularly central role in the adjustment to parenthood. Couples who have close and confiding marriages compared to those who are unhappily married, are more likely to be warm and sensitive parents and to hold positive attitudes about their babies and their parenting roles (Owen, Lewis, & Henderson, 1989). For women, high levels of marital intimacy are also associated with a reduced level of postpartum depression (Stemp, Turner, & Noh, 1986). Previous work has suggested that the

single best predictor of postpartum marital adjustment is the level of marital adjustment during a pregnancy (Harriman, 1986), and better adjustment has been linked to cohesive and satisfying couple bonds (Belsky & Pensky, 1988).

In the present study, marital congruence was conceptualized as an indicator of the positive quality of a marital relationship. Marital congruence refers to the extent of conjugal agreement on important issues in life, such as finance, affection, and outlook of life, which has been found to relate to marital satisfaction (Locke & Wallace, 1959). In the context of parenthood transition, research has found that how couples deal with the allocation of childcare and other household chores was a strong predictor of adaptation. Issues such as paternal involvement (Levy-Shiff, 1994), violated expectations for the sharing of responsibilities (Hackel & Ruble, 1992), and the process of decision making (Osofsky & Culp, 1989) are all predictive of marital satisfaction for both sexes.

The present study thus focused on both social support and marital congruence as resources in the context of adjustment to parenthood. Specifically, we hypothesized that:

1. Both social support and marital congruence were negatively related to psychological symptoms and positively related to marital satisfaction, when assessed at the same time. (Cross-sectional resources beneficial effects)
2. Both social support and marital congruence were still negatively related to psychological symptoms and positively related to marital satisfaction, even after the baseline levels of mental health or marital satisfaction were controlled. (Prospective resources beneficial effects)

Parenting in the Chinese Cultural Context

As noted by Phoenix and Woollett (1991), motherhood and fatherhood are socially and culturally constructed; becoming a parent in a Chinese society thus entails some distinct experiences. Confucian philosophy has constructed family and filial piety as a central cultural value, which is transmitted and reinforced through social institutions and socialization practices in Chinese societies (Yang, 1988). Traditionally, the ultimate purpose of a marriage is to produce an heir to carry on the family line. Confucian teachings regard the failure to produce an offspring as the gravest violation of filial piety, which still has a normative influence on people's views of parenthood in contemporary Chinese societies (Yang, 1987).

It is thus important to recognize that in a Chinese cultural context, becoming a parent is to fulfill a vitally important social duty and obligation, as well as to contribute to the collective well-being (Lu, 2001). The stress and challenge of transition to parenthood blended with joy and accomplishment are immense. Furthermore, as first pointed out by the famous anthropologist Francis Hsu (1953), the traditional Chinese culture regards the father-son axis as the primal relationship in society, far more energy and resources are allocated to childcare while sacrificing conjugal needs, the impact of the birth of a child on the Chinese marital relationship is likely to be much greater than in a Western society.

It has to be recognized though that there might be differences in childcare roles between various Chinese societies, as well as within a particular Chinese society. Having systematically analyzed and compared distinct political, economic, and social characteristics of the People's Republic of China and Taiwan, Lu et al. (2003) argued that Taiwan had the better preservation of the Confucian cultural tradition. Recent empirical studies in Taiwan have indeed found that Chinese couples view the parent-child relationship as

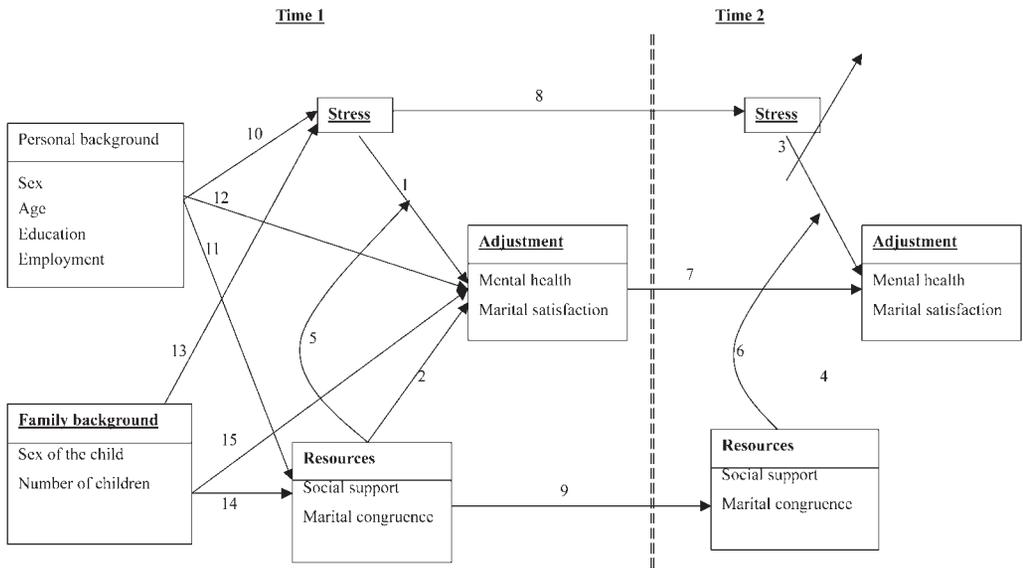


Figure 1. A generic model of parenthood transition.

more important than the conjugal relationship (Chen, 1978), and women more than men give higher ratings on the importance as well as the stress of parental roles (Lu & Lin, 1998). Furthermore, for both men and women, parental stress is detrimental to personal well-being (Lu & Lin, 1998). In a rare longitudinal study, Chong (1995) followed-up 36 pairs of Chinese parents from when they first knew the conception of their children for 4 consecutive years. Repeated in-depth interviews revealed the evolving nature of childcare roles: decreased egocentric tendencies and increased sense of familial responsibility. The underlying theme identified in this qualitative research was the overriding importance of childcare roles above personal and conjugal needs. Our present study thus focused on young parents in Taiwan as representatives of the Chinese culture.

In addition, the close-knit social network of a Chinese society is rather active in providing various kinds of support to the young parents-to-be. Today, though, such help could be a potential source for conflict as young couples may hold very different views regarding child-rearing practices from those of their elderly relatives. All these distinct cultural and social characteristics must be taken into account in our effort to understand the transition to parenthood among the Chinese people.

To this end, a generic model of parenthood stress, resources, and adjustment (see Figure 1) was purported, and we have already completed a longitudinal analysis of trajectories of postparenthood adjustment by following a panel of Chinese parents for a half-year period after their children were born (Lu, 2002). This study, with data from a representative sample of 483 parents in Taiwan, has provided strong support for our model in Figure 1; our major findings were: (a) parental stress had a detrimental effect on mental health and marital satisfaction (paths 1 and 3 in Figure 1); (b) both social support and marital congruence had direct effects on adjustment (paths 2 and 4); (c) marital congruence had an indirect stress buffering effect on the stress-mental health relationship (paths 5 and 6); and (d) women reported higher stress, more psychological symptoms, and lower marital satisfaction than men. A more rigorous dyadic analysis, based on a subsample of 90 married couples from the above database, also confirmed the pattern of sex differences (Lu, 2004).

Whereas the above study focused on adjustment *after* the actual transition to parenthood and examined trajectories of postparenthood adjustment, the present study aimed to examine the impact of parenthood through the pre- and postparenthood comparison. The same generic model was adopted, though fitted to a different period. The thrust of the current study was threefold. First, longitudinal data were collected to clarify the impact of parenthood from 6 weeks prenatal (time 1) to 6 weeks postnatal (time 2). A diachronic design is advantageous in making causal inferences as baseline levels of mental health and marital satisfaction can be controlled in prospective analyses. Second, a gender-balanced design was adopted to examine the transition processes for both men and women to overcome our shortcomings in understanding men's experiences. Third, this study was conducted in a Chinese society to examine the transition to parenthood as embedded in this particular cultural context.

Specifically, a two-wave panel study was conducted to examine stress, resources, and adjustment at 6 weeks before and 6 weeks after the child was born. The research framework for the present study is presented in Figure 1. As a full test of the model is beyond the scope of a single empirical study, and the stress buffering effect of marital congruence was already established in the previous study (Lu, 2002), we thus focused on examining the main (direct) effects of stress and resources (i.e., the four numbered paths). To summarize our hypotheses, we purported that at any given time, the adjustment of parenthood was predicted by both stress and resources (hypotheses 1 and 3). These effects of stress and resources remained after the baseline level of mental health or marital satisfaction was controlled (hypotheses 2 and 4).

METHODS

Participants and Procedure

The target population for the present study was parents who were going through a parenthood transition. Participants were recruited in two major metropolitan cities in Taiwan: the capital city Taipei (north) and Tainan (south), balancing the geographical location of our sample. When expecting mothers at the 34th week of pregnancy came to their pediatricians' offices for a routine health check-up covered by the national health insurance program, they were invited to take part in the study. A large medical center, a medium-size regional hospital, and a well-established local specialist clinic were used as our recruiting bases to cover a whole range of medical institutions in Taiwan. The overall concurrence rate was 48%. For those concurred, follow-up telephone contacts were made to arrange for the mailing of questionnaires, and whenever possible, the participation of fathers was strongly solicited. Participation was anonymous. As a two-wave panel study, each participant was requested to answer a structured questionnaire twice, once about 6 weeks before the child was born and again 6 weeks after the child was born.

Three hundred sixty-four parents (201 women and 163 men) returned completed questionnaires, with a response rate of 63%. This rate is comparable to the reported average of mail surveys using a general population ($60\% \pm 20$) (Baruch, 1999). Among our 364 participants, 138 (69 women and 69 men) had data for both time 1 and time 2, and 55 men and women constituted married couples. The lower response rate at time 2 was because of various causes, such as residence change, incorrect contact information, and refusal. Self-selection bias therefore, could not be ruled out, and results should be read with due caution.

Measurements

The structured questionnaire (same for both times) had six parts, described below.

Personal and Family Background. Participants' sex, age, education attainment, and employment status were recorded. Family background, such as sex and birth order of the newborn baby and number of children in the family, was also requested.

Stress of Parenthood. The Perceived Stress Scale was originally developed by Cohen, Kamarck, and Mermelstein (1983), translated and revised into Chinese by Kao and Lu (2001). This 14-item Chinese version has demonstrated good reliability and validity with both Chinese students (Kao & Lu, 2001) and community young adults (Lu, 2002, 2004; Tsai & Chen, 2002). The scale was used in the present study to measure stress of the parenthood transition. Five-point scales were used for rating the frequency of a particular stress feeling (0 = *never*, 4 = *very often*), and a high score indicates a higher level of perceived stress. Sample items include "In the last month, how often have you been upset because of something that happened unexpectedly?" and "In the last month, how often have you felt confident about your ability to handle your personal problems?" (reverse scored). The Cronbach's α was .83 in the present study.

Mental Health. Three subscales, depression (seven items), anxiety (seven items), and somatic symptoms (five items) from the SCL-90-R (Derogatis, Rickels, & Rock, 1976) were used to assess mental health. The Chinese version was revised and applied to various independent samples, including students (Lu, 1994) and community adults (Lu, 1999; Lu & Shih, 1997), demonstrating good reliability and validity. Three-point scales were used for rating the severity of a particular symptom (0 = *not at all*, 2 = *very severe*), and a high score indicates more psychological symptoms, hence worse mental health. The Cronbach's α was .87 in the present study.

Social Support. The Inventory of Socially Supportive Behaviors was originally developed by Barrera (1981), translated and revised into Chinese by Lu (1995). This 15-item Chinese version has demonstrated good reliability and validity with community adults (Lu, 1997; Lu & Hsieh, 1997; Lu, Shih, Lin, & Ju, 1997). The scale was used in the present study to assess actual received support, which includes emotional, tangible, informational support, and companionship. Four-point rating scales were used for rating the frequency of receiving a particular form of help (0 = *not at all*, 3 = *very often*), and a high score indicates more received support. The Cronbach's α was .94 in the present study.

Marital Congruence. Eight items from the Marital Adjustment Scale (Locke & Wallace, 1959) were used to assess conjugal agreement on important life domains (e.g., finance, affection, and outlook of life). This 8-item Chinese version has demonstrated good reliability and validity with community couples (Lu, 2002; Kao & Lu, in press). Six-point rating scales were used for rating the degree of a conjugal agreement (1 = *always disagree*, 6 = *always agree*), and a high score indicates greater marital congruence. The Cronbach's α was .86 in the present study.

Marital Satisfaction. Participants rated this in reference to the marriage as a whole. A 7-point scale was used (1 = *very dissatisfied*, 7 = *very satisfied*), a high score means greater satisfaction with the marriage. Previous research has demonstrated that single-item global

Table 1. Sample Characteristics

Variables		N	%	Mean (min–max)	SD
Sex	Male	163	44.8		
	Female	201	55.2		
	Total	364	100.0		
Age		360		30.29 (18–48)	4.57
Education	Primary school	1	13.0		
	Junior high school	14	3.9		
	High (vocational) school	124	34.3		
	Junior college	123	34.0		
	College/university	84	23.2		
	Graduate school	16	4.4		
	Not answered	2			
Years of education		362		13.75 (6–18)	2.02
Employment	Male: unemployed	6	3.7		
	Full time	155	95.7		
	Not answered	2			
	Female: Homemaker	75	37.7		
	Full time	124	62.3		
	Not answered	2			
Sex of the child (this time)	Male	194	57.1		
	Female	146	42.9		
	Not answered	24			
Birth order of the child (this time)	First-born	291	86.3		
	Not first-born	57	16.4		
	Not answered	3			
Number of children in the family				1.21 (1–3)	.49

measures of satisfaction as such are acceptable and may even be more indicative than the summation of facets (Scarpello & Campbell, 1983; Wanous, Reichers, & Hudy, 1997).

To sum, in the present study mental health and marital satisfaction were designated as outcome (adjustment) variables, stress and resources as the main explanatory variables, and personal and family background as control variables.

RESULTS

Sample Characteristics

Demographic and family background information of our sample are summarized in Table 1. There were more mothers than there were fathers in the sample. Our participants were generally young and most of them (61.6%) had at least some college education. Almost all fathers were working, and over half of the mothers had paid jobs. More parents had a newborn son rather than a daughter. Nearly all the participants (83.6%) were first-time parents and there were 1 to 3 children in the family. Overall, our participants were young and well educated. These young fathers mostly had skilled or semiskilled jobs (67.8%), whereas more than half of these young mothers were combining a career with motherhood.

Table 2. *t* Tests for Gender Differences Over the Parenthood Transition

	Male		Female		df	t
	Mean	SD	Mean	SD		
6 Weeks prenatal						
Stress	21.95	5.68	23.03	6.00	330	-1.66
Health	24.58	4.58	27.08	4.97	335	-4.75***
Marital satisfaction	5.76	1.19	5.47	1.36	336	2.10*
Social support	22.29	9.05	27.49	8.56	334	-5.37***
Marital congruence	34.75	5.32	34.57	5.35	335	0.32
6 Weeks postnatal						
Stress	21.64	6.34	23.93	5.82	131	-2.17*
Health	23.34	4.36	24.14	4.47	131	-1.05
Marital satisfaction	5.50	1.21	5.16	1.21	128	1.62
Social support	20.74	10.35	22.51	10.78	131	-0.97
Marital congruence	35.01	5.27	34.55	5.77	133	0.49

* $p < .05$. ** $p < .01$. *** $p < .001$.

Preliminary analysis showed that there were no differences between first-time parents and experienced parents, between parents who expected/had a male or female child, on main research variables; thus, the data were pooled for further analyses. At the prenatal stage, older parents tended to report less support ($r = -.15, p < .01$); and at the postnatal stage, they tended to report lower stress ($r = -.19, p < .01$) and higher marital satisfaction ($r = .20, p < .01$). In our sample, the length of marriage highly correlated with age ($r = .85, p < .001$), thus producing a very similar pattern of results. These results tentatively suggest that older adults tended to fare better during the parenthood transition, and having a male or female child seems no longer a critical issue for modern Taiwanese parents. In all the following analyses, the actual sample size varied due to missing data. The pairwise deletion method was used to treat missing data to maximize the utility of raw data without serious artificial distortion.

Temporal Changes

Paired *t* tests were conducted to compare means of each research construct over the period from prenatal to postpartum to examine temporal changes. Results showed that stress and marital congruence were not significantly different at two times. However, the amount of social support declined over the period ($t = 4.04, df = 116, p < .001$), so did marital satisfaction ($t = 4.44, df = 113, p < .001$). On the other hand, mental health was actually improved over time ($t = 3.51, df = 110, p < .001$). It seems that whereas stress and marital congruence stayed unchanged, social support was shrinking over time. Furthermore, although mental health was on the recovery path, marital satisfaction took a plunge over the same transitional period.

Gender Differences

Gender differences were examined with *t* tests, and results are presented in Table 2. At 6 weeks, prenatal women reported more support, worse mental health, and lower marital satisfaction than men. They also perceived higher stress at 6 weeks postpartum.

Possible effects of other personal and family background factors were also examined. Overall, significant associations were few in number (7 out of 50) and small in magnitude (below .20 in correlation coefficients). Thus, these variables were not included in further analyses.

Effects of Stress and Resources on Adjustment

To test for paths 1, 2, 3, and 4 in Figure 1, Pearson correlations were computed among the main research variables both simultaneously and over time. The correlation matrix is presented in Table 3.

One advantage of the longitudinal data was for testing prospective models. Hierarchical multiple regression analyses were conducted to predict mental health and marital satisfaction at 6 weeks postpartum, while controlling for their “baseline” levels at 6 weeks prenatal. Results are presented in Table 4. At step 1, sex (coded 1 for male and 2 for female) was entered as there were gender differences on stress, mental health, and marital satisfaction (see Table 2). At step 2, the “baseline” measure at time 1 (mental health or marital satisfaction) was entered. At step 3, stress, social support, and marital congruence measured at time 2 were entered.

In predicting mental health at time 2 (6 weeks postpartum), all five variables accounted for 28% of variance. Stress was significantly related to mental health at time 2 even after mental health at time 1 (6 weeks prenatal) was controlled for. In predicting marital satisfaction at time 2 (6 weeks postpartum), all five variables accounted for 46% of variance. Stress and marital congruence were significantly related to marital satisfaction at time 2 even after marital satisfaction at time 1 (6 weeks prenatal) was controlled for. To sum, hypotheses 1, 2, and 3 were fully supported. Hypothesis 4 was partially supported in the case of marital congruence but not for social support.

DISCUSSION

Our major findings in the present study were (a) parenthood stress had consistent negative effects on mental health and marital satisfaction in cross-sectional analyses (Table 3), our *cross-sectional adverse stress effects* (hypothesis 1) was thus fully supported; (b) in prospective analyses, stress still had adverse effects on mental health or marital satisfaction after controlling for their prenatal baseline levels (Table 4), our *prospective adverse stress effects* (hypothesis 2) was thus fully supported; (c) social support and marital congruence had consistent beneficial effects on mental health and marital satisfaction in cross-sectional analyses (Table 3), our *cross-sectional resources beneficial effects* (hypothesis 3) was thus fully supported; (d) in prospective analyses, marital congruence still had beneficial effects on marital satisfaction after controlling for the prenatal baseline level (Table 4), our *prospective resources beneficial effects* (hypothesis 4) was thus partially supported; (e) compared to men, women generally reported higher stress, more mental health symptoms, lower marital satisfaction, but more social support.

Overall, the backbone of the generic model presented in Figure 1 was supported in the time frame of the *actual* parenthood transition. With methodological strengths of the panel study design and a gender-balanced sample, implications of these results warrant serious reflections and careful considerations. The following discussion will be organized around four themes: impact of the parenthood transition, roles of resources, gender differences, and practical implications.

Table 3. Pearson Correlations Among the Main Research Variables

Variables	1	2	3	4	5	6	7	8	9	10
1. Stress (1)	1.00									
2. Health (1)	.58***	1.00								
3. Marital satisfaction (1)	-.38***	-.32***	1.00							
4. Social support (1)	-.28***	-.16**	.39***	1.00						
5. Marital congruence (1)	-.34***	-.32***	.48***	.38***	1.00					
6. Stress (2)	.53***	.44***	-.22*	-.11	-.36***	1.00				
7. Health (2)	.21**	.43***	-.09	-.14	-.22*	.44***	1.00			
8. Marital satisfaction (2)	-.23**	-.27***	.56***	.28**	.32***	-.29***	-.13	1.00		
9. Social support (2)	-.22*	-.22*	.38***	.56***	.32***	-.26**	-.22*	.38***	1.00	
10. Marital congruence (2)	-.08	-.24**	.27***	.14	.58***	-.53***	-.28**	.43***	.35***	1.00

Note. Number in parentheses indicates the time measurements were taken: Time 1 = 6 weeks prenatal, time 2 = 6 weeks postnatal.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4. Prospective Models: Hierarchical Regression Analyses Testing for Direct Effects of Stress and Resources

Dependent variables	Step	Entered variables	β	R ²	ΔR^2	F
Health (2)	1	Sex	-.09	.00	.00	
	2	Health (1)	.30***	.19	.19***	
	3	Stress (2)	.28***			
		Support (2)	-.09			
Marital satisfaction (2)		Marital congruence (2)	-.08	.28	.09***	7.96***
	1	Sex	-.13*	.04	.04	
	2	Marital satisfaction (1)	.31**	.35	.31***	
	3	Stress (2)	-.13*			
		Support (2)	.08			
	Marital congruence (2)	.19**	.46	.11***	24.45***	

Note. Number in parentheses indicates the time measurements were taken: Time 1 = 6 weeks prenatal, time 2 = 6 weeks postnatal.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Impact of Parenthood Transition: Costs on Mental Health and Marital Satisfaction

Our present study focused on the critical period of the *actual* parenthood transition, specifically from late pregnancy (6 weeks before the child was born) to early parenthood (6 weeks after the child was born). We found that the impact of parenthood was felt at both the prenatal and postpartum stages, with negative effects on both the individual's mental health and his or her marital satisfaction. The most striking finding perhaps was that stress at 6 weeks postpartum was still significantly related to mental health and marital satisfaction even after controlling for the baseline levels of mental health and marital satisfaction at 6 weeks prenatal (see Table 4). Psychological distress and possible marital problems thus are more than the spillover of previously existing distress or problems; parental stress is a possible antecedent of psychological symptoms and marital problems. These findings validate existing Western theories and research, which suggest that becoming a parent has profound effects on both the individual and the developing family (Argyle, 1987; Abbot & Brody, 1985; Cowan et al., 1985; Sullivan-Lyons, 1998).

Furthermore, our present study had several distinct characteristics. First, as we measured stress, mental health, and marital satisfaction twice over a 3-month period from prenatal to postpartum, data at time 1 and time 2 can serve as a cross-validation for each other. In Table 3, we can see that the pattern of relations among stress, mental health, and marital satisfaction was identical in both sets of data. This robustness of findings adds weight to our claim of the stressful impact of parenthood transition.

Second, the perceived level of stress did not change from 6 weeks prenatal to 6 weeks postpartum. In other words, parenthood stress did not wane with the relapse of time or the birth of the child; rather, it was of a stable and continuing nature. This conclusion is corroborative of our previous finding that the impact of parenthood transition sustained even 6 months after the child was born (Lu, 2002, 2004). Incorporating findings by other Western researchers (e.g., Fergusson, Horwood, & Thorpe, 1996; Ferketich & Mercer, 1989), we can conclude that the stressful impact of parenthood is felt before and after the child is born, immediately, and over a considerable period.

Third, the mental health measure used in the present study included not only depression, but also anxiety and common somatic symptoms. Our findings, therefore, were applicable to a wider scope of mental health issues related to the transition to parenthood.

Finally, the stressful impact of parenthood found in the present study also corroborates results of previous studies with Chinese people (Chong, 1995; Lu & Lin, 1998). It is clear now that although the Chinese culture places great emphasis on the family and socially sanctioned parenthood as a divine obligation, taking on the parental role is still not all rosy. The stress accompanied with the joy of becoming a parent may take its toll on mental health and marital happiness. In a time of rising divorce rates and heightened general life stress, young parents deserve more research-based help while coping with the challenges of parenthood transition.

Role of Resources: Social Support and Marital Congruence

Although entering parenthood could be challenging and stressful for most people, there are still quite considerable individual differences in dealing with this transition. The present study found that social support and marital congruence were beneficial for adjusting to parenthood, though they had somewhat different roles.

In the present study, those who reported receiving more support tended to report fewer psychological symptoms and higher marital satisfaction at both 6 weeks prenatal and 6 weeks postpartum. Our previous study found a similar pattern at 6 weeks and 6 months after the birth of the child (Lu, 2002). This pattern of relations also corroborated existing theories and research in the general stress–health context (e.g., Wortman & Dunkel-Schetter, 1987), and more specifically in the context of parenthood transition in Western societies (Howell-White, 1991).

On the other hand, marital congruence as a resource in coping with parenthood stress has demonstrated an unequivocal beneficial effect for marital satisfaction in both our cross-sectional analysis and the more stringent prospective analysis. It thus seems that in the crucial transition to parenthood, resources within the conjugal system are important and effective. Our previous postparenthood transition study also found consistent stress-buffering effects of marital congruence on mental health (Lu, 2002). An American study has noted that for women, high levels of marital intimacy are associated with a reduction in the degree of postpartum depression (Stemp, Turner, & Noh, 1986). Our results have thus extended the protective role of marital quality to a much wider scope of parenthood adjustment indicated by mental health and marital satisfaction for both men and women. Resource management may thus be a worthy effort to help young couples through their transition to parenthood.

Gender Differences in the Parenthood Transition

Most extant research on parenthood transition has focused on maternal distress and adjustment. Consequently, we know very little about men's experiences of fatherhood. Thus, it was a rarity to draw a community sample with men and women equally represented as in the present study. Our results have revealed a striking pattern of gender differences across the critical period of parenthood transition. At 6 weeks before the child was born, women reported worse mental health and lower marital satisfaction than men did. At 6 weeks after the child was born, women reported higher stress than men did. The only advantage women seemed to get was the receipt of more support before the child was born. Our previous postparenthood transition study found a similar female disadvantage sustained immediately following the childbirth through a period of half a year (Lu, 2004).

Our finding of women's heightened stress and poorer mental health over this transition period is consistent with existing Western research on maternal distress and adjustment (Brody, 1985; Cowan et al., 1985). The Chinese culture places a particularly great emphasis on the continuation of the family line, and places the responsibility of childrearing squarely on the shoulders of women (Yang, 1988). Becoming a mother is not only the most salient role for women (Lu & Lin, 1998; Chen, 1978), but is also culturally sanctioned as a women's legitimate occupation. In Chinese societies, there is a widely observed social custom called "honeymoon for the mother," which is a 1-month homebound confinement designed to rehabilitate the mother physically and psychologically immediately following the childbirth. The preparation for this usually begins at late pregnancy when the grandmother moves in to supervise the complicated rituals and take over daily chores, which coincides with the observed increment of social support to prenatal women. Despite its designated purpose to support the mother, it nonetheless also helps to strengthen the cultural discourse that parenting is "a women's business." It is thus understandable that becoming a mother may be far more salient and stressful than becoming a father. Worse still, in a modern society when women have to juggle jobs and family responsibilities, as over half of our mothers in the sample did, motherhood becomes even more taxing.

However, men's experiences of fatherhood are changing fast in modern Chinese society. Traditionally, the fathers are the sole bread earners and have little to do with child caring. Contemporary fathers though are expected to share household duties including childcare responsibilities, especially when mothers are working too. Although women still assume a greater share of homemaking activities, the pressure of being "a new good man" is increasing. As can be seen in the present study, parenthood stress was detrimental to men's mental health and marital happiness too, yet they were supported less than the women were. Previous Western research has even found that husbands report a greater degree of unhappiness (Cowan et al., 1985). Our recent dyadic analysis with Chinese couples revealed that although husbands fared better than their wives in overall mental health, they nonetheless reported comparable levels of anxiety and physical ailments at 6 weeks and 6 months postpartum (Lu, 2004). It is clear that both men and women feel the negative effects of parenthood stress on their mental health and marital relationships. Hence, scientific research and intervention should better address the needs and concerns of both genders.

Implications for Community Interventions

Although this study focuses mainly on the parenthood transition from 6 weeks before the birth of a child to 6 weeks postpartum, what we explored has important implications for devising possible community-based interventions to promote individual and family well-being. First, previous work has suggested that the problems that lead to marital breakdown start early within relationships (Thornes & Collard, 1979), early preventive measures are thus most likely to be effective, as they would address problems before conflicts have become serious. As we have found that the birth of a child does entail substantial stress and costs on personal well-being as well as marital satisfaction for both men and women, preventive interventions aimed at supporting couples at this family stage are likely to have long-term beneficial effects on the functioning of their developing family. As we have also shown that parental stress was actually felt before the birth of the child, interventions should be introduced as early as possible for expecting parents, including marital counseling, parenting skills training, stress-coping workshops, career counseling, etc.

Second, because our results clearly demonstrate that both marital congruence and social support are vitally important resources in coping with the stress of parenthood transition, effective interventions can begin with resource assessment, resource building, and resource consolidation. For instance, education programs can focus on preparing expecting parents to face the impact of childbirth on their marital relationships more realistically. Marital communication and conflict management training can also foster and strengthen positive feelings in a conjugal relationship. Furthermore, because we found an unequivocal beneficial effect of marital congruence on marital satisfaction, it seems reasonable to suggest then efforts made to foster and nurture marital alliance or co-parenting would most likely yield beneficial effects on promoting marital happiness and family stability.

Finally, although we found that women withstand the worst of parenthood transition, they nonetheless receive more support interventions traditionally. However, men's needs should not be ignored and fathers deserve more support and recognition. Perhaps even at the national level, fathers should be encouraged to get more involved in the co-parenting teamwork among the other aspects of family life. One foreseeable consequence of the greater paternal involvement is a warm and constructive father-child relationship, which is often absent in traditional family life.

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