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#### Abstract

Postpartum depression among the Chinese population in the United States has been understudied even though the Chinese community continues to rapidly increase in numbers. The purpose of this study is to investigate the prevalence of postpartum depression among Chinese immigrants using the "Edinburgh Postnatal Depression Scale," a self-report questionnaire. This study also reports demographics obtained from participants and explores the practice of "zuo ye zi" among Chinese immigrants.

In the spring of 2005, twenty-eight postpartum Chinese women, all first generation immigrants, were asked to participate in this study during home visits conducted by public health nurses in Alameda County, CA. The overall prevalence of postpartum depression in the study was found to be 14.3%, with 10.7% showing signs of mild depression, and 3.6% showing signs of severe depression. All of the depressed subjects refused referral to a mental health specialist. Instead, they preferred to continue to discuss issues with social workers at the clinic where they had previously established relationships.

The majority (96%) of the subjects practiced "zuo ye zi," a common postpartum custom in the Chinese community, and 39% of the subjects were helped by their husbands. The majority of the subjects (89%) qualified for MediCal. Lack of social support and low socioeconomic status may be contributing factors in postpartum depression among Chinese immigrants.

The self-administered depression tool used in this study was found to be helpful in getting Chinese women to express symptoms related to depression, and was thus useful in screening mental health problems.

# POSTPARTUM DEPRESSION AMONG CHINESE IMMIGRANTS

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A Research Manuscript

Presented to

San Jose State University

School of Nursing

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by

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#### Introduction

Postpartum depression is characterized by sadness, guilt, restlessness, mood swings, insomnia, and fatigue (Mayo Clinic, n.d.). This disorder affects a woman as well as the community surrounding her. The National Collaborative for Asian Women's Mental Health (n.d.) points out that Asian American immigrants have a "higher number of depressive

symptoms than whites" as well as the "lowest utilization of mental health services" (p. 1). Postpartum depression is a treatable condition. When it is not assessed or treated, the long lasting impact of this disorder takes a toll on society. Chinese immigrants suffering from postpartum depression are often hesitant to volunteer their symptoms because of the stigma associated with any kind of mental illness. Further screening of patients would provide more information for healthcare providers so they could better serve the Chinese immigrant community.

The main purpose of this study is to investigate the prevalence of postpartum depression among Chinese immigrant women using the, "Edinburgh Postnatal Depression Scale," a selfreport questionnaire. This study also explores the practice of "zuo ye zi" among Chinese immigrants and reports demographics obtained from participants.

## Literature Review

The experience of having a baby can be exhilarating and exhausting. After hours of labor and pain, a woman feels that she is expected to immediately respond to her newborn's needs. Physiological changes of her body and psychological adaptations may predispose the woman to depression. According to a meta-analysis of 59 studies, the prevalence rate of postpartum depression is estimated at 13% (O'Hara & Swain, 1996, p. 37). Postpartum depression affects women from different ethnicities, backgrounds and social status. Postpartum depression takes away the joy surrounding the celebration of a birth. Mothers find themselves unable to provide for the physical and emotional needs of their infants. Women who have experienced postpartum depression describe their experience as "lonely," "empty," "stripped of positive feelings," "loss of control," and "shrouded in fogginess" (Beck, 1992, p. 169). As their wives suffer, fathers also experience a "loss of control, loss of intimacy, and loss of how things used to be" (Meighan, Davis, Thomas, & Droppleman, 1999, p. 5). Even the newborn is impacted, perhaps losing bonding time with their mother who is experiencing this mood disorder.

Postpartum depression differs from other disorders such as postpartum blues or psychosis. Women who experience postpartum blues usually have mild symptoms of "fatigue, crying, mood instability and anxiety" which resolve spontaneously after a few weeks (Ugarriza, 2000, p. 45). Postpartum psychosis is a rare disorder in which the new mother has more severe symptoms including "delusions, hallucinations, incoherence or loosening of associations" (Beck, 1992, p. 166).

O'Hara and Swain (1996) found that a woman with a previous psychological history, marital dissatisfaction, a perceived lack of social support, and who has experienced stressful events will more likely report postpartum depression. In an Australian study of immigrant women of Vietnamese, Turkish and Filipino descents, similar contributing factors were noted. Almost 66% of the women interviewed reported "lack of social support and being isolated" as risk factors in postpartum depression (Small, Lumley, & Yelland, 2003, p. 202). The study did not find any consistent association between depression and family income, level of education, or type of delivery (p. 189). The risk factors found in Western culture were also consistent with a study of Chinese women in Hong Kong. Lee, Yip, Leung, and Chung (2004) reported "marital dissatisfaction, antenatal life events, past depression, late antenatal depressive symptoms and lack of social support" as factors contributing to depression among their subjects (p. 36).

In using the key words, "postpartum," "depression," "mothers," "prevalence," "screening," and "Chinese", CINAHL and PubMed yielded no studies, between 1980-2005, of postpartum depression within the Chinese population in the United States. According to the Census in 2000, there were 11.9 million Asians in the United States, more than 25% of those being Chinese. Many of them migrated from China, Hong Kong, Taiwan and other Asian countries. Studies conducted in Hong Kong and Taiwan showed that postpartum depression is an existing health concern among the Chinese population. A qualitative study in Hong Kong women found similar themes of postpartum depression in the Beck's (1992) phenomenological study. Chan, Levy, Chung, and Lee (2002) noted "helplessness and hopelessness, loss of control, ideas of infanticide and self-destruction" as themes in their study.

The first month after a birth, a new Chinese mother usually follows the cultural ritual of restricting certain foods from her diet and various activities from her daily routine (Matthey, Panasetis, & Barnett, 2002). This cultural practice lasts about a month, and the term "zuo yue zi"

(Mandarin) or "doing the month" is a familiar concept in the Chinese community (Matthey et al., 2002, p. 568). The woman is believed to be in a "yin" state during the time of recovery. During this period, she is given extra support by female relatives, usually her mother, mother-in-law, or a hired helper. A new mother is expected to do only minimal work around the home and to concentrate on recuperation from birth. The woman is served "hot" foods to restore yin/yang balance. Activities such as washing hair, doing laundry and having intercourse are discouraged to prevent further imbalances. Matthey et al. (2002) reported that 90.2% of their Chinese subjects followed some of these cultural practices in Australia.

The belief that the extensive social support in the Chinese culture protects the women from postpartum depression has been questioned. Chinese women in Hong Kong have similar rates of postpartum depression rate as women in Western societies according to an epidemiological study. In the first month postpartum, the major depression rate of Chinese women in Hong Kong is 6% and the minor depression rate is 5% (Lee, Yip, Chiu, Leung, & Chung, 2001). A study in Taiwan showed that about 26.3% of the population was considered "mildly to moderately depressed" and 9.3% was "moderately to severely depressed" at sixth week postpartum (Chen, 1994, p. 85). Hung & Chung (2001) also reported that 41% of women at fifth postpartum week "had minor psychiatric morbidity" in Taiwan (p. 676).

Due to the incidence rate of this mood disorder, it is important for clinicians to have a standard screening protocol and tool for its detection. However, screening of postpartum depression has been challenging, especially for the immigrant population with limited English skills. Literature has shown that the screening rate and frequency of screening for this disorder has been less than ideal. As a result, women who suffered from this disorder were not offered services because they were not asked about the symptoms (Clemmens, Driscoll, & Beck, 2004). Furthermore, depression and mental health are not usually discussed in the Chinese community because of the fear of stigmatization. Tabora and Flaskerud (1994) reported that this population fears that mental illness will affect the "good name of the family for future generation" (p. 572). According to Wang (2004) "children are so highly prized, the idea of a mother being anything

less than thrilled is unthinkable for many Chinese families." The standard use of a selfadministered depression tool in Chinese would improve the screening of this disorder.

## Methodology

The target population of this study consisted of first generation Chinese immigrants living in Alameda County, CA. The women recruited were limited to those who immigrated after the age of sixteen. These women were more likely to continue with the traditional rituals of their native culture. Mothers who had healthy pregnancies were included in the sample, but mothers with infants less than 2,000 grams or under 36 weeks gestation were excluded. Candidates were at least two weeks postpartum, with either a vaginal or cesarean delivery. A Chinese sociodemographic questionnaire was attached to the screening tool. Two Chinese speaking public health nurses recruited the participants in their respective homes. Confidentiality was assured during recruitment of the subjects. After the data was received, the patients who had participated were mailed a \$1 lottery ticket in a pre-addressed envelope to help compensate for their time.

A self-report screening tool, the Edinburgh Postnatal Depression Scale (EPDS) was used in this study. EPDS was developed at health centers in Livingston and Edinburgh to assist primary care providers to detect women suffering from postpartum depression. The scale was published in the British Journal of Psychiatry and allowed to be reproduced without permission (Cox, Holden & Sagovsky, 1987). The study in this journal showed that the sensitivity of the tool was 85% and specificity was 77%, and the standardized  $\alpha$ -coefficient was 0.87 (Cox et al., 1987, p. 784). Several studies have shown the EPDS as an efficient and useful tool in screening postpartum depression (Downie, et al., 2003; Fergerson, Jamieson, & Lindsay, 2002; Georgiopoulus, Bryan, Yawn, Houston, Rummans, & Therneau, 1999; Morris-Rush, Freda, & Bernstein, 2003). This survey of 10 questions takes about 5-10 minutes to complete. The questions attempt to measure depressive symptoms such as the ability to laugh, feelings of anxiety and sleep disturbances. Each question is scored between 0-3, with a possible total score of 30. Scores with threshold of 12/13 out of 30 on the EPDS questionnaire indicate a likelihood of postpartum depression while a threshold of 9/10 is appropriate for screening in primary care setting (Cox et al., 1987, p. 785).

The EPDS was translated to Chinese and validated in a study in Hong Kong (Lee et al., 1998). The validation study found that a cut-off point for the survey at 9/10 is appropriate for screening the Chinese community. The sensitivity of the scale was 82% and specificity was 86% (Lee et al., 1998, p. 434). Lee et al. (2004) further categorized the scores into 3 levels: 0-9 indicating insignificant depressive symptoms, 10-14 as mild to moderate depressive symptoms, and >14 as severe depressive symptoms (p. 36). This categorization was used as a guide in this study. Permission to use this tool was given by Dr. Lee. Ethical approval was obtained from San Jose State University IRB. All participants were assured confidentiality. Data was analyzed using SPSS.

## Results

Twenty-eight women agreed to participate in this study. Their ages ranged from 20-40. The median age was 32. The length of time the participants had lived in the United States ranged from 0.5 to 15 years. Days of postpartum ranged from 15-158. 96% of the subjects came from China. 89% are married. Only 30% had attended college or held a degree. The household income was less than \$35,000 annually for 85%. 89% also qualified for MediCal. 48% were first-time mothers. 41% breastfed exclusively. Table 1 summarized some of the demographic data.

# Table 1: Demographic Data of the Subjects

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Variable	Category	No (%)
Marital Status	Single	3 (11%)
	Married	25 (89%)
Number of Children	1	13 (46%)
	>1	15 (54%)
Education	High School	14 (50%)
	Some College/College Educated	8 (28%)
Annual Household Income	<\$35,000	23 (85%)
	>\$35,000	5 (15%)
Health insurance	Qualified for MediCal	25 (89%)
Practice "zuo ye zi"	Yes	27 (96%)
	Husband participation	11 (39%)

According to the EPDS scale used in the Hong Kong study (Lee et. al, 2004), the

majority (85.7%) of the subjects did not report depressive symptoms, 3 (10.7%) scored within

the range 10-14, and 1 (3.6%) scored above 14 points (see Table 2).

Table 2: Results of EPDS (n=28)

EPDS score	No. (%)
0-9 (none)	24 (85.7%)
10-14 (mild)	3 (10.7%)
>14 (severe)	1 (3.6%)

#### Discussion

Western culture estimates postpartum depression rate at about 10-20% (O'Hara & Engeldinger, 1990). The Chinese population study in Hong Kong and Taiwan ranged from 5% to 40% (Lee, Yip, Chiu, Leung, & Chung, 2001; Chen, 1994; Hung & Chung, 2001). The rate of postpartum depression observed in this study was 14.3%. According to the data collected, 3 of the subjects reported mild depressive symptoms and 1 was found to have severe depressive symptoms. All four were unemployed. Three of the subjects who reported depressive symptoms qualified for pregnancy Medi-Cal. Previous publications have indicated low socioeconomic status as a risk factor for postpartum depression (O'Hara & Swain, 1996; Séguin, Potvin, St. Denis, & Loiselle, 1999; Yonkers, et. al, 2001). The subject with the highest score on the EPDS also admitted to financial stress in her marriage. All of the 4 subjects who were screened as depressed had previously denied feeling "depressed or unhappy." The results on the questionnaires helped these women bring out their feelings and express symptoms related to depression. This 10-item self-report questionnaire proved to be an effective assessment tool among this population.

The women who had indicated depressive symptoms based on the EPDS were offered follow-up mental health assessment and treatment. The public health nurse offered referral to a mental health specialist, as part of the multidisciplinary team. If the subject agreed, she would then be given a choice to speak to the mental health specialist for an initial assessment or be referred directly to a local mental health agency. She was told that the mental health specialist would contact a local mental health agency to set up an appointment for long-term management. The designated agency would also provide the services of a counselor or a staff who could communicate with the patient in an appropriate Chinese dialect. Nevertheless, all of the four depressed subjects refused referral to a mental health specialist. The women preferred to continue to discuss issues with social workers at the clinic they already had an established relationship. This relationship was established as part of the multidisciplinary perinatal program at the clinic. In addition to providing emotional support, the social worker also assisted the subjects in accessing community resources such as government aid. One subject, who scored between 10-14 in her EPDS, agreed to attend a local mother's group and felt that she could consult with the group leader as needed. This woman had a college education in China and could communicate in basic English.

The woman who scored higher than 14 on the EPDS had depressive symptoms during pregnancy but no prior depression history. Her care provider was aware of her situation and had prescribed an anti-depressant. Nevertheless, the subject felt that she was able to cope and was non-adherent to medication regimen. The patient continued to see her social worker at the established clinic.

Two of the women, who scored between 10-14, reported that missing home and extended family made their situation more difficult. Lee et al. (2004) and Small et al. (2003) found that a "lack of social support" was a risk factor for postpartum depression. Future studies among this population specifically in relation to the social support factor would provide a more comprehensive picture of this community.

The majority (96%) of the subjects practiced "zuo ye zi," a common postpartum custom in the Chinese community. The assistance received by the postpartum women is usually provided by "female relatives," such as mothers or mother-in-laws (Posmontier & Horowitz, 2004, p. 38). Matthey et al. (2002) found that 18% of their subjects reported feeling "ambivalent and or negative" about following postpartum cultural practices. These women abided by their parents' or in-laws' wishes despite being ambivalent toward the cultural ritual. Chan, Levy, Chung, and Lee (2002) indicated in their study that new mothers perceived that stress from their in-laws relationships contributed to their postpartum mood. It is interesting to note that 3 of the women who had mild or severe depressive symptoms in this study were given assistance by their inlaws. It was possible that the assistance provided by their in-laws may have caused additional stress for these women.

According to the data collected, 39% of the women reported receiving assistance from their husbands. The practice of the spouse assisting with "zuo ye zi" is unusual. This adaptation to the postpartum cultural practice seen among this population may be largely due to the loss of social support after immigration. The population observed here was primarily consisted of low income immigrant. As a result, the relatives who lived nearby may not have been able to provide assistance because of work commitments. On the other hand, spousal involvement with "zuo ye zi" may have allowed new mothers to maintain a part of this cultural ritual, thus avoiding some cultural distress and helping to meet some of the woman's emotional needs.

#### Limitations

One of the limitations of this study was the small sample size with convenience sampling. Future studies with a larger sample size and random sampling would further validate the effectiveness of the EPDS among the Chinese population and would yield a more comprehensive picture of this community. Secondly, the tool used was a self-administered screening tool. It was not designed to be used as a clinical diagnosis. In addition, the subjects who were willing to participate in the study may not reflect the general population. Subjects visited by public health nurses, as compared to those who are not, may have been more open to discussing health issues, especially mental health concerns.

## Conclusion

The prevalence of postpartum depression was found to be 14.3% in a low socioeconomic Chinese immigrant population in Alameda County, CA. The postpartum ritual, "zuo ye zi," was practiced by 96% of the study population. 39% of the postpartum women were assisted by their husbands. Lack of support was indeed a problem since the support for "zuo ye zi" is usually a female's role. Being away from one's community and lacking familial social support may have contributed to the depressive symptoms in this immigrant population. In-law's assistance with "zuo ye zi," and its contribution to postpartum depression needs further exploration.

A Chinese patient may be subtle and conservative about sharing her mental health issues due to the stigma attached to mental illness in the culture. Depression screening gives the postpartum woman an opportunity to review her emotional status and to express any symptoms related to depression. The Chinese woman may refuse further treatment for fear of exposure. Although she may refuse mental health therapy, she may continue to get emotional support from someone like a social worker, whom she already has an established relationship with. Healthcare providers who serve this community may benefit from understanding this aspect of the population and should utilize the staff within their system as a standard of care. Being culturally competent and incorporating collaboration are imperative in providing services to Chinese immigrants.

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