Physical Activity in Pregnancy: Attitudes and Practices of Hong Kong Chinese Women

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Objectives: To explore Hong Kong Chinese women's attitude towards and degree of physical activity during the first and second trimesters of pregnancy, and to identify factors that may be associated with a satisfactory level.
Methods: This prospective cohort study recruited women from a regional hospital in Hong Kong from March to July 2014. A self-administered questionnaire written in traditional Chinese was distributed in the first trimester and a follow-up questionnaire in the second trimester. Level of physical activity was assessed with the validated Pregnancy Physical Activity Questionnaire.
Results: A total of 534 questionnaires from the first trimester and 261 from the second were included for analysis. Around 94.5% of subjects agreed that exercise is necessary during pregnancy. Only 26.0% of women sought advice from medical staff. The median total physical activity level was 176.6 mean weekly energy expenditure (MET-h/week) and 179.4 MET-h/week in the first and second trimester, respectively. The level of sports activity was significantly increased in the second trimester compared with the first, with 23% to 30% of women exercising at the recommended level. Women with higher education level (p=0.002) and higher income (p=0.02) were more likely to be engaged in sports.
Conclusion: The total physical activity level was comparable in both trimesters, but sports activity significantly increased in the second trimester. Increased awareness of the recommended exercise level should be actively promoted by health care professionals.
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Keywords: Exercise; Physical fitness; Pregnancy

Introduction

Traditionally, women are advised to reduce their physical activity level during pregnancy. Nonetheless, research has provided new information about how pregnant women and their fetuses respond to moderate physical activity, and revealed no adverse maternal or neonatal outcomes[1]. There is consistent evidence that promoting physical activity in women of reproductive age may be a promising approach to prevent excessive weight gain, gestational diabetes mellitus, and subsequent complications suffered by children born from mothers with gestational diabetes[2,3]. Exercise during pregnancy not only helps reduce backache, fatigue and swelling of the extremities, it also improves women's sleep, mood, and posture[4-6].

Based on these findings, the American College of Obstetricians and Gynecologists (ACOG) recommends that pregnant women who are free of medical or obstetric complications should follow the American College of Sports Medicine–Centers for Disease Control and Prevention general guidelines on physical activity and engage in 30 minutes of moderate exercise per day on most, if not all, days of the week[7,8].

A significant number of people in Hong Kong adopt a sedentary lifestyle. The Behavioural Risk Factor Survey conducted in April 2012[9] revealed that about half (53.9%) of female adults aged 18 to 64 years had exercised during their leisure time less than once a week in the past 30 days. Only 14.8% of female adults had exercised more than 4 to 6 times a week[9].

Pregnancy is a good time to develop healthy lifestyle habits including regular exercise. Although a recommended level of physical activity is beneficial, it may not be perceived as appropriate or feasible around the world[10-12].

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This study aimed to explore Hong Kong Chinese pregnant women's attitude towards and extent of physical activity during pregnancy, as well as any change at different stages of pregnancy. The study also aimed to identify factors associated with level of physical activity.

Methods

Participants

The subjects for this prospective cohort study were recruited from the antenatal clinic of United Christian Hospital, Hong Kong. This study was approved by the Hospital Authority Cluster Research Ethics Committee. A self-administered questionnaire written in traditional Chinese was distributed to all Chinese pregnant women who attended the clinic within their first trimester from March to July 2014. Women of other ethnic origin were excluded. Written consent was obtained by attending doctors, nurses, or paramedic staff. Once recruited, a woman was assigned a code and marked on the electronic obstetric record. A follow-up questionnaire was distributed in the second trimester at about 24 to 28 weeks of gestation to assess physical activity during that trimester.

Questionnaire

The questionnaires (Appendix) consisted of three parts: (1) questions on the attitudes and knowledge of women about physical activity in pregnancy and their sources of information; (2) the translated traditional Chinese version of Pregnancy Physical Activity Questionnaire (PPAQ) which has been validated by a Taiwan study[13]; and (3) demographic data including age, parity, education level, occupation, and household income.

The PPAQ is a self-administered, semi-quantitative questionnaire that asks respondents to report the time spent in 32 activities including household / caregiving (13 activities), occupational (5 activities), sports / exercise (8 activities), transportation (3 activities), and inactivity (3 activities)[14]. The respondents were asked to select a category for each activity that approximated the time spent by them per day or week on that activity. The time frame of recall was the current trimester of pregnancy. In the last part of the section on sports activities, an open-ended section allowed the respondent to add activities not already listed. Calculations were computed as reported previously. The compendium-based metabolic equivalent (MET) values were used to estimate the intensity of the PPAQ activities[15]. The duration of time spent on each activity was multiplied by its intensity to arrive at a measure of mean weekly energy expenditure (MET-h/week).

Statistical Analysis

Statistical analysis was performed using the Statistical Packages for the Social Sciences Windows version 22 (SPSS Inc., Chicago [IL], US). The mean weekly energy expenditure (MET-h/week) during pregnancy by PPAQ with different intensity level and

Table 1. Subjects' demographics (n=534)

Variable	Data
Age (years)	
<20	8 (1.5%)
21-30	239 (44.8%)
31-40	270 (50.6%)
>40	17 (3.2%)
Marital status (n=532)	
Single / cohabitation	64 (12.0%)
Married	465 (87.4%)
Divorced	3 (0.6%)
Occupation (n=527)	
Housewife	194 (36.8%)
Clerical work	158 (30.0%)
Manual work	14 (2.7%)
Professional	70 (13.3%)
Self-employed	15 (2.8%)
Others	76 (14.4%)
Income (HK$) [n=510]	
<10,000	82 (16.1%)
10,000-20,000	222 (43.5%)
20,001-50,000	157 (30.8%)
>50,000	49 (9.6%)
Education level	
Primary	17 (3.2%)
Secondary	311 (58.2%)
Tertiary	206 (38.6%)
Parity	
0	258 (48.3%)
≥1	276 (51.7%)
History of miscarriage	
0	386 (72.3%)
1	88 (16.5%)
≥2	60 (11.2%)
Conception (n=531)	
Natural	515 (97.0%)
Assisted reproduction (other than in-vitro fertilisation)	11 (2.1%)
In-vitro fertilisation	5 (0.9%)

types of activity were calculated. Women who satisfied the ACOG guidelines (≥7.5 MET-h/week) in the study period were regarded as physically active. Factors observed to be associated with changes in physical activity from the first to second trimester were calculated with non-parametric tests including Mann-Whitney *U* test, Kruskal-Wallis test, Wilcoxon signed rank test, and considered as statistically significant if p value was <0.05.

Results

A total of 600 questionnaires were distributed to eligible pregnant women in their first trimester. A total of 542 questionnaires were returned, giving a response rate of 90.3%. There were 534 (89%) questionnaires that were adequately completed and included for analysis. Adequately filled was defined as more than 70% of questions answered. A total of 270 women were successfully contacted in their second trimester and questionnaires were distributed for follow-up, of which 261 (96.7%) were returned and included for analysis.

For demographics (Table 1), the mean age of

Table 2. Attitudes and knowledge of the women on exercise and pregnancy (n=534)

Question	Data
Do you have regular exercise before pregnancy? (n=532)	
Yes	120 (22.6%)
No	412 (77.4%)
Does pregnancy affect your exercise habit? (n=528)	
No	272 (51.5%)
Yes, slightly limited	194 (36.8%)
Yes, considerably limited	62 (11.7%)
Reason(s) for decreased physical activity during pregnancy	
Fatigue during pregnancy	435 (81.5%)
Worry about fetal growth being affected	186 (34.8%)
Physical discomfort during exercise	102 (19.1%)
Advice from family / friends	55 (10.3%)
Advice from medical staff	9 (1.7%)
Others	20 (3.8%)
Appropriate level of exercise is necessary during pregnancy (n=542)	
Agree	512 (94.5%)
Not agree	30 (5.5%)
Benefit(s) of exercise during pregnancy	
Shortened delivery process	457 (85.6%)
Improve general health of mother / fetus	325 (60.9%)
Minimise excessive weight gain	244 (45.7%)
Decrease low back pain / muscle pain	217 (40.6%)
Improve blood glucose control	113 (21.2%)
Others	4 (0.8%)
Source(s) of information about pregnancy and exercise	
Internet / website	258 (48.3%)
Friends / family	255 (47.8%)
Books	221 (41.4%)
Medical staff	139 (26.0%)
Newspaper / magazines	128 (24.0%)
Television / radio	101 (18.7%)
Others	5 (0.9%)

subjects was 30.5 years. About 95% were between 20 and 40 years of age and about 3% were over 40 years. Most women (87.4%) were married, almost half (48.3%) were nulliparous, and approximately 2% conceived by assisted reproduction. Approximately a quarter (28%) of participants had had one or more miscarriage before this pregnancy.

Table 2 shows the attitudes towards and knowledge of the subjects about exercise and pregnancy. In all, 120 (22.6%) claimed to have exercised regularly before pregnancy. Most (94.5%) agreed that exercise was necessary during pregnancy. About half (51.5%) considered that pregnancy did not affect their exercise routine but 11.7% believed it had been considerably limited. The main reason for this limitation was reported to be fatigue (81.5%) followed by worry about fetal growth (34.8%). In terms of the benefits of exercise during pregnancy, most thought that labour may be shortened (85.6%) and general health of the mother or fetus would be improved (60.9%). Most women obtained their information from the internet / website (48.3%), family / friends (47.8%), and books (41.4%). Only a quarter (26.0%) obtained information from medical staff.

For physical activity level calculated by the PPAQ (Table 3), the median total activity was 176.6 MET-h/week in the first trimester and 179.4 MET-h/week in the second. An evaluation of activity level according to the classes of intensity showed that light activity constituted 40% of the total activity of the women, followed by moderate activity 34%, and sedentary activity 24%.

Through analysis of activity according to the domains of activity, household activity constituted the largest component of physical activity, being about 40% in both trimesters, followed by occupation activity (23%). For sports / leisure activity, it constituted only 2.2% (2.4 MET-h/week) in the first trimester and 3.2% (3.5 MET-h/week) in the second. There was a significant increase in sport-related activity in the second trimester compared with the first ($p < 0.001$): significantly more women in the second trimester (79/261, 30.3%) than the first (126/534, 23.6%) fulfilled the advice of the ACOG to have moderate physical activity of more than 7.5 MET-h/week (p=0.05, Fisher's exact test).

For the 261 women who completed questionnaires in both trimesters, there was no statistically significant change in total activity level and by classes of intensity between the two trimesters. Nonetheless, similar to the cross-sectional analysis, there was significant increase in sports activity in the second trimester (3.5 MET-h/week) compared with the first (2.4 MET-h/week; p=0.001, Wilcoxon signed rank test).

The total physical activity level was significantly higher in the multiparous group (212.8 MET-h/week) than the nulliparous group (144.1 MET-h/week) [$p < 0.001$]. Women with higher income were also more physically active (p=0.01). For level of sports activity, women with higher education level (p=0.002) and higher income (p=0.02) were more likely to engage in sports. For conception method, the median level of sport activity for the natural conception group was 2.4 MET-h/week and artificial reproduction

Table 3. Physical activity of women according to Pregnancy Physical Activity Questionnaire in the first and second trimesters

	Mean ± SD (Met-h/week)		Median (IQR) [Met-h/week]		Proportion of total activity		p Value*
	First trimester	Second trimester	First trimester	Second trimester	First trimester	Second trimester	
Total (intensity)	205.2 ± 139.3	206.9 ± 127.7	176.6 (115.0-261.6)	179.4 (114.5-268.7)	100.0	100.0	0.68
Sedentary	49.3 ± 26.8	47.8 ± 26.4	48.7 (25.9-68.9)	47.8 (24.5-64.6)	24.0	23.1	0.39
Light	86.5 ± 79.4	87.6 ± 61.0	72.5 (40.1-111.7)	76.1 (40.6-115.3)	42.2	42.4	0.40
Moderate	68.9 ± 83.8	70.7 ± 69.1	48.6 (11.8-99.8)	54.8 (16.2-105.4)	33.6	34.2	0.19
Vigorous	0.4 ± 1.8	0.7 ± 3.3	0.0 (0.0-0.0)	0.0 (0.0-0.2)	0.2	0.3	0.32
Household	81.2 ± 92.8	82.1 ± 73.2	53.8 (0.0-107.7)	63.4 (30.1-110.6)	39.6	39.7	0.21
Occupation	47.8 ± 56.5	47.1 ± 55.6	33.6 (0.0-70.3)	33.6 (0.0-74.2)	23.3	22.8	0.94
Sports	4.4 ± 6.2	6.5 ± 10.0	2.4 (0.0-6.5)	3.5 (0.8-8.4)	2.2	3.2	<0.001

Abbreviations: IQR = interquartile range; MET-h/week = mean weekly energy expenditure; SD = standard deviation

* Comparison of the means between first and second trimesters by Mann-Whitney *U* test

group was 0.8 MET-h/week, but the difference was not statistically significant (p=0.24) [Table 4].

Discussion

In this prospective study among Chinese women in Hong Kong, the validated traditional Chinese version of the PPAQ from Taiwan was used[13]. For the PPAQ results, the total physical activity level was lower in Hong Kong when compared with Taiwan (Table 5[13,16]). Household and sport-related activity were comparable but occupation activity was significantly lower (Hong Kong 47 MET-h/week vs. Taiwan 120 MET-h/week) in both trimesters. About 40% of our participants were housewives and 30% were employed in clerical work; this accounted for the low occupational activity. The level of sports activity was comparable with other Asian countries[16].

According to the World Health Organization recommendations, adults aged 18 to 64 years should have at least 150 minutes of moderate-intensity, or 75 minutes of

Table 4. Distribution of total and sports activities across different categories (n=534)

	No. (%)	Median physical activity level (Met-h/week)	
		Total activity	Sports activity
Age (years)			
<20	8 (1.5%)	115.2	1.4
21-30	239 (44.8%)	160.1	2.0
31-40	270 (50.6%)	186.1	2.4
>40	17 (3.1%)	182.7	2.0
p Value*		0.22	0.48
Parity			
0	258 (48.3%)	144.1	2.0
≥1	276 (51.7%)	212.8	2.4
p Value†		<0.001	0.22
Conception (n=531)			
Natural	515 (97.0%)	175.6	2.4
Assisted reproduction	16 (3.0%)	180.6	0.8
p Value†		0.54	0.24
History of miscarriage			
0	386 (72.3%)	177.6	2.4
1	88 (16.5%)	175.9	0.8
≥2	60 (11.2%)	175.2	2.4
p Value*		0.83	0.07
Education level			
Primary	17 (3.2%)	183.1	0.8
Secondary	311 (58.2%)	169.8	2.0
Tertiary	206 (38.6%)	192.5	2.4
p Value*		0.09	0.002
Income (HK$) [n=510]			
<10,000	82 (16.1%)	151.3	0.8
10,000-20,000	222 (43.5%)	167.4	2.0
20,001-50,000	157 (30.8%)	182.5	2.4
>50,000	49 (9.6%)	222.0	2.4
p Value*		0.01	0.02

* Mann-Whitney *U* test

† Kruskal-Wallis test

Table 5. Comparison of physical activity level using Pregnancy Physical Activity Questionnaire among different Asian countries[13,16]

	Present study (Hong Kong)		Lee (2011), Taiwan[13]	Matsuzaki (2014), Japan[16]
	Mean	Median	Mean	Median
First trimester				
Total activity	222.5	176.6	251.17	137.9
Household	81.2	53.8	89.9	79.1
Occupation	47.8	33.6	120.0	0.0
Sports	4.4	2.4	3.4	4.2
Second trimester				
Total activity	206.9	179.4	253.2	151.9
Household	82.1	63.4	84.7	79.0
Occupation	47.1	33.6	120.1	0.0
Sports	6.5	3.5	4.6	2.8

vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of both[17]. The ACOG adopted this recommendation for pregnant women and advised engagement in 30 minutes of moderate exercise per day on most days of the week, equivalent to 7.5 MET-h/week[7,8]. In our study, 23.6% and 30.3% of women fulfilled the criteria in the first and second trimester, respectively. Studies from other countries have also shown poor compliance with exercise during pregnancy with less than half of the population complying. Only 10.2% of women fulfilled the recommendations in Brazil[18], 17.4% in United States[19], 20.3% in Spain[20], 47% in France[21], and 48% in United Kingdom[22]. The French[21] and British[22] studies showed that this level of activity was similar throughout the entire pregnancy, even in the third trimester.

It is not surprising that the level of sports activity was significantly increased in the second trimester compared with the first. It is well known that in the first trimester, women experience more physical discomfort, i.e. nausea, vomiting, and fatigue. In addition, they may be less worried about the possibility of miscarriage after the end of the first trimester. Finally, antenatal exercise classes in our hospital are not usually scheduled until after the first trimester and may account for the increase in sports activity then.

Our study showed that multiparous women were more physically active than nulliparous ones, in agreement with prior studies[18,23,24]. Women are better adapted to physical changes during pregnancy after one or more deliveries and are more likely to remain active. Women with a higher education level and income engaged in more sports. This may be because they are better informed about exercise in pregnancy as shown in the first part of the questionnaire. The sports activity was much lower in women who conceived following artificial reproduction techniques (0.8 MET-h/week) than in those who conceived naturally (2.4 MET-h/week), although it was not statistically significant as the sample size of assisted reproductive technology group was very small, accounting for only 3% of the participants.

Our study showed that although women had some knowledge about exercise in pregnancy and their attitude towards exercise was favourable, few exercised in reality. The main reason for reduced physical activity was fatigue and concern about fetal growth. Only a quarter of women sought relevant information from medical staff. Counselling should be offered starting at the first antenatal visit about the recommended level of exercise during pregnancy, preferably accompanied by informative pamphlets and internet resources. A physiotherapist can also be involved to organise a structured exercise programme (including birth ball, yoga, etc.) to increase motivation.

The response rate to our questionnaire in the first trimester of above 90% was satisfactorily high although disappointingly low in the second trimester, around half. Nonetheless a comparison was made of level of physical activity in the first trimester between those who had completed a follow-up questionnaire in the second trimester and those who had not. There was no significant difference between them (p=0.83). There was also no significant difference between the two groups in parity, conception

method, history of miscarriage, education level, or income, only age. Thus, we can assume that their behaviour in the second trimester may also be similar.

We suggest that future study may examine changes that occur in the third trimester and postpartum. An interventional study that offers written information at the first visit and a repeat questionnaire in a subsequent trimester to identify any improvement in level of sports activity would also be beneficial.

Conclusion

This study showed that in local Chinese women, the level of sports activity was significantly increased in the second trimester compared with the first. In addition, those with higher education level and higher income had increased physical activity. About 23% to 30% of women fulfilled the ACOG recommendations for exercise during pregnancy, comparable with prior studies in foreign countries. It would be optimal if medical staff can take a more active role in promoting physical exercise during pregnancy.

References

1. Kramer MS, McDonald SW. Aerobic exercise for women during pregnancy. *Cochrane Database Syst Rev* 2006; (3):CD000180.
2. Tobias DK, Zhang C, van Dam RM, Bowers K, Hu FB. Physical activity before and during pregnancy and risk of gestational diabetes mellitus: a meta-analysis. *Diabetes Care* 2011; 34:223-9.
3. Kieffer EC, Willis SK, Arellano N, Guzman R. Perspectives of pregnant and postpartum latino women on diabetes, physical activity, and health. *Health Educ Behav* 2002; 29:542-56.
4. Sternfeld B. Physical activity and pregnancy outcome. Review and recommendations. *Sports Med* 1997; 23:33-47.
5. Clapp JF 3rd, Rokey R, Treadway JL, Carpenter MW, Artal RM, Warrnes C. Exercise in pregnancy. *Med Sci Sports Exerc* 1992; 24(6 Suppl):S294-S300.
6. Melzer K, Schutz Y, Soehnchen N, et al. Effects of recommended levels of physical activity on pregnancy outcomes. *Am J Obstet Gynecol* 2010; 202:266.e1-6.
7. ACOG Committee opinion. Number 267, January 2002: exercise during pregnancy and the postpartum period. *Obstet Gynecol* 2002; 99:171-3.
8. Artal R, O'Toole M. Guidelines of the American College of Obstetricians and Gynecologists for exercise during pregnancy and the postpartum period. *Br J Sports Med* 2003; 37:6-12.
9. Behavioural Risk Factor Survey April 2012, Main Report. Commissioned by Surveillance and Epidemiology Branch, Centre for Health Protection, Department of Health; Jan 2013.
10. Ribeiro CP, Milanez H. Knowledge, attitude and practice of women in Campinas, São Paulo, Brazil with respect to physical exercise in pregnancy: a descriptive study. *Reprod Health* 2011; 8:31.
11. Clarke PE, Gross H. Women's behaviour, beliefs and information sources about physical exercise in pregnancy. *Midwifery* 2004; 20:133-41.
12. Borodulin KM, Evenson KR, Wen F, Herring AH, Benson AM. Physical activity patterns during pregnancy. *Med Sci Sports Exerc* 2008; 40:1901-8.
13. Lee CF, Chiang IC, Lin SS, Lin HM, Hsu CJ. Physical activity pattern and related factors among women during pregnancy [in Chinese]. Formosan J Med 2012; 16:103-11.
14. Chasan-Taber L, Schmidt MD, Roberts DE, Hosmer D, Markenson G, Freedson PS. Development and validation of a Pregnancy Physical Activity Questionnaire. *Med Sci Sports Exerc* 2004; 36:1750-60.
15. Ainsworth BE, Haskell WL, Whitt MC, et al. Compendium of physical activities: an update of activity codes and MET intensities. *Med Sci Sports Exerc* 2000; 32(9 Suppl):S498-504.
16. Matsuzaki M, Haruna M, Nakayama K. Adapting the Pregnancy Physical Activity Questionnaire for Japanese pregnant women. *J Obstet Gynecol Neonatal Nurs* 2014; 43:107-16.
17. World Health Organization. Global Recommendations on Physical Activity for Health. Geneva, Switzerland; 2011.
18. Carvalhaes MA, Martiniano AC, Malta MB, Takito MY, Benício MH. Physical activity in pregnant women receiving care in primary health care units [in Portuguese]. *Rev Saude Publica* 2013; 47:958-67.
19. Harrod CS, Chasan-Taber L, Reynolds RM, et al. Physical activity in pregnancy and neonatal body composition: the Healthy Start study. *Obstet Gynecol* 2014; 124:257-64.
20. Amezcua-Prieto C, Lardelli-Claret P, Olmedo-Requena R, et al. Compliance with leisure-time physical activity recommendations in pregnant women. *Acta Obstet Gynecol Scand* 2011; 90:245-52.
21. Chandonnet N, Saey D, Alméras N, Marc I. French Pregnancy Physical Activity Questionnaire compared with an accelerometer cut point to classify physical activity among pregnant obese women. *PLoS One* 2012; 7:e38818.
22. Liu J, Blair SN, Teng Y, Ness AR, Lawlor DA, Riddoch C. Physical activity during pregnancy in a prospective cohort of British women: results from the Avon longitudinal study of parents and children. *Eur J Epidemiol* 2011; 26:237-47.
23. Lynch KE, Landsbaugh JR, Whitcomb BW, Pekow P, Markenson G, Chasan-Taber L. Physical activity of pregnant Hispanic women. *Am J Prev Med* 2012; 43:434-9.
24. Schmidt MD, Pekow P, Freedson PS, Markenson G, Chasan-Taber L. Physical activity patterns during pregnancy in a diverse population of women. *J Womens Health (Larchmt)* 2006; 15:909-18.

Appendix. Questionnaire for the study

研究題目: 本地婦女在懷孕期間的身體活動量之研究

孕期：早期 / 中期 / 後期

請你花十五分鐘完成問卷，在適當空間填上剔號 (✓)

第一部份：孕婦對懷孕期間身體活動的看法

1. **你在懷孕前有沒有慣常的運動習慣？** ☐1. 有 ☐2. 沒有

2. **懷孕有沒有影響你的運動習慣？** ☐1. 沒有 ☐2. 少量影響 ☐3. 非常影響

3. **在懷孕期間使你減少身體活動的原因：(可選多於一項)**
   - ☐1. 怕影響胎兒成長
   - ☐2. 身體疲倦
   - ☐3. 活動造成身體不適
   - ☐4. 家人或朋友建議
   - ☐5. 醫護人員建議
   - ☐6. 其他 _____

4. **你認同懷孕期間應該有適量的運動？** ☐1. 是 ☐2. 否

5. **你認為運動對懷孕的好處包括：(可選多於一項)**
   - ☐1. 減少腰背痛等身體不適
   - ☐2. 令生產過程更順利
   - ☐3. 有利媽媽與孩子的健康
   - ☐4. 減少體重過量增加
   - ☐5. 幫助身體的血糖控制
   - ☐6. 其他 _____

6. **你從以下哪些途徑獲得懷孕與運動的資訊：(可選多於一項)**
   - ☐1. 電視、電台
   - ☐2. 報章、雜誌
   - ☐3. 書本
   - ☐4. 互聯網
   - ☐5. 朋友、家人
   - ☐6. 醫護人員
   - ☐7. 其他 _____

Appendix. (cont'd)

第二部份：孕期身體活動問卷

親愛的孕婦們：這份問卷的問題是由不同方面來看您在此懷孕期間的身體活動狀態，請您回答以下問題，在適當空間填上剔號 (✓)，選出最符合您狀況的答案。

	無	一天少於半小時	一天約半小時-1小時	一天約1-2小時	一天約2-3小時	一天3小時以上
在此懷孕期，當妳下班後或沒工作時，您通常花多少時間：						
1. 準備餐點（煮飯、擦桌子、洗盤子）						
2. 坐著幫孩子穿衣、洗澡、餵食						
3. 站著幫孩子穿衣、洗澡、餵食						
4. 站著或坐著和小孩玩						
5. 走路或跑步和小孩玩						
6. 帶小孩						
7. 照顧長輩						
8. 使用電腦或寫字						
9. 看電視或影片						
10. 坐著讀書、說話、講電話						
11. 和寵物玩						
12. 輕鬆簡單的打掃（整理床舖、送洗衣物、熨衣服、整理東西）						
13. 逛街購物（為了買食物、衣服或其他）						
14. 做粗重的打掃（吸塵器、打掃、洗窗戶）						
15. 準備午晚餐（從烹煮、整理餐桌到飯菜上桌）						
16. 洗瓦斯爐或抽油煙機						
去某地方……在此懷孕期間，妳通常花多少時間做下列事情：						
17. 用慢走的方式去某個地方（例如搭公車、工作、拜訪），但不是為了玩樂或運動						
18. 用快走的方式去某個地方（例如搭公車、工作、學校），但不是為了玩樂或運動						
19. 開車或搭公車						
為了玩樂或運動……在此懷孕期妳通常花多少時間做下列事情：						
20. 用慢走的方式去玩樂或運動						
21. 用快走的方式去玩樂或運動						
22. 為了玩樂或運動，以快走方式登山						
23. 慢跑						
24. 參加產前運動課程						
25. 游泳						
26. 跳舞						

Appendix. (cont'd)

第二部份：孕期身體活動問卷（續）						
親愛的孕婦們：這份問卷的問題是由不同方面來看您在此懷孕期間的身體活動狀態，請您回答以下問題，在適當空間填上剔號 (✓)，選出最符合您狀況的答案。						
	無	一天少於半小時	一天約半小時-1小時	一天約1-2小時	一天約2-3小時	一天3小時以上
請告訴我們，除了上述外，妳還有參加那些活動是為了玩樂或運動？						
27. （活動名稱）						
28. （活動名稱）						
若妳是學生或是有工作收入者請寫填下欄。若妳是家庭主婦、無法工作者、沒有工作者則不需填寫下欄。在工作時……在此懷孕期間，妳通常花多少時間做下列事情：						
29. 坐著工作或上課						
30. 工作時，需拿著東西，站著或慢步走（重量超過3瓶家庭號鮮奶）						
31. 工作時，不需拿任何東西站著或慢步走						
32. 工作時，需拿著東西快走（重量超過3瓶家庭號鮮奶）						
33. 工作時，不需拿著任何東西快步走						

第三部份：孕婦資料統計（圈出最符合您狀況的答案）	
年齡	20歲以下 / 21-30歲 / 31-40歲 / 40歲以上
教育水平	小學程度或以下 / 中學程度 / 副學士或文憑 / 大專或以上
婚姻狀況	未婚 / 已婚 / 分居 / 離居 / 同居
是次懷孕	自然懷孕 / 人工輔助懷孕 / 試管嬰兒
生產次數	沒有 / 一次或以上
小產次數	沒有 / 一次 / 多於一次
職業	家庭主婦 / 文職 / 工人 / 專業人士 / 自僱人士 / 其他 _____
家庭收入	少於$10,000 / $10,000-20,000 / $20,001-50,000 / 多於$50,000