Thai Journal of Obstetrics and Gynaecology
July 2024, Vol. 32, No. 4, pp. 278-286.

OBSTETRICS

Comparing the Different Antenatal Nutritional Counseling Methods Regarding Proper Gestational Weight Gain during the Second Trimester: A randomized, controlled trial

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ABSTRACT

Objectives: To compare the two different antenatal nutritional counseling styles [computer-assisted instruction (CAI) and routine, casual, individual (RCI)] regarding the proper gestational weight gain (GWG) of healthy pregnant women during the second trimester, and to identify the factors influencing the level of pregnant women's GWG.

Materials and Methods: This was a randomized, controlled study comparing the number of pregnant women in the CAI and RCI groups who had a proper GWG during the four-week period.

Results: There were 70 and 80 participants in the CAI and RCI groups, respectively. The basic characteristics of the two groups at the beginning of the study were similar. The rate of the participants who had an appropriate GWG according to their pre-pregnancy BMI in both groups was comparable (p = 0.656, 0.307, 0.111, and 0.524 among the underweight, normal-weight, overweight and obese women, respectively). The number of participants who had an appropriate GWG was 50.0%, 47.8%, 23.1%, and 20.0% in the CAI group and 37.5%, 58.3%, 58.3%, and 50.0% in the RCI group. The GWG per week according to the participants' pre-pregnancy BMI was comparable in both groups (p = 0.585, 0.292, 0.087, and 0.614 in the underweight, normal-weight, overweight, and obese women, respectively). The multiparous women had a significantly increased possibility of having an appropriate GWG (p = 0.013).

Conclusion: Antenatal nutritional counseling using CAI was shown to be comparable to RCI in trying to achieve an appropriate GWG. The multiparous individuals had significant factors for having an appropriate GWG.

Keywords: weight gain, nutrition, counseling, computer-assisted instruction.

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Received: 31 May 2023, **Revised:** 7 January 2024, **Accepted:** 15 January 2024

ผลเปรียบเทียบการให้คำแนะนำเรื่องโภชนาการด้วยวิธีแตกต่างกันต่อการเพิ่มขึ้นอย่างเหมาะสมของน้ำหนักตัวหญิงตั้งครรภ์ระหว่างไตรมาสสอง: การศึกษาแบบสุ่มและมีกลุ่มควบคุมี

สุกัญญา เสรีรัตน์, กิตติพงษ์ คงสมบูรณ์, ธารารัตน์ หาญประเสริฐพงษ์

บทคัดย่อ

วัตถุประสงค์: *เพื่อเปรียบเทียบการให้คำแนะนำเรื่องโภชนาการด้วยวิธีที่แตกต่างกัน 2 วิธี (การดูวีดิทัศน์กับแบบตัวต่อตัว) ต่อการเพิ่มขึ้นของน้ำหนักตัวอย่างเหมาะสมของหญิงตั้งครรภ์สุขภาพดี ระหว่างไตรมาสสอง และแสดงปัจจัยที่มีอิทธิพลต่อระดับการเพิ่มขึ้นของน้ำหนักตัวของหญิงตั้งครรภ์*

วัสดุและวิธีการ: *เป็นการศึกษาแบบสุ่มและมีกลุ่มควบคุม เปรียบเทียบจำนวนหญิงตั้งครรภ์ที่มีการเพิ่มขึ้นของน้ำหนักตัวอย่างเหมาะสมในการติดตาม 4 สัปดาห์ ระหว่างกลุ่มที่ได้รับคำแนะนำเรื่องโภชนาการด้วยวิธีที่แตกต่างกัน 2 วิธี (การดูวีดิทัศน์กับแบบตัวต่อตัว)*

ผลการศึกษา: *หญิงตั้งครรภ์ 70 และ 80 คน เข้าร่วมการศึกษา โดยเป็นกลุ่มที่ได้รับคำแนะนำเรื่องโภชนาการด้วยวิธีการดูวีดิทัศน์กับแบบตัวต่อตัว ตามลำดับ ข้อมูลพื้นฐานของหญิงตั้งครรภ์ทั้งสองกลุ่มเหมือนกัน อัตราส่วนของหญิงตั้งครรภ์มีการเพิ่มขึ้นของน้ำหนักตัวอย่างเหมาะสมตามดัชนีมวลกายก่อนการตั้งครรภ์ระหว่างสองกลุ่มไม่มีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติ (ค่า p เท่ากับ 0.656, 0.307, 0.111, และ 0.524 ในกลุ่มน้ำหนักตัวน้อยเกินไป น้ำหนักตัวปกติ น้ำหนักเกิน และอ้วน ตามลำดับ) จำนวนหญิงตั้งครรภ์ที่มีการเพิ่มขึ้นของน้ำหนักตัวอย่างเหมาะสม เป็นร้อยละ 50.0, 47.8, 23.1 และ 20.0 ในกลุ่มได้รับคำแนะนำเรื่องโภชนาการด้วยวิธีการดูวีดิทัศน์ และเป็นร้อยละ 37.5, 58.3, 58.3 และ 50.0 สำหรับกลุ่มได้รับคำแนะนำเรื่องโภชนาการแบบตัวต่อตัว จำแนกตามดัชนีมวลกายเป็นกลุ่มน้ำหนักตัวน้อยเกินไป น้ำหนักตัวปกติ น้ำหนักเกิน และอ้วน ตามลำดับ น้ำหนักตัวหญิงตั้งครรภ์ที่เพิ่มขึ้นต่อสัปดาห์จำแนกตามระดับดัชนีมวลกายก่อนตั้งครรภ์ระหว่างสองกลุ่มไม่มีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติ (ค่า p เท่ากับ 0.585, 0.292, 0.087 และ 0.614 ในกลุ่มน้ำหนักตัวน้อยเกินไป น้ำหนักตัวปกติ น้ำหนักเกิน และอ้วน ตามลำดับ) หญิงตั้งครรภ์หลายครั้งเพิ่มความเป็นไปได้ที่จะมีน้ำหนักเพิ่มระหว่างตั้งครรภ์เหมาะสม (ค่า p เท่ากับ 0.013).*

สรุป: *การให้คำแนะนำเรื่องโภชนาการด้วยการดูวีดิทัศน์มีความเท่าเทียมกับการให้คำแนะนำแบบตัวต่อตัวที่จะทำให้หญิงตั้งครรภ์มีน้ำหนักเพิ่มระหว่างตั้งครรภ์เหมาะสม ปัจจัยที่มีแนวโน้มว่าน้ำหนักเพิ่มระหว่างตั้งครรภ์เหมาะสมคือ หญิงตั้งครรภ์หลายครั้ง*

คำสำคัญ: *น้ำหนักเพิ่ม, โภชนาการ, การให้คำแนะนำ, ดูวีดิทัศน์*

Introduction

Antenatal care (ANC) is an important medical service for pregnant women[1]. It mainly aims to promote and maintain the physical, social, and mental well-being of the pregnant woman and her fetus and to prepare for the postpartum period. Such care involves providing education about one's proper nutritional intake; adequate personal hygiene; the detection of medical, surgical, and obstetric complications; and preparing for the birth process and breastfeeding[2]. Meeting the nutritional requirements during pregnancy is crucial to proper fetal growth and development and to maintaining maternal health and preparing mothers to lactate sufficiently. Adverse pregnancy outcomes are more common in women who begin the gestation when they are undernourished or overweight/obese[3]. Maternal malnutrition increases the risk of fetal growth restriction, premature birth, fetal low-birth weight, and perinatal morbidity and mortality[3]. On the other hand, pregnant women who have a high body mass index (BMI) are at potential risk of several obstetric complications, including miscarriage, preeclampsia, gestational diabetes, obstructed labor, postpartum hemorrhage, obstetric-wound infection, and neonatal death[3, 4]. Moreover, preconception BMI and gestational weight gain (GWG) have been found to be important factors in maternal and fetal health[5]. In 2009, the American Institute of Medicine (IOM) recommended the GWG guidelines for better universal comprehension[6]. The recommended range of GWG per week during the second and third trimesters is classified according to pre-pregnancy BMI as follows: underweight (BMI < 18.5 kilograms (kg)/m^2) 1-1.3 pounds; normal weight (BMI 18.5-24.9 kg/m^2) 0.8-1 pounds; overweight (BMI 25-29.9 kg/m^2) 0.5-0.7 pounds; and obese (BMI ≥ 30 kg/m^2) 0.4-0.8 pounds[6].

Several interventions have been introduced to promote proper GWG, such as daily weighing, online intervention, and technology-based approaches[7-9]. Nutritional counseling and lifestyle modification are included in nearly all interventions. In our hospital, many counseling styles are offered to pregnant women, including routine, casual, individual methods (RCI), self-guided book reading, and group counseling with a unique computer-assisted pattern. Generally, nutritional counseling was constructed as an individual, casual style and did not separate from other topics. It was concluded with general care and genetic issues. The benefits to pregnant women have been questioned, especially when in-person counseling has been so difficult or even impossible during the pandemic. So, we initiated the individual computer-assisted instruction (CAI) as an alternative to the RCI. However, we had not, until this study, evaluated the effectiveness of both methods. We choose only the individual counseling method because of the importance of social distancing these days. We assumed that, if individual CAI is more effective or comparable to RCI, it is safer for healthcare providers. Thus, the main purpose of this study was to compare the individual CAI with the RCI as regards the proper weight gain according to the pre-pregnancy BMI of each participant. The second aim was to identify the factors influencing the level of pregnant women's weight gain.

Materials and Methods

This prospective, randomized, controlled study was conducted among healthy pregnant women who were scheduled for antenatal visits during their second trimester at the Antenatal Outpatient Unit, Department of Obstetrics and Gynecology, Faculty of Medicine, Srinakharinwirot University, Thailand, between May 2021 and February 2022. The exclusion criteria were multiple pregnancies, pregnant women who had a history of underlying disease, and/or who were previously diagnosed with diabetic mellitus. The study was approved by the institute's ethics

committee (SWUEC/E-471/2563) and was registered on the Thai Clinical Trials Registry (TCTR 20210225003). Informed consent from all the participants was obtained.

The participants were asked to complete a questionnaire which included their maternal age, education, parity, gravidity, occupation, religion, and family income. They were asked about the factors which may have influenced their weight gain, and this information was recorded. The data included their pre-pregnancy weight, height, pre-pregnancy BMI, a history of previous abnormal birth weight in a child, their family history of first- or second-degree diabetic mellitus, sleep duration for a day, working duration for a day, exercise regularity, number of main-course meals, dinner time, duration from dinner to sleep (hours), and any history of gastrointestinal disturbance (constipation, hemorrhoids, heartburn). The visual analogue scales (VAS) were examined to demonstrate the level of the participants' perceptions regarding abnormal weight gain dangerous and necessary for weight gain, and diet-intake control. Then, the participants were randomly allocated to receive counseling by the individual CAI or RCI method. Previously numbered, sealed, opaque envelopes were used in this process. The given information in the CAI was created by a second-year resident (the first author listed in this study) in the Department of Obstetrics and Gynecology, Faculty of Medicine, Srinakharinwirot University, under the Royal Thai College of Obstetricians and Gynecologists' curriculum, with supervision by the Maternal Fetal Medicine staff (the third author) at the Department of Obstetrics and Gynecology, Faculty of Medicine, Srinakharinwirot University.

Crucial information pertaining to pregnant women was included, such as the importance of proper GWG, maternal and neonatal complications related to inappropriate GWG, healthy food, and lifestyle-modification material. After the antenatal clinic was finished and an appointment was scheduled, the participants in the RCI group were counseled about nutrition as routine, causal antenatal visits. The RCI took approximately 15 minutes including nutritional education and other routine antenatal care. The main content about nutrition was advised for the attending physician were similar to the content in CAI script but did not have a definite script. The participants in the CAI groups were given one round of the CAI script. The CAI took approximately 20 minutes. Participants in both groups were given an opportunity to ask any questions after finishing the counseling. The service doctors were not advised of additional information, except to answer the participants' questions.

Following the CAI or RCI, all the participants were discharged from the antenatal clinic, and their next appointment was made for four weeks later. At that time, all participants were weighed and recorded. A digital weigh scale (Seca, with a decimal point or 0.1 kg and a maximum of 200 kg/ 440 pounds) was used for each person. Their frequency of exercise was classified as either regular or irregular. Regular exercise was defined as aerobic work-out on three or more days per week, with each session lasting at least 15 minutes. Less than that was defined as irregular exercise. Their frequency of unhealthy food intake was classified into high and low frequency. High was defined as eating two or more types of unhealthy food at least twice a week. Unhealthy foods included highly processed ones such as fast food, snack food, low-in-nutrients items, and high in flours, sodium, and sugar, such as chips, cookies, cakes and sweet cereals.

The required sample size was estimated by using a formula for a randomized, controlled trial for binary data with continuity correction. In a previous study, 45.7% of pregnant women had proper weight gain after receiving individual, in-person, or e-mail counseling. There was no study

focusing on the CAI. We expected about 55% of the pregnant women to properly gain weight after the CAI. To achieve an alpha of 0.05, the sample size required for each group was around 68 subjects or 136 in total. Allowing for 20% lost or missing data, 164 participants were required.

The demographic and clinical characteristics of the patients at baseline within each group were examined by tabulating percentages or means and standard deviation or the median and interquartile range (IQR), depending on the distribution. The number of participants who had proper and improper GWG in the CAI and RCI groups was compared according to their pre-pregnancy BMI, using the Pearson chi-square test. The GWG per week between the CAI and RCI groups were compared according to their BMI by using the independent t-test or the Mann-Whitney U test, depending on the distribution. Lastly, the possible factors associated with proper GWG were identified using co-linearity and binary, logistic regression. In all statistical tests, p values of < 0.05 were considered significant.

Results

One hundred and sixty-four pregnant women were enrolled and randomized into 82 participants for each group. 12 and 2 participants in CAI and RCI groups, respectively, lost to follow-up. Thus, 70 and 80 participants were in the CAI and RCI groups, respectively, for analysis. The flow of participants and lost numbers are summarized in Fig. 1. At the beginning, the participants' demographic and clinical data in both groups were similar (Table 1).

The rate of participants in the groups who had an appropriate GWG was compared according to their pre-pregnancy BMI, as shown in Table 2. It was comparable between the groups. The comparison of the GWG per week in both groups according to their pre-pregnancy BMI is shown in Table 3. It was comparable in both groups. Table 4 presents the logistic regression analysis for factors that may have influenced the possibility of having an appropriate GWG. Only multiparous participants had a significantly increased possibility of having an appropriate GWG.

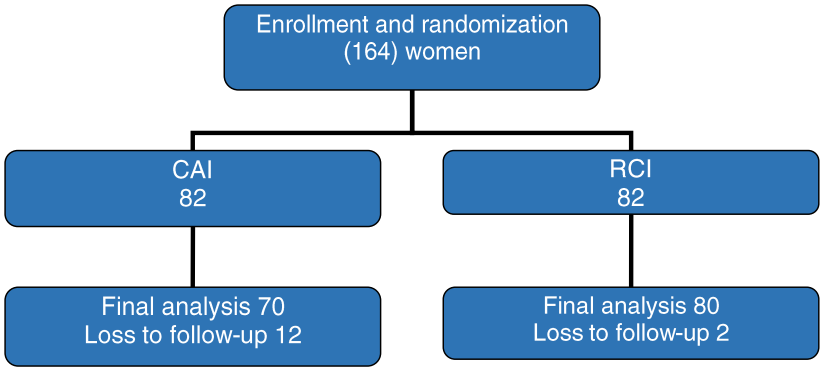

Fig. 1. Flow diagram showing the overall outcomes of all screening cases.

Table 1. Baseline characteristics (n = 150).

Characteristics	RCI (n = 80)	CAI (n = 70)	p value
Age (years), mean (SD)	28.19±5.087	27.64±4.923	0.508*
Level of education, n (%)			0.174**
Less than primary school	12 (15.0)	16 (22.9)	
Primary school-bachelor's	65 (81.3)	48 (68.6)	
Higher than bachelor's	3 (3.8)	6 (8.6)	
Primigravida, n (%)			0.894**
Yes (G = 1)	34 (42.5)	29 (41.4)	
No (G ≥ 2)	46 (57.5)	41 (58.6)	
Occupation, n (%)			0.333**
Employee	21 (26.3)	23 (32.9)	
Housewife	21 (26.3)	16 (22.9)	
Government officer	8 (10.0)	13 (18.6)	
Agriculture	2 (2.5)	2 (2.9)	
Others	28 (35.0)	16 (22.9)	
Religion, n (%)			0.289**
Buddhist	64 (80.0)	62 (88.6)	
Muslim	15 (18.8)	7 (10.0)	
Others	1 (1.3)	1 (1.4)	
History of abortion, n (%)			0.543**
Yes	14 (17.5)	15 (21.4)	
No	66 (82.5)	55 (78.6)	
Family income (Bath)			0.186**
< 15,000	21 (26.3)	18 (25.7)	
15,000 – 29,999	33 (41.3)	34 (48.6)	
30,000 – 50,000	21 (26.3)	18 (25.7)	
> 50,000	5 (6.3)	0 (0)	
Gestational age (weeks), n (%)			0.301**
14-22	52 (65.0)	51 (72.9)	
23-28	28 (35.0)	19 (27.1)	
Height (cm), mean (SD)	159.43±5.852	158.44±5.946	0.310*
Pre-pregnancy weight (kg), median (IQR)	56 (48.5-64.0)	54 (50.0-62.0)	0.946***
Pre-pregnancy BMI, median (IQR)	22.15 (19.35-24.85)	22.00 (19.5-25.4)	0.670***
Pre-pregnancy BMI			0.245**
Underweight	16 (20.0)	6 (8.6)	
Normal	48 (60.0)	46 (65.7)	
Overweight	12 (15.0)	13 (18.6)	
Obesity	4 (5.0)	5 (7.1)	
Previous child's abnormal weight, n (%)			
Yes	4 (5.0)	2 (2.9)	
No	76 (95.0)	68 (97.1)	
Family history of DM, n (%)			0.805**
Yes	22 (27.5)	18 (25.7)	
No	58 (72.5)	52 (74.3)	
Sleep duration (hours), median (IQR)	8 (8-9)	8 (8-8)	0.412***
Work duration (hours), median (IQR)	8 (0.5-8)	7 (0-8)	0.689***
Exercise frequency n, (%)			0.734**
Regular	11 (13.8)	11 (15.7)	
Irregular	69 (86.3)	59 (84.3)	
Number of main-course meals per day, n (%)			0.678**
≤ 2	13 (16.3)	14 (20.0)	
3-4	64 (80.0)	55 (78.6)	
> 4	3 (3.8)	1 (1.4)	
Dinner-to-sleep duration (hours), n (%)			0.361**
< 3	25 (31.3)	24 (34.3)	
3-5	45 (56.3)	42 (60.0)	
> 5	10 (12.5)	4 (5.7)	
Smoking or alcohol, n (%)			0.685**
Yes	4 (5.0)	2 (2.9)	
No	76 (95.0)	68 (97.1)	
GI discomfort, n (%)			
presence	25 (31.3)	32 (45.7)	
absence	55 (68.8)	38 (54.3)	
Attitude about abnormal weight (VAS), median (IQR)	5 (3.15-6.15)	4.25 (2.9-5.2)	0.116***
Attitude about controlling weight (VAS), median (IQR)	10 (8.35-10.0)	10 (8.1-10.0)	0.854***
Frequency of unhealthy food intake **			0.304**
high	41 (51.3)	30 (42.9)	
Low	39 (48.8)	40 (57.1)	

* Independent t-test, ** Pearson chi-square test, *** Mann-Whitney U test

RCI: routine, casual, individual, CAI: computer-assisted instruction,

SD: standard deviation, IQR: interquartile range, BMI: body mass index, DM: diabetes mellitus, VAS: visual analogue scales.

Table 2. Comparisons of the number of participants who had an appropriate GWG involving the CAI and RCI groups according to their pre-pregnancy BMI.

Groups	Weight gain		RR	95%CI	p value
	appropriate	inappropriate			
Underweight					
CAI, n (%)	3 (50.0)	3 (50.0)	1.333	0.481-3.698	0.655**
RCI, n (%)	6 (37.5)	10 (62.5)			
Normal weight					
CAI, n (%)	22 (47.8)	24 (52.2)	0.820	0.558–1.205	0.307**
RCI, n (%)	28 (58.3)	20 (41.7)			
Overweight					
CAI, n (%)	3 (23.1)	10 (76.9)	0.396	0.131-1.190	0.111**
RCI, n (%)	7 (58.3)	5 (41.7)			
Obesity					
CAI, n (%)	1 (20.0)	4 (80.0)	0.400	0.054-2.980	0.524**
RCI, n (%)	2 (50.0)	2 (50.0)			

** Pearson chi-square test

GWG: gestational weight gain, CAI: computer-assisted instruction, RCI: routine, casual, individual, BMI: body mass index, RR: risk ratio, CI: confidence interval.

Table 3. Comparisons of GWG per week (kg/wk.) among participants in both the RCI and CAI groups according to their pre-pregnancy BMI.

Gestational weight gain per week (Kg/wk)	CAI	RCI	p value
Underweight, mean (SD)	0.52 ± 0.22	0.48 ± 0.24	0.585*
Normal weight, median (IQR)	0.46 (0.40-0.73)	0.47 (0.38-0.55)	0.292**
Overweight, median (IQR)	0.52 (0.37-0.70)	0.31 (0.25-0.55)	0.087**
Obesity, mean (SD)	0.37 ± 0.13	0.45 ± 0.31	0.614*

* Independent t-test, **Mann-Whitney U test

GWG: gestational weight gain, RCI: routine, casual, individual, CAI: computer-assisted instruction, BMI: body mass index, RR: risk ratio, SD: standard deviation, IQR: interquartile range.

Table 4. Factors associated with appropriate weight gain (n = 150).

Factors	Crude OR	95%CI	p value	Adjusted OR	95%CI	p value
Parity						
Multiparity	2.243	1.153-4.362	0.017	2.384	1.198-4.742	0.013
Nulliparous	1	-	-	1	-	-
Pre-pregnancy BMI						
Normal weight	1.756	0.897-3.439	0.101	1.911	0.947-3.856	0.071
Abnormal weight	1	-	-	1	-	-
Group						
RCI	1.643	0.860-3.140	0.133	1.678	0.850-3.312	0.136
CAI	1	-	-	1	-	-
Religion						
Muslim and others	2.018	0.822-4.951	0.125	2.120	0.820-5.480	0.121
Buddhist	1	-	-	1	-	-

Adjusted with gravida, pre-pregnancy BMI, group and religion

OR: odds ratio, CI: confidence interval, BMI: body mass index, RCI: routine, casual, individual, CAI: computer-assisted instruction.

Discussion

A healthy lifestyle is crucial for pregnant women. The old- fashioned belief is that pregnant women must "eat for two" and that eating more is better for their fetus. Previous study found that 20-40% of pregnant women in Europe excessively gained weight, beyond the recommended GWG[10]. Such excessive weight increased the prevalence of chronic diseases and healthcare costs involved in additional obstetric complications[11]. Healthcare providers should participate in routine antenatal counseling to convince patients that eating more is in fact not advisable at all. The current study is the first to compare the RCI and CAI used for antenatal nutritional counseling in Thailand during the COVID-19 pandemic. RCI is a two-way, face-to-face form of communication. It is easier for physicians to observe the patients' participation and communication than when using the CAI. However, CAI is safer at this time, due to the need for social distancing. The results of comparison of the number of participants who had an appropriate GWG were comparable to those in the RCI groups, according to their pre-pregnancy BMI. Thus, it is reasonable to apply it in clinical practice to avoid close contact between healthcare providers and pregnant women. However, the benefits of both counseling methods in reducing adverse pregnancy outcomes could not be concluded from our study because we did not follow the participants until they gave birth. Thus, further study is planned, and the pregnancy outcomes should be followed until delivery. An important limitation of our study was that it was no blinded for service doctors who gave the RCI. So, we are concerned that the biases of such doctors may have interfered with our results. However, only one round of CAI script attention may not be enough. Opportunities for repeated attendance are our suggestion. Regarding CAI counseling, there has so far been no CAI on antenatal nutritional counseling in Thailand. There were two studies of pregnant Thai women during their antepartum and postpartum period. To enhance our knowledge of pregnant women before they undergo their second-trimester genetic amniocentesis, the CAI was less effectiveness than reading brochures by themselves[12]. As for improving the LATCH scores among breastfeeding women, the CAI was not shown to be significantly better than routine postpartum care[13].

Attention to the GWG per week, although it was comparable between both groups, it tended to have an improper range regarding the overweight and obese pregnant women, as contrasted to those who were underweight or had a normal weight. It was similar to the findings of previous studies which focused on the GWG in overweight and obese pregnant women[14,15]. We postulated that the behavioral style and individual metabolism of overweight and obese pregnant women may be linked to a risk for excessive GWG. Several previous studies have intensively focused on this pregnancy group[14-16]. However, our study failed to identify any significant effects of BMI on GWG. Parity was the only variable which indicated a significant effect on the appropriate GWG. Multiparous women can achieve the appropriate GWG more than nulliparous women can. This finding was different from that in the previous study which investigated how to minimize obese women's total weight gain during pregnancy to less than 7 kg[16]. It reported that the percentage of nulliparous obese women who successfully gained less than 7 kg was greater than the number in the unsuccessful group. They postulated that nulliparous women might be more expected for their first children and thus give higher priority to a lifestyle than do multiparous women. The different results may be explained by the different study objectives and participants' characters. We included all participants' BMI, and this may have influenced the outcome. Greater success in achieving the appropriate GWG among multiparous pregnant women may be caused by their experience with

previous adverse pregnancy outcomes and/or delivery difficulties, along with their awareness of difficulties with postpartum weigh reduction. These factors may likely have inspired the multiparous women to better control their weight.

Conclusion

In conclusion, it is clear that, during this COVID epidemic when social distancing is essential, CAI counseling is comparable to RCI for appropriate weight management among antenatal women. Universal distribution is our suggestion.

Potential conflicts of interest

The authors declare no conflicts of interest.

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