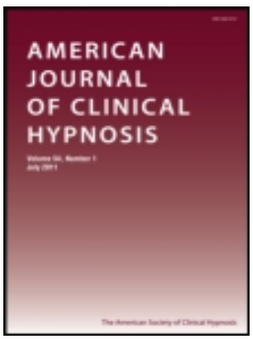

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Impact of Hypnosis Intervention in Alleviating Psychological and Physical Symptoms During Pregnancy

Zuhrah Beevi, Wah Yun Low, and Jamiyah Hassan
Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

Physical symptoms (e.g., vomiting) and psychological symptoms (stress, anxiety, and depression) during pregnancy are common. Various strategies such as hypnosis are available to reduce these symptoms. The objective of the authors in this study is to investigate the impact of a hypnosis intervention in reducing physical and psychological symptoms during pregnancy. A pre-test/post-test quasi-experimental design was employed in this study. The hypnosis intervention was given to the experimental group participants at weeks 16 (baseline), 20 (time point 1), 28 (time point 2), and 36 (time point 3) of their pregnancy. Participants in the control group received only the traditional antenatal care. Participants from both groups completed the Depression Anxiety Stress Scale—21 (DASS-21) and a Pregnancy Symptoms Checklist at weeks 16, 20, 28 and 36 of pregnancy. Results indicated that stress and anxiety symptoms were significantly reduced for the experimental group, but not for the control group. Although mean differences for the depressive symptoms were not significant, the experimental group had lower symptoms at time point 3. The physical symptoms' results showed significant group differences at time point 3, indicating a reduction in the experience of physical symptoms for the experimental group participants. Our study showed that hypnosis intervention during pregnancy aided in reducing physical and psychological symptoms during pregnancy.

Keywords: hypnosis, pregnancy, symptoms

The World Health Organization (WHO) states that all pregnancies are potentially risky (WHO, 2007). Each day, a total of 800 women die due to complications that occur during pregnancy and childbirth. These complications include preeclampsia, eclampsia, and infections that require some form of intervention from professionals such as physicians and midwives (WHO, 2014).

Women who survive life-threatening pregnancy complications subsequently give birth to neonates with various complications. These complications include low birth weight, an Apgar score of less than 8 at the fifth minute of birth, and medical conditions like breathing difficulties requiring neonatal intensive care (Zadeh, Khajehei, Sharif, & Hadzic, 2012). Physical symptoms, such as nausea and vomiting, developed during pregnancy may escalate into a medical condition known as hyperemesis gravidarum.

Address correspondence to Zuhrah Beevi, Medical Education Research and Development, Faculty of Medicine, University of Malaya, Kuala Lumpur, 50603, Malaysia. E-mail: zuhrahbeevi@yahoo.com

Though rarely life-threatening, hyperemesis gravidarum is disabling, disrupts daily activities, and leads to further complications, for example hypokalemia or low potassium level and dehydration (Jueckstock, Kaestner, & Mylonas, 2010; O'Brien, Evans, & White-McDonald, 2002).

The onset of medical complications during pregnancy is a factor in the development of psychological symptoms; for example, women with hyperemesis gravidarum were shown to experience higher stress, anxiety, and depression (McCarthy et al., 2011). Psychological symptoms may cause further complications. These complications include poor neonatal health, labor pain, and postpartum depression. For instance, depression and anxiety during pregnancy have been shown to be associated with labor pain (Čuržik & Begić, 2012), postpartum depression (Redshaw & Henderson, 2013), and preterm birth (Dayan et al., 2002; Fransson, Örtenstrand, & Hjelmstedt, 2011).

Psychological symptoms during pregnancy, such as depression, have the potential to cause significant problems such as sleep disturbances (Okun, Kiewr, Luther, Wisniewski, & Wisner, 2011). Women with symptoms of depression were reported to have fair or poor health (Orr, Blazer, James, & Reiter, 2007). Anxiety and depression during the antenatal period predisposes neonates to be born preterm and with below-average language abilities including poor understanding of spoken words (Laplante et al., 2004).

Various allopathic and complementary medicines are available to assist women with various health conditions (Tournaire & Theau-Yonneau, 2007). One of these treatments is the use of hypnosis, which has been shown to assist women in coping with physical and psychological symptoms during pregnancy, labor, and the postpartum period. In terms of physical symptoms, hypnosis has helped to reduce and/or eliminate nausea and hyperemesis gravidarum (Madrid, Giovannoli, & Wolfe, 2011), lower the incidence of epidural use (VandeVusse, Irland, Berner, Fuller, & Adams, 2007); lower the incidence of surgical intervention (Martin, Schauble, Rai, & Curry, 2001); provide pain relief during labor and a shorter length of labor (Abbasi, Ghazi, Barlow-Harrison, Sheikhvatan, & Mohammadyari, 2009); lower the use of pain relief during labor (Mehl-Madrona, 2004); increase the Apgar score to an average of 9.2 (Phillips-Moore, 2012); increase postpartum psychological well-being (Guse, Wissing, & Hartman, 2006); and reduce the incidence of postpartum depression (Phillips-Moore, 2012).

In regards to hypnosis research in obstetrics, the majority of studies involving experimental approaches have investigated the effect of hypnosis intervention in preparing women for labor and postpartum periods. Studies investigating hypnosis intervention in the reduction or elimination of symptoms have primarily focused on individual case reports, especially on the alleviation of symptoms of hyperemesis gravidarum (Simon & Schwartz, 1999). To our knowledge, there are no experimental studies evaluating the effectiveness of hypnosis intervention in alleviating physical and psychological symptoms during pregnancy. Therefore, in this study we aim to

investigate the effects of hypnosis intervention in alleviating physical and psychological symptoms, defined as stress, anxiety, and depression, during pregnancy when compared with a control group, which does not receive any intervention except for the routine antenatal care provided by the obstetricians

Method

Participants

Pregnant women were recruited from the antenatal clinic of a teaching hospital in Kuala Lumpur, Malaysia. The selection criteria were as follows: pregnant women in the second trimester; above the age of 18; and able to read and understand either English or Malay. Participants consisted of 28 pregnant women from the experimental group, aged 23 to 36 ($M = 28.23$ $SD = 3.12$). Participants from the control group ($n = 28$), aged 25 to 34 ($M = 29.28$ $SD = 2.65$), were matched for parity (nulliparous and multiparous) and were recruited on a one-to-one ratio from the same antenatal clinic.

Materials

Participants were required to complete demographic information, which included age, occupation, level of education, work status, and parity. Psychological symptoms, namely stress, anxiety, and depression, were measured using the Depression, Anxiety, and Stress Scale-21 items (DASS-21). The DASS-21 consists of 21 items, which include 7 items measuring the intensity of stress, 7 items measuring the intensity of anxiety, and 7 items measuring the intensity of depression. These symptoms are measured on a 4-point Likert scale ranging from *"did not apply to me at all"* to *"applied to me very much or most of the time."* The intensity of stress, anxiety, and depression ranges from normal to extremely severe. The higher the score, the greater the depression, anxiety, and stress (Lovibond & Lovibond, 1995; Musa, Fadzil, & Mohd Zain, 2007; Musa, Ramli, Abdullah, & Sarkarsi, 2011). The internal consistencies (Cronbach alpha) for DASS-21 were 0.88 for the depression subscale, 0.82 for the anxiety scale, 0.90 for the stress subscale, and 0.93 for the total score. These scores also had a good convergent and discriminant validity (Crawford & Henry, 2003). The internal consistencies for the Malay version of the DASS-21 were 0.84 for the depression subscale, 0.74 for the anxiety subscale, 0.79 for the stress subscale, and 0.90 for the overall score (Musa et al., 2007). The DASS-21 also has good concurrent validity, with correlation between its total score and scores on the total Hospital Anxiety and Depressive Scale (HADS) (Musa et al., 2011).

The physical symptoms experienced by participants were noted in the Pregnancy Symptoms Checklist, which was developed for this current study. This checklist consisted of 24 common symptoms during pregnancy, such as nausea, vomiting, backache, and frequent urination. Participants were required to indicate either "yes" for the presence of the symptoms or "no" for the absence of any symptoms. The internal consistency for the Pregnancy Symptoms Checklist was 0.77.

Design and Procedure

A pre-test/post-test quasi-experimental design was employed in this study. Participants were recruited during their first antenatal appointment at week 12 of pregnancy. During the initial recruitment process, pregnant women who matched the inclusion criteria were approached at the antenatal clinic and asked whether they were interested in participating in a research study on hypnosis during pregnancy. Women were briefed regarding the nature of hypnosis and its benefits. Upon the participants' agreement to take part in the study, informed consent was obtained prior to the first hypnosis session. Participants who declined to participate in the hypnosis intervention were asked if they were interested to be included in the control group, and if so, informed consent was obtained prior to answering the questionnaires at week 16 of pregnancy.

Participants in the experimental group were given four hypnosis interventions by the first author, who received training in clinical hypnosis (London) and has been practicing hypnosis as an adjunct to Clinical Psychology (Malaysia). Baseline data included demographic characteristics and the measurement of stress, anxiety, depression, and physical symptoms, which were collected at week 16 of pregnancy, prior to the first hypnosis intervention. Subsequently, participants completed the DASS-21 and Pregnancy Symptoms Checklist during the remaining three intervention phases or time points. These were: time point 1 at week 20, time point 2 at week 28, and time point 3 at week 36 of pregnancy. The timing of the completion of these questionnaires was in relation to the timing of the hypnosis sessions. Participants in the control group did not receive hypnosis intervention but they also completed the questionnaires at weeks 16, 20, 28, and 36 of pregnancy. Although participants in the control group did not receive hypnosis intervention, they received the usual routine antenatal care from the obstetricians. Participants in the control group also received advice on a healthy diet, learned back massage techniques to help them to relax, and breathing exercises, as these are also routine procedures provided to all women attending the antenatal clinic.

Participants were given instructions on the completion of the questionnaires (DASS-21 and the Pregnancy Symptoms Checklist). The forms were then collected and reviewed. Participants were asked to complete any missing information, unless the omission was deliberate.

For ethical purposes, women in the control group were offered four hypnosis sessions following the completion of the study at 2 months postpartum, but none decided to participate.

Hypnosis Intervention

The hypnosis session was conducted following a script designed for this study. The ego strengthening script was adapted from Hartland's hypnotherapy training (Hartland, 1977). This script includes suggestions for the reduction of and subsequent elimination of psychological and physical symptoms. Each of the four sessions had a specific objective with a common theme of strengthening the self, encouraging positive thinking, and increasing physical and psychological well-being. Session one focused on the elimination of physical and psychological symptoms and the teaching of self-hypnosis. Sessions two, three, and four continued with the focus on the elimination of physical and psychological symptoms. Suggestions for the positive experience of labor and postpartum period (e.g., a positive bond between mother and child and better maternal psychological well-being) were included in the third and fourth sessions. At the conclusion of each session, participants were encouraged to engage in self-hypnosis at home. Participants' engagement in self-hypnosis was checked through phone calls once a week until they were hospitalized for labor. Participants were also asked if they had engaged in self-hypnosis during the hypnosis sessions' meetings at weeks 20, 28, and 36.

Results

Statistical Analysis

Items were checked for normal distributions, using both the Shapiro-Wilk test and residuals testing. Parametric tests were conducted using mixed-design ANOVA, since the data met the assumptions of normality. Huynh-Feldt degrees of freedom were reported in the cases of violations of assumption of sphericity. Subsequent to the significance of interaction effect, Tukey's post-hoc analysis was utilized by adjusting the multiple comparisons with Bonferroni corrections.

Baseline Characteristics

The hypnosis intervention study was completed by 56 pregnant women, of whom 28 women were in the experimental group and 28 women were in the control group at the baseline measurement. A total of 23 participants in the experimental group and 23 participants in the control group continued with the experimental research at time point

TABLE 1
Demographic Characteristics of the Pregnant Women from Experimental and Control Groups

Characteristics	*Experimental Group (*n = *28)*		*Control Group (*n = *28)*		p *value*
Mean age (years)	*28.23 (*SD = *3.12)*		*29.28 (*SD = *2.65)*		*0.201*
	N	*(%)*	N	*% [1]*	
Educational level					
Secondary school	7	25	11	39.3	0.25
College/University	21	75	17	60.7	
Work status					
Employed	26	92.9	25	89.3	1.00
Unemployed	2	7.1	3	10.7	
Parity					
Nulliparous	14	50	13	46.4	0.79
Multiparous	14	50	15	53.6	

1, time point, and time point 3. Participants who dropped out of the study did so due to the intention of continuing their antenatal check-ups in different hospitals.

The mean age difference between the experimental and control groups was not significant [$t(48.312) = -1.296$, $p = 0.201$]. The majority of participants had completed college or university education (75% in the experimental group and 60.7% in the control group). A majority of the participants were employed (92.9% in the experimental group and 89.3% in the control group). A total of 50% of participants in the experimental group were first-time mothers (nulliparous) compared to 46.4% of participants in the control group, and 50% of participants in the experimental group were women who had previously given birth, compared to 53.6% in the control group (Table 1).

Psychological and Physical Symptoms

Stress Symptoms

There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ($p > .05$) and also homogeneity of covariances, as assessed by Box's test of equality of covariance matrices ($p = .358$). There was a statistically significant interaction between group and time point on stress symptoms, $F(2.707, 113.701) = 3.037$, $p = .037$, partial $\eta^2 = .067$. Results for the simple main effect for group indicated that there was a statistically significant difference in stress symptoms at time point 3, $F(1,44) = 4.704$, $p = .036$, partial $\eta^2 = .101$, with the experimental group experiencing fewer stress symptoms ($M = 5.81$, $SD = 5.36$) compared to the control group ($M = 10.70$, $SD = 8.96$). However, group differences at baseline, time point 1 and time point 2 were not significant. There was a statistically significant effect of time on

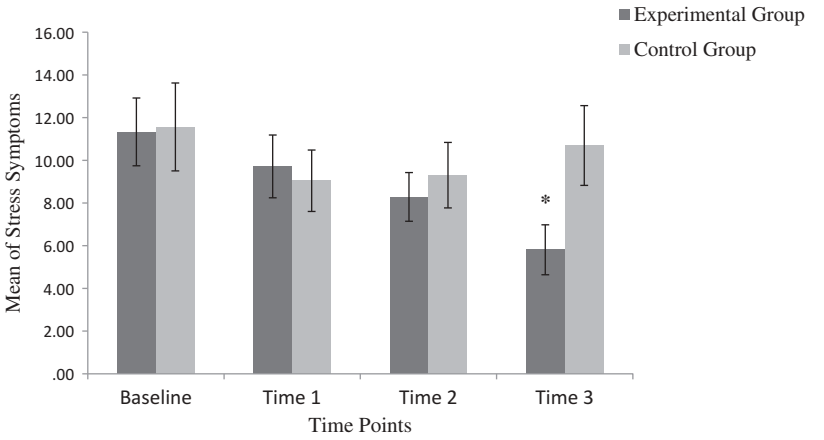

FIGURE 1. Mean of stress symptoms from baseline to time point 3.

Note. The asterisk (*) indicates a significant simple main effect, whereby the experimental group at time 3 experienced reduced stress. No other simple main effects were significant. Error bars represent the standard error of the mean.

stress symptoms for the experimental group, $F(3,60) = 7.117$, $p = .0005$, partial $\eta^2 = .262$, but not for the control group, $F(3,66) = 1.224$, $p = .308$, partial $\eta^2 = .053$. Following the significant effect of time for the experimental group, a pairwise comparison was performed and results indicated that stress symptoms were not statistically significant between baseline and time point 1 ($M = 1.62$, $SE = 1.48$, $p = 1.00$), between baseline and time point 2 ($M = 3.05$, $SE = 1.24$, $p = .139$), between time point 1 and time point 2 ($M = 1.43$, $SE = 1.12$, $p = 1.00$), between time point 1 and time point 3 ($M = 3.91$, $SE = 1.45$, $p = .084$, and between time point 2 and time point 3 ($M = 2.48$, $SE = 0.90$, $p = .076$). However, stress symptoms were statistically significantly reduced at time point 3 compared to baseline ($M = 5.52$, $SE = 1.18$, $p = .001$) (Figure 1).

Anxiety Symptoms

There was homogeneity of variances, as assessed by the Levene test of homogeneity of variance ($p > .05$) as well as homogeneity of covariances, as assessed by Box's test of equality of covariance matrices ($p = .314$). There was a statistically significant interaction between the group and time for anxiety symptoms, $F(3,126) = 7.933$, $p < .037$, partial $\eta^2 = .16$. Results for the simple main effect for group indicated that there was a statistically significant difference in anxiety symptoms at time point 3, $F(1,44) = 10.764$, $p = .002$, partial $\eta^2 = .20$, but not at baseline, time point 1, and time point 2. There was a statistically significant effect of time on anxiety symptoms for the experimental group, $F(2.138,58.457) = 12.352$, $p = .0005$, partial $\eta^2 = .38$ and the effect

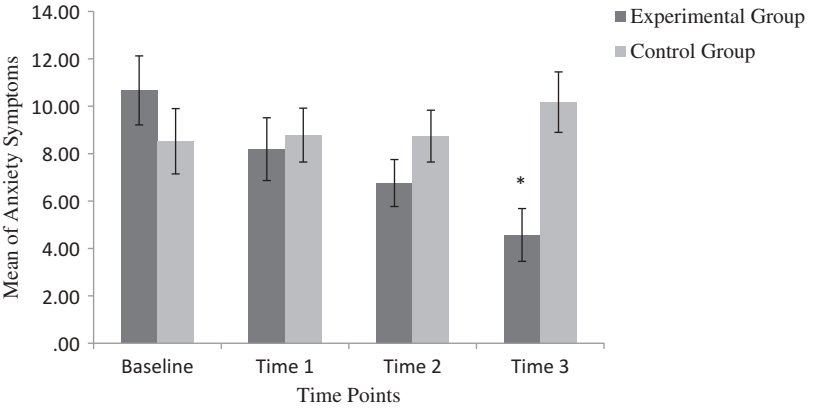

FIGURE 2. Mean of anxiety symptoms from baseline to time point 3.

Note. The asterisk (*) indicates a significant simple main effect, whereby the experimental group at time point 3 experienced reduced anxiety. No other simple main effects were significant. Error bars represent the standard error of the mean.

of time on anxiety symptoms for the control group was not significant, $F(3,66) = 0.756$, $p = .523$, partial $\eta^2 = .03$. Following the significant effect of time for the experimental group, a pairwise comparison was performed and results indicated that anxiety symptoms were statistically significantly reduced between time point 1 and baseline ($M = 2.48$, $SE = 0.80$, $p = .035$), between time point 2 and baseline ($M = 3.91$, $SE = 1.18$, $p = .020$), between time point 3 and baseline ($M = 6.10$, $SE = 1.27$, $p = .001$), between time point 3 and time point 1 ($M = 3.62$, $SE = 1.13$, $p = .026$), but not statistically significant between time point 1 and time point 2 ($M = 1.43$, $SE = 0.89$, $p = .734$) and between time point 2 and time point 3 ($M = 2.19$, $SE = 0.82$, $p = .085$) (Figure 2).

Depressive Symptoms

Again, there was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ($p > .05$) and homogeneity of covariances, as assessed by Box's test of equality of covariance matrices ($p = .556$). The interaction between group and time on depressive symptoms was not statistically significant, $F(3,48) = 1.070$, $p = .371$, partial $\eta^2 = .063$. Results of the main effect of group were not statistically significant, $F(1,16) = 0.958$, $p = .342$, partial $\eta^2 = .06$. However, the main effect of time was significant, $F(3,48) = 2.815$, $p = .049$, partial $\eta^2 = .15$. Following the overall significant effect of time (regardless of groups), a pairwise comparison was performed, and the results indicated that there was a statistically significant effect between baseline and

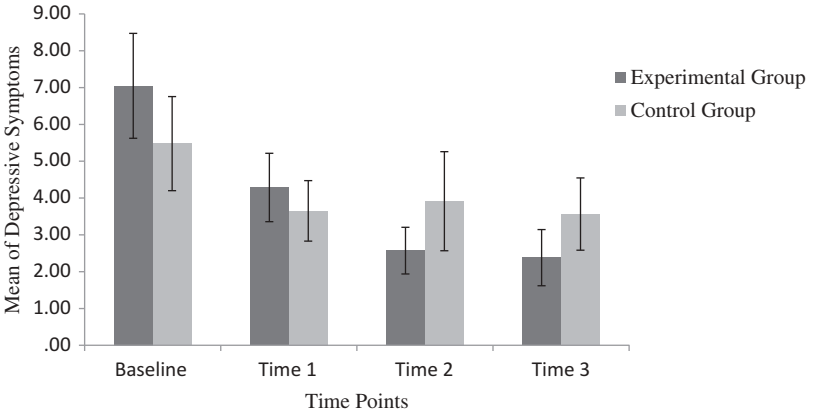

FIGURE 3. Mean of depressive symptoms from baseline to time point 3.

Note. The interaction between the intervention and time on depressive symptoms were not significant. Due to this, the simple main effect of time and group were not conducted

time point 3 (M = 3.29, SE = 1.00, p = .012), but the pairwise comparison was not significant for the combinations of the other time points (Figure 3).

Physical Symptoms

There was also homogeneity of variances, as assessed by Levene's test of homogeneity of variance (p > .05) along with homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .153). The interaction between the group and time on physical symptoms was not statistically significant, $F(3,120)$ = 2.652, p = .052, partial 2^2 = .06. Results indicated that the main effect of time was not statistically significant, $F(3,120)$ = 2.652, p = .052, partial η^2 = .06. The main effect of group did show statistically significant results, $F(1,40)$ = 7.978, p = .007, partial η^2 = .17. Univariate analyses indicated that there were group differences at time point 1, $F(1,44)$ = 11.448, p = .002, partial η^2 = .206, with the experimental group experiencing less physical symptoms (M = 7.26, SD = 3.21) compared to the control group (M = 10.22, SD = 2.70). Group differences were also present at time point 3, $F(1,41)$ = 8.004, p = .007, partial η^2 = .163, with the experimental group experiencing less physical symptoms (M = 7.70, SD = 3.51) compared to the control group (M = 10.96, SD = 3.97).

However, group differences at time point 2, $F(1,44)$ = 2.059, p = .158, partial η^2 = .045 and baseline, $F(1,53)$ = .680, p = .413, partial η^2 = .013, were not significant (Figure 4).

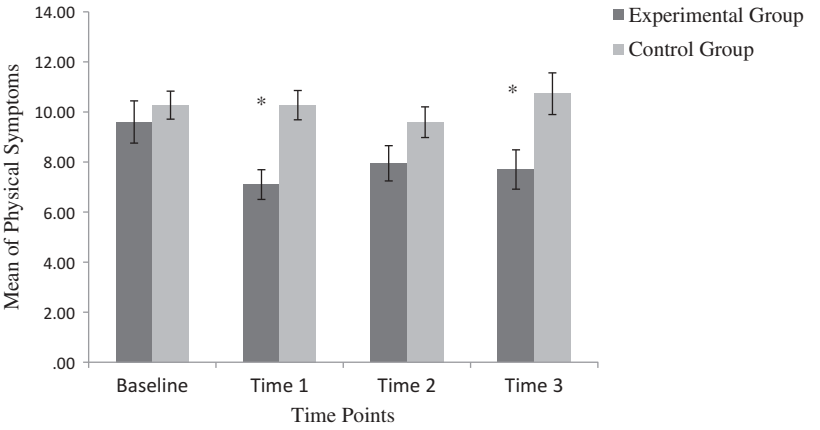

FIGURE 4. Mean of physical symptoms from baseline to time point 3.

Note. The asterisk (*) indicates significant group differences, whereby the experimental group experienced fewer physical symptoms at time point 1 and time point 3. No other group differences were significant. Error bars represent the standard error of the mean.

Discussion

Our aim through this study was to determine the efficacy of hypnosis intervention on the alleviation of physical symptoms and psychological symptoms of stress, anxiety, and depression during pregnancy.

Our results showed that pregnant women in the experimental group experienced a reduction in psychological symptoms during pregnancy. Their stress, anxiety, and depressive symptoms had decreased at time point 3 (week 36 of pregnancy). For the control group, the experience of stress, anxiety, and depressive symptoms increased at time point 3. Psychological symptoms during pregnancy, particularly anxiety, have been shown to follow a 'u' pattern with more symptoms during the first trimester, a decrease in symptoms in the second trimester and an upward trend in the third trimester (Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009). In our current study, this trend was found in the psychological symptoms experienced by the control group. However, the symptoms experienced by our experimental group showed a decreasing trend, particularly in the experience of stress and anxiety.

Although therapeutic interventions such as hypnotherapy and relaxation therapy during the antenatal period have been shown to aid in reducing the incidence of psychological symptoms during pregnancy (Marc et al., 2011; Vieten & Astin, 2008), studies exploring this aspect have been largely overlooked (Dennis, Ross, & Grigoriadis, 2007). Therapeutic interventions during the antenatal period are pertinent, as studies have shown a link between maternal mental health and birth outcomes,

postpartum well-being, and future infant development (Marc et al., 2011; Schetter & Tanner, 2012). Intervention during pregnancy has been shown to reduce psychological symptoms toward the final stage of pregnancy (Consonni et al., 2010). The results of our current study indicated that pregnant women in the experimental group experienced a reduction in their psychological symptoms during pregnancy.

Although the experience of physical symptoms during pregnancy is common, for some women these symptoms escalate into severe conditions. These include normal morning sickness in the form of nausea and/or vomiting escalating into hyperemesis gravidarum (O'Brien et al., 2002). Physical symptoms, such as nausea and vomiting, can be reduced or eliminated using various strategies. For hyperemesis gravidarum, for example, non-pharmacological options include modification of diet, pharmacological options include antiemetics, and therapeutic interventions include hypnosis (Jueckstock et al., 2010; Nayeri, 2012).

Our current findings support the notion that therapeutic interventions may assist in the reduction or elimination of physical symptoms, as the results indicated a reduction in the experience of physical symptoms at time point 3 for the participants in the experimental group. In contrast, participants in the control group experienced an increased in their physical symptoms at time point 3.

Further investigations of each of the physical symptoms that composed the total physical symptoms showed that at time point 3, the experimental group participants experienced reduction in vomiting (9.5% compared to 71.4% at baseline), fatigue (71.4% compared to 89.3% at baseline), breasts tenderness (47.6% compared to 53.6% at baseline), sensitivity to smell (9.5% compared to 64.3% at baseline) and taste (9.5% compared to 39.3% at baseline), dizziness (14.3% compared to 78.6% at baseline), constipation (14.3% compared to 42.9% at baseline), heartburn (23.8% compared to 46.4% at baseline), backaches (47.6% compared to 67.9% at baseline), shortness of breath (28.6% compared to 53.6% at baseline), sleep difficulty (28.6% compared to 57.1% at baseline), and face swelling (9.5% compared to 10.7% at baseline). However, the experience of contractions (52.4% compared to 10.7% at baseline), and feet and ankle swelling (28.6% compared to 10.7% at baseline) had increased.

Meanwhile, participants in the control group experienced increased in fatigue (87.0% compared to 85.7% at baseline), breasts tenderness (69.6% compared to 67.9% at baseline), heartburn (69.6% compared to 42.9% at baseline), backaches (91.3% compared to 71.4% at baseline), shortness of breath (43.5% compared to 21.4% at baseline), sleep difficulty (69.6% compared to 42.9% at baseline), contractions (17.4% compared to 14.3% at baseline), feet (34.8% compared to 3.6% at baseline), ankle (56.5% compared to 3.6% at baseline), and face swellings (4.3% compared to 3.6% at baseline). Participants in the control group experienced decreased in vomiting (21.7% compared to 78.6% at baseline), smell sensitivity (43.5% compared to 64.3% at baseline), taste sensitivity (39.1% compared to 53.6% at baseline), dizziness (47.8% compared to 96.4% at baseline), and constipation (30.4% compared to 46.4% at baseline).

There was a decreased in the experience of nausea (26.1% compared to 96.4% at baseline) for the participants in the control group and none of the participants in the experimental group experienced nausea at time point 3 (a considerable decreased from baseline, which was 71.4%).

The use of hypnosis has been shown to aid in the reduction or elimination of physical symptoms during the antenatal period, notably the elimination of nausea and vomiting (Madrid et al., 2011; Simon & Schwartz, 1999). More studies on the use of hypnosis are needed to show its efficacy in eliminating various other physical symptoms during the antenatal period, as there is still a paucity of experimental studies in this area.

Alleviating the experience of severe nausea and vomiting, along with other physical symptoms, during pregnancy is pertinent as past studies have shown its effect in precipitating stress, anxiety and depression in pregnant women (McCarthy et al., 2011). A number of studies examining physical and psychological symptoms during pregnancy did not include any interventions as a means to reduce participants' symptoms. This current study showed that early intervention in pregnancy assisted in the reduction of these symptoms toward the end of pregnancy.

Limitations and Recommendations

This study is not without its limitations. Because of the limited number of participants in this study, one has to be cautious about the generalizability of the findings. The intervention phases were conducted during participants' antenatal check-ups as per participants' requests, as this reduced the frequency of travelling to the hospital. This limited the study in terms of the number of hypnosis sessions included. The intervention phases were conducted with only four sessions and a long gap in between.

Although the baseline data showed that the pre-existing group differences in the experienced of psychological symptoms, physical symptoms, and demographic characteristics (i.e., age, educational level, parity, and work status) were not significant, due to the lack of control intervention, participants in the control group may have had opted for other forms of treatment to increase their psychological and physical well-being during the pregnancy stage.

Future research should include other parameters of well-being to enhance understanding of the efficacy of hypnosis during pregnancy. These parameters include participants' satisfaction with the hypnosis intervention, coping skills, and other factors.

Conclusion

To our knowledge, the current study is the first attempt at conducting a quasi-experimental study into the efficacy of hypnosis in reducing physical symptoms and psychological symptoms of stress, anxiety, and depression during pregnancy. In the area of therapeutic intervention using hypnosis, the previous focus has been on its efficacy in

reducing discomfort during labor (Martin et al., 2001; Mehl-Madrona, 2004; VandeVusse et al., 2007) and increasing postpartum well-being (Guse et al., 2006; Phillips-Moore, 2012). Including therapeutic interventions early in pregnancy is important in increasing the physical and psychological well-being of pregnant women during the antenatal period.

Ethical Statement

This study was approved by the University of Malaya Medical Ethics Committee, Kuala Lumpur, Malaysia (Medical Ethics Committee Reference No: 901.5). Written consent was obtained from all participants, as required by the Medical Ethics Committee,

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