Clinical Case Reports International

Research Article
Published: 09 May, 2022

Coping Strategies in Pregnant Women with High Risk Pregnancies during COVID-19 Pandemic

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Abstract

This was an observational, prospective, cohort study of pregnant women with high-risk pregnancy admitted for inpatient antenatal monitoring. Women were asked to fill the Italian version of the Coping Orientation to the Problems Experienced (COPE-NVI). The questionnaire included 5 different dimensions: 1) Social support; 2) Avoidance strategies; 3) Positive attitude; 4) Problem solving; 5) Turning to religion. We planned to evaluate COPE-NVI score according to the different maternal or fetal complication. Hundred women met the inclusion criteria, agreed to participate to the study and filled out the questionnaire. Thirty-seven were admitted for preeclampsia, 15 for diabetes, 5 for intrahepatic cholestasis, 14 for hyperemesis gravidarum, while 29 had severe intrauterine growth restriction requiring monitoring. The mean COPE-NVI score for social support was 31.5 ± 8.6, for avoidance strategies was 25.1 ± 6.7, for positive attitude was 31.7 ± 7.3, for problem solving was 30.5 ± 7.5, and for turning to religion was 24.9 ± 5.3. No statistically significant differences were found the COPE-NVI score within the different maternal or fetal complications, rather than for turning for religion, where the score was higher for women with preeclampsia and lower for women with intrahepatic cholestasis (P=0.01). Women with high risk pregnancies admitted for antenatal inpatient monitoring have a high score at coping strategies.

Keywords: COPE NVI; Coping; Psychology; High risk pregnancy; Neonates

Introduction

Most of the time, pregnancy is a joyful and happy period, but during gestation, pregnant women may also experience anxiety symptoms and stress levels associated with potential adverse obstetrical outcomes, such as preterm birth, intrauterine fetal death or fetal abnormalities [1,2]. Pregnant women may also worry about the health of their future babies, impending childbirth, and motherhood responsibilities. Women with high-risk pregnancies usually report a significantly higher level of stress and negative emotions [3,4]. Studies also showed that hospitalized pregnant patients admitted for inpatient monitoring had higher levels of anxiety compared to non-hospitalized women [5,6]. However, why some women have a better psychologic outcome compared to other pregnant women with similar pregnancy features, is still a subject of debate [7].

Coping is defined as a changing cognitive and behavioral efforts aimed to dealing with specific situations that may be stressful [8,9]. Reviews showed that avoidant coping behaviors or styles and poor coping skills in general could be associated with adverse outcomes, including postpartum depression, preterm birth, and infant development [7].

The COPE inventory was created by Carver et al. in the 1989 [10]. It is a multi-dimensional inventory developed to assess the different coping strategies people use in response to stress. COPE stands for Coping Orientation to Problems Experienced. The inventory is a list of statements that participants review and score. Each statement in the inventory is then connected to a specific coping strategy that sits under either the problem-focused, emotion-focused, or coping response measures.

Objective

The aim of this study was to evaluate coping behavior and style in a cohort of pregnant women with high risk pregnancy admitted for inpatient antenatal monitoring.

Materials and Methods

Study design and participants

This was a single-center, observational, prospective, cohort study of pregnant women with high-risk pregnancy admitted for inpatient antenatal monitoring at University of Naples Federico II from

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Received Date: *19 Apr 2022*
Accepted Date: *04 May 2022*
Published Date: *09 May 2022*

Citation:
Aviani S, Ammendola A, Saccone G, Gragnano E, Nazzaro G, Miranda M, et al. Coping Strategies in Pregnant Women with High Risk Pregnancies during COVID-19 Pandemic. Clin Case Rep Int. 2022; 6: 1327.

Appendix 1: Statements of the COPE-NVI.

1. I try to grow as a person as a result of the experience.
2. I turn to work or other substitute activities to take my mind off things.
3. I get upset and let my emotions out.
4. I try to get advice from someone about what to do.
5. I concentrate my efforts on doing something about it.
6. I say to myself "this isn't real."
7. I put my trust in God.
8. I laugh about the situation.
9. I admit to myself that I can't deal with it, and quit trying.
10. I restrain myself from doing anything too quickly.
11. I discuss my feelings with someone.
12. I use alcohol or drugs to make myself feel better.
13. I get used to the idea that it happened.
14. I talk to someone to find out more about the situation.
15. I keep myself from getting distracted by other thoughts or activities.
16. I daydream about things other than this.
17. I get upset, and am really aware of it.
18. I seek God's help.
19. I make a plan of action.
20. I make jokes about it.
21. I accept that this has happened and that it can't be changed.
22. I hold off doing anything about it until the situation permits.
23. I try to get emotional support from friends or relatives.
24. I just give up trying to reach my goal.
25. I take additional action to try to get rid of the problem.
26. I try to lose myself for a while by drinking alcohol or taking drugs.
27. I refuse to believe that it has happened.
28. I let my feelings out.
29. I try to see it in a different light, to make it seem more positive.
30. I talk to someone who could do something concrete about the problem.
31. I sleep more than usual.
32. I try to come up with a strategy about what to do.
33. I focus on dealing with this problem, and if necessary let other things slide a little.
34. I get sympathy and understanding from someone.
35. I drink alcohol or take drugs, in order to think about it less.
36. I kid around about it.
37. I give up the attempt to get what I want.
38. I look for something good in what is happening.
39. I think about how I might best handle the problem.
40. I pretend that it hasn't really happened.
41. I make sure not to make matters worse by acting too soon.
42. I try hard to prevent other things from interfering with my efforts at dealing with this.
43. I go to movies or watch TV, to think about it less.
44. I accept the reality of the fact that it happened.
45. I ask people who have had similar experiences what they did.
46. I feel a lot of emotional distress and I find myself expressing those feelings a lot.
47. I take direct action to get around the problem.
48. I try to find comfort in my religion.
49. I force myself to wait for the right time to do something.
50. I make fun of the situation.
51. I reduce the amount of effort I'm putting into solving the problem.
52. I talk to someone about how I feel.
53. I use alcohol or drugs to help me get through it.
54. I learn to live with it.
55. I put aside other activities in order to concentrate on this.
56. I think hard about what steps to take.
57. I act as though it hasn't even happened.
58. I do what has to be done, one step at a time.
59. I learn something from the experience.
60. I pray more than usual.

June 01st, 2020 to January 01st, 2021 COVID-19 period.

The study was approved by the local ethics committee. All participants in the trial provided written informed consent.

Inclusion criteria were pregnant women with high-risk pregnancy admitted for inpatient antenatal monitoring. High risk pregnancies included diabetes, preeclampsia, intrahepatic cholestasis, severe intrauterine growth restriction, and hyperemesis gravidarum.

Outcomes

Women were asked to fill the Italian version of the Coping Orientation to the Problems Experienced (COPE-NVI) [9]. The tool consists of five large essentially independent dimensions: Social support, Avoidance strategies, and Positive attitude, Problem solving and Turning to religion. The tool includes 60 statements (Appendix 1) with a score from 1 to 4 as following:

1. I usually do not do this at all
2. I usually do this a little bit
3. I usually do this a medium amount
4. I usually do this a lot

Each statement in the inventory is connected to a specific coping dimension. The questionnaire included 5 different dimensions:

1. Social support
2. Avoidance strategies
3. Positive attitude
4. Problem solving
5. Turning to religion

For each dimension a specific score is validated. Above that cut-off the coping strategy is considered to be present: 27.7 for social support; 23.5 for avoidance strategies; 30.9 for positive attitude; 32.0 for problem solving; 22.7 for turning to religion.

We planned to evaluate COPE-NVI score according to the different maternal or fetal complication.

Statistical analysis

Statistical analysis was performed using Statistical Package for Social Sciences (SPSS) v. 19.0 (IBM Inc., Armonk, NY, USA). Continuous variables were reported as means ± Standard Deviation

(SD), while categorical as numbers (percentage). Univariate comparisons of dichotomous data were performed with the use of the chi-square test with continuity correction. Comparisons between groups were performed with the use of the T-test to test group means by assuming equal within-group variances for parametric data, and with the use of Wilcoxon and Mann-Whitney tests for nonparametric data. P value <0.05 was considered statistically significant.

Results

Characteristics of the included women

During the study period 100 women, admitted for antenatal inpatient monitoring, met the inclusion criteria, agreed to participate to the study and filled out the questionnaire.

Maternal age ranged from 25 to 40 years. Thirty-seven were admitted for preeclampsia, 15 for diabetes, 5 for intrahepatic cholestasis, 14 for hyperemesis gravidarum, while 29 had severe intrauterine growth restriction requiring monitoring (Table 1).

Questionnaires

The man COPE-NVI score for social support was 31.5 ± 8.6, for avoidance strategies was 25.1 ± 6.7, for positive attitude was 31.7 ± 7.3, for problem solving was 30.5 ± 7.5, and for turning to religion was 24.9 ± 5.3 (Table 2).

Table 1: Characteristics of the included women.

	N=100
Demographics	
Age (years)	32 (25–40)
Preeclampsia	37
Diabetes	15
Intrauterine growth restriction	29
Intrahepatic cholestasis	5
Hyperemesis gravidarum	14
First trimester	6
Second trimester	25
Third trimester	69

Data are presented as number or as median (range)

Table 2: Overall COPE-NVI score.

	N=100
COPE-NVI SCORE	
Social support	31.5 ± 8.6
Avoidance strategies	25.1 ± 6.7
Positive attitude	31.7 ± 7.3
Problem solving	30.5 ± 7.5
Turning to religion	24.9 ± 5.3

Data are presented as number or as median (range)

No statistically significant differences were found the COPE-NVI score within the different maternal or fetal complications, rather than for turning for religion, where the score was higher for women with preeclampsia and lower for women with intrahepatic cholestasis (P=0.01).

Discussion

Main findings

This study aimed to evaluate coping behavior and style in a cohort of pregnant women with high-risk pregnancy admitted for inpatient antenatal monitoring. The study included 100 pregnant women, and showed that for all five dimensions using the COPE-NVI tool pregnant women have high score and therefore good coping strategies.

The study was limited by the small sample size, and by the observational study design. All participants were enrolled during the COVID-19 pandemic. If there were any effect on the outcomes [2], is it possible that the COVID-19 pandemic could have modified the findings. This would further reduce the power of a maybe already underpowered study.

Implication

Pregnancy is a unique health experience. Unlike other health and illness contexts studied by health psychologists, such as cancer or heart disease, pregnancy is not an illness and is commonly associated with positive psychological experiences [11]. However, different maternal or fetal conditions, and high risk pregnancies, may have a significant impact on maternal satisfaction [2,3,6,12-16].

Many women may be coping with an unintended pregnancy, bothersome physical symptoms, medical risk conditions or other chronic life strains. Pregnancy, which typically spans 40 weeks, is also time-limited in nature. The finite nature may influence how women appraise and cope with at least some pregnancy-specific stressors. By its very nature, pregnancy is also embedded within a broader interpersonal context and therefore, it is particularly important to understand the influence of an expecting mother's close personal relationships on her coping effectiveness. A recent study by Stapleton et al. examined the maternal relationship with a baby's father in detail and found that paternal support during pregnancy predicted maternal prepartum and postpartum distress, as did the quality of their relationship [16]. Models of dyadic coping developed in other populations suggest that a partner's ways of coping with stress affects the other partner's coping methods, as well as the effectiveness of his or her coping [17].

Coping helps pregnant women to manage the negative effects of stress [18]. Firm evidence of mediational mechanisms and for relevant moderating factors should be established before implementing interventions that are based on teaching women how to better cope

Table 3: COPE score according to type of high-risk pregnancy.

	Preeclampsia	Diabetes	IUGR	Intrahepatic cholestasis	Hyperemesis gravidarum	p-value
Social support	32.8 ± 9.1	29.8 ± 8.4	31.9 ± 9.3	28.2 ± 6.7	30.4 ± 6.5	0.64
Avoidance strategies	24.9 ± 7.4	24.8 ± 5.6	25.9 ± 7.6	22.4 ± 3.0	25.1 ± 5.2	0.87
Positive attitude	32.2 ± 8.5	34.0 ± 5.9	30.3 ± 7.6	31.8 ± 4.9	30.5 ± 5.5	0.55
Problem solving	30.5 ± 8.8	32.4 ± 6.7	30.1 ± 7.5	30.8 ± 5.1	29.5 ± 5.2	0.86
Turning to religion	26.2 ± 4.7	22.7 ± 5.4	26.2 ± 4.6	19.2 ± 9.1	24.9 ± 5.3	0.01

Data are presented as mean ± Standard Deviation (SD)
IUGR: Intrauterine Growth Restriction; Boldface data, statistically significant

during pregnancy. Looking ahead, researchers should develop a greater understanding of the particular challenges that women face and must cope with during pregnancy and across the lifespan, use strong and consistent instrumentation, and conduct longitudinal studies in large samples. A more rigorous approach to the study of coping during pregnancy could provide evidence needed to develop empirically-based interventions targeting modifiable risk factors for adverse pregnancy outcomes [7].

The solution that expresses COPE-NVI internal structure is the one that combines the basic scales in five factors: Social support; avoidance strategies; positive attitude; problem solving; and turning to religion. Our cohort was associated with high score at coping strategies. By looking at the different type of high-risk pregnancies (Table 3), only turning to religion was statistically significant with the highest score in IUGR patients, and lowest score in women with intrahepatic cholestasis. We also reported a non-significant higher score for social support in women with preeclampsia and IUGR. This may reflect a tendency for these classes of patients to research "social support" more than others, since they are often long-term patients and therefore more exposed to social distancing imposed by prolonged hospitalization and social exclusion induced from the CODIV-19 pandemic.

Conclusion

In summary, women with high risk pregnancies admitted for antenatal inpatient monitoring have a high score at coping strategies.

Ethical Approval

This study was approved by the local IRB of University of Naples Federico II, Naples, Italy (#208/19) on 21/10/2019.

References

1. Alhurani AS, Dekker R, Ahmad M, Miller J, Yousef KM, Abdulqader B, et al. Stress, cognitive appraisal, coping, and event free survival in patients with heart failure. Heart Lung. 2018;47(3):205-10.
2. Carver CS, Scheier MF, Weintraub JK. Assessing coping strategies:A theoretically based approach. J Pers Soc Psychol. 1989;56(2):267-83.
3. Ciardulli A, Saccone G, Anastasio H, Berghella V. Less-restrictive food intake during labor in low-risk singleton pregnancies: A systematic review and meta-analysis. Obstet Gynecol. 2017;129(3):473-80.
4. Coluccia A, Ferretti F, Fagiolini A, Pozza A. Psychometric properties and relations with coping and family strain of the Health Services and Caregiver Experience questionnaire (HSCE): An outcome measure of informal caregivers' experience for inpatient care in Italy. BMC Health Serv Res. 2017;17(1):494.
5. Cumberbatch CJ, Birndorf C, Dresner N. Psychological implications of high-risk pregnancy. Int J Fertil Womens Med. 2005;50(4):180-6.
6. Di Mascio D, Quist-Nelson J, Riegel M, George B, Saccone G, Brun R, et al. Perinatal death by bile acid levels in intrahepatic cholestasis of pregnancy: A systematic review. J Matern Fetal Neonatal Med. 2021;34(21):3614-22.
7. Falconier MK, Kuhn R. Dyadic coping in couples: A conceptual integration and a review of the empirical literature. Front Psychol. 2019;10:571.
8. Guardino CM, Schetter CD. Coping during pregnancy: A systematic review and recommendations. Health Psychol Rev. 2014;8(1):70-94.
9. Heaman M. Psychosocial impact of high-risk pregnancy: Hospital and home care. Clin Obstet Gynecol. 1998;41(3):626-39.
10. Jayasvasti K, Kanchanatawan B. Happiness and related factors in pregnant women. J Med Assoc Thai. 2005;88(Suppl 4):S220-5.
11. Levy-Shiff R, Lerman M, Har-Even D, Hod M. Maternal adjustment and infant outcome in medically defined high-risk pregnancy. Dev Psychol. 2002;38(1):93-103.
12. Mancuso RA, Schetter CD, Rini CM, Roesch SC, Hobel CJ. Maternal prenatal anxiety and corticotropin-releasing hormone associated with timing of delivery. Psychosom Med. 2004;66(5):762-9.
13. Migliorini S, Saccone G, Silvestro F, Massaro G, Arduino B, D'Alessandro P, et al. First-trimester screening based on cell-free DNA *vs.* combined screening: A randomized clinical trial on women's experience. Prenat Diagn. 2020;40(11):1482-8.
14. Inpatient *vs.* outpatient management and timing of delivery of uncomplicated monochorionic monoamniotic twin pregnancy: The MONOMONO study. Ultrasound Obstet Gynecol. 2019;53(2):175-83.
15. Saccone G, Florio A, Aiello F, Venturella R, De Angelis MC, Locci M, et al. Psychological impact of coronavirus disease 2019 in pregnant women. Am J Obstet Gynecol. 2020;223(2):293-5.
16. Sinaci S, Ozden Tokalioglu E, Ocal D, Atalay A, Yilmaz G, Keskin HL, et al. Does having a high-risk pregnancy influence anxiety level during the COVID-19 pandemic? Eur J Obstet Gynecol Reprod Biol. 2020;255:190-6.
17. Stapleton LR, Schetter CD, Westling E, Rini C, Glynn LM, Hobel CJ, et al. Perceived partner support in pregnancy predicts lower maternal and infant distress. J Fam Psychol. 2012;26(3):453-63.
18. Tol ID, Yousif M, Collins SL. Post Traumatic Stress Disorder (PTSD): The psychological sequelae of Abnormally Invasive Placenta (AIP). Placenta. 2019;81:42-5.