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PSYCHOLOGICAL INTERVENTION FOR IMPROVING PRENATAL ATTACHMENT OF PREGNANT WOMEN WITH A HISTORY OF PREVIOUS MISCARRIAGE

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Abstract

Given that pregnant women who went through the miscarriage experience during one or more previous pregnancies have difficulties in forming emotional attachments to the fetus during the current pregnancy, development of psychological interventions for improving their maternal-fetal attachment is needed. The aim of this study is to present a psychological intervention centered on the Unifying-Experiential Psychotherapy for improving the prenatal attachment in pregnant women with a history of miscarriage and to investigate its effectiveness. Hence, 32 pregnant women at 10-30 weeks of gestation, who reported miscarriage in previous pregnancies, were divided in two groups: experimental and control group. All participants had completed Romanian version of Maternal-Fetal Attachment Scale MFAS) (Cranley, 1981)in the pre-experiment and post-experiment stages. The experimental group members participated in a psychological intervention program, while the control group did not undergo any psychological intervention. The results obtained highlight significant differences in MFAS overall scores, Roletaking and Attributing Characteristics and Intentions to the Fetus subscales scores. Our findings indicate that psychological intervention for pregnant women with a history of miscarriage could be an important factor in improving their maternal-fetal attachment. Even if is is known that MFA increases during pregnancy, one-to-one or group therapy sessions support a stronger and healthier attachment between mother and fetus.

Keywords: Maternal-fetal attachment, miscarriage, pregnancy, prenatal psychology.

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1. Introduction

Out of all the pregnancy specific complications, miscarriage has the highest incidence. Because most miscarriages occur during the first trimester, the trend among Romanian obstetricians is to ignore this experience, especially when it is a singular one, be it at that respective moment in time or during a following pregnancy arguing with reasons such as: *It's a common occurrence, It was just an accident, Your loss was not an actual baby etc.*

However, for women that went through a miscarriage, including the post-miscarriage period, this experience is quite a complex one and mainly influenced by many variables: physical pain during the moment of miscarriage, social support, age, whether the pregnancy was a natural one or obtained via IVF procedure, if it was a desired one or unwanted, or on the information received from the medical staff.

Given that approximately 50% of women who experience a miscarriage get pregnant again, increasingly more studies have focused on investigating the impact of prenatal losses during the following pregnancies. Out of these, the most frequently mentioned are the pregnancy specific anxiety (Franche & Mikail, 1999; Geller, Kerns and Klier, 2004; Bergner, Beyer, Klapp & Rauchfuss, 2008) and its effects on prenatal maternal-fetal attachment (Armstrong & Hutti, 1998 Armstrong 2004, O'Leary, 2004; Tsartsara & Johnson, 2006). It is important here to mention that most of these studies are considering the entire prenatal losses registry, and not just the miscarriages.

An interesting fact regarding prenatal attachment on women with a history of miscarriage is that the qualitative studies, the conclusions and the recommendations given in the course of some quantitative studies, highlight the strong mechanisms for avoiding emotional attachment towards the fetuses in pregnant women during the current pregnancy. As a need to protect themselves from a new suffering after a possible abortion, pregnant women tend to emotionally distance themselves from the pregnancy, to retain their feelings towards the fetus, focusing exclusively on a healthy intrauterine development in order to avoid a new miscarriage (M. Andersson, S. Nilsson, A. Adolfsson, 2011; Green & Solnit, 1964 Carey Smith, 198; Cote-Arsenault & Mahlangu, 1998; Cote-Arsenault & B. Morrison, 2001).

Because prenatal maternal attachment was associated with the adoption of healthy behaviors in pregnancy – e.g. nutrition, sports, giving up smoking, alcohol and drugs (Lindgren, 2001; Ustunsoz, Guvenc, Akyus, Oflaz, 2010; Ross, 2012), with the postnatal mother - newborn attachment (Fonaggy, Steele & Steele, 1991; Benoit Parker & Zeanah, 1997; Siddiqui & Hagglof, 2000), clinicians are more and more concerned to develop psychological interventions focused on prenatal attachment. The existent psychological interventions focus on different techniques as mindfulness meditation (Duncan & Bardacke, 2009), listening to music (Chang, Yu, Chen, Chen, 2015), abdominal palpation using Leopold's maneuvers (Nishkawa & Sakakibara, 2013), reflective functioning (Jenkins & Williams, 2008), relaxation training (Toosi, Akbarzadeh, Farkhondeh & Zare, 2014).

The prenatal attachment implications are sustained both by its complexity and by the variety of its meanings, for example, Cranley M. (1981) defines prenatal attachment based on the affiliation and the interaction behaviors of the pregnant women to the fetus, while M. Muller (1993) takes into account the unique and affectionate character of the relationship between the mother and the unborn child and Condon (1993), the love towards the fetus. Doan and Zimerman (2003) define prenatal attachment as an abstract concept, which is representative for the affiliate relationship between the parent and the child,

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potentially present even before pregnancy, which depends on cognitive and emotional abilities to conceptualize another human being and that is developed within an ecological system.

2. Problem Statement

Given that pregnant women who went through the miscarriage experience during one or more previous pregnancies have difficulties in forming emotional attachments to the fetus during the current pregnancy, it is necessary that the psychological intervention refer primarily to the emotional dimension of these women.

So, they need to be encouraged to experiment different personal and original interactions with their fetuses using expressive-creative means, so as to be able to build a healthy and safe attachment during pregnancy. Concerning this, the Unifying-Experiential Psychotherapy, method developed by Mitrofan (2004) and centered on symbol analysis, personal and self-change development through challenging exercise, on the creative improvisation and meditation with art-therapy and expressive support, answers to the genuine psychological needs during pregnancy.

PEU focuses on three axes of intervention – the identity roles axis, the time axis and the awareness axis, among which, subjective experiences are being processed through a four-step methodology:

a) the identification of lived through experiences, their meanings and manifestations;

b) the connection and analysis of the level of merger of the experiences with the verbal and nonverbal external manifestations;

c) the symbolic outsourcing or reconstitution of traumatic experiences that allow their exploration and redefinition;

d) the creative self-transformation based on the activation of inventive resources by methods of identification, formulation, rearrangement and integration of alternative, healthy and creative solutions, actions and behaviors. Each of the three experiential- unifying ways aims specific milestones, and their unifying effect is the result of the simultaneous and interrelated functioning.

3. Research Questions

The questions that we ask ourselves in this study are:

i. What is the specific of psychological intervention carried out in order to optimize the maternal-fetal attachment in pregnant women with a history of miscarriage?

ii. To what extent does the therapeutic intervention program proposed lead to the improvement of the maternal-fetal attachment in pregnant women with a history of miscarriage?

4. Purpose of the Study

The purpose of this article is to present a psychological intervention centered on the Unifying-Experiential Psychotherapy techniques (Mitrofan, 2004) formulated in order to optimize the maternal-

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fetal attachment in women with a history of miscarriage and also to examine its effectiveness on the maternal-fetal relationship.

5. Research Methods

5.1. Instruments

The participants' prenatal attachment to her fetus is assessed before and after psychological intervention using the Romanian version of Maternal-Fetal Attachment Scale (Cranley 1981), which contains 22 items. MFAS is not just the first, but also one of the most widely used instruments in measuring prenatal attachment in the world. The items are conceived as sets of affirmations, and each item measures one of five dimensions or subscales of the prenatal attachment identified by Cranley, that is Differentiation of Self from Fetus, Interaction with the Fetus, Attributing Characteristics and Intentions to the Fetus, Giving of the Self, and Role Taking. The response options in the MFAS are ranged from "Definitely Yes" to "Definitely No", and are scored from 1-5, with 5 being the most positive statement, except 21 item for which options are reversed. The fidelity of Romanian version Cranley's scale, $\alpha = 0.73$, supports the fidelity $\alpha = 0.85$ of the original instrument.

In spite of the fact that Cranley's Maternal-Fetal Attachment Scale was constructed exclusively based on a sample of pregnant women with gestation ages between 35 and 40 weeks, the data obtained through relating the scores to variables such as age, socio-economic status, parity, self-confidence, perceived stress support the idea of hierarchically ordering behaviours specific to the maternal-fetal attachment and the fact that some dominate over others throughout the various stages of pregnancy. Also, the administration of MFAS in the first and second trimesters of pregnancy allows for the measurement of the development stage of each behaviour, which in turn allows for the evaluation of their evolution and for highlighting any risky situations as far as the maternal-fetal relationship is concerned.

5.2. Participants

Our study involved 32 pregnant women (10-30 weeks of gestation, m = 22.28, std. deviation = 6.65) with a history of miscarriage, recruited from the database of a private center in Bucharest providing prenatal service, as well as via online publishing of an information notice regarding this research on blogs for future parents. All expecting mothers involved in this study are married and aged between 27 and 39, with an average age of 30.6 years old.

The criteria for including pregnant women as participants were:

i. age over 18;
ii. the existence of at least one previous miscarriage,
iii. confirmed pregnancy;
iv. willingness to participate in this study.

The participants were divided into two groups: one experimental group (N = 16) and one control group (N = 16). From the experimental group, 11 pregnant women went in previous pregnancy through a singular experience of miscarriage, 4 of them went through two miscarriages and one pregnant woman

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through three miscarriages. The pregnant women in the control group, experienced one single miscarriage.

All participants had completed Romanian version of MFAS in the pre-experiment and post-experiment stages. The experimental group participated in a psychological intervention program which we present below, while the control group did not benefit of any psychological intervention.

5.3. Description of psychological intervention program

The psychological intervention program was conducted over 10 weeks and included one individual session and 9 group sessions. During the individual session, the pregnant women have undergone a semi-structured interview covering three areas: current pregnancy, previous pregnancy / previous miscarried pregnancies and the experience going through miscarriage. The group sessions were held on a weekly bases, for 3 hours each. As expressive-creative means used in our intervention we can mention here was: dancing and movement, collage, creative improvisation, centered on musical rhythm, guided meditation and the actual story.

During the first group session, information regarding the purpose of the intervention and the principles of the experimental-unifying orientation on which the intervention that took place after were presented. Also, we clarified the rules of the group and the administrative aspects regarding the group sessions: the program, the location, the number of sessions, the duration and frequency of the meetings. In order to develop a group cohesion, every participant opened up about herself, her pregnancies (current and previous one/s) and their motivation to participate in the prenatal attachment improvement program developed by us. After that, using some dies with images on them, the participants working together formulated a definition of the prenatal maternal-fetal attachment. Finally, they were verbally encouraged to explore the group experience, process that revealed enlightening insights on the personal significance attributed to the maternal-fetal relationship.

From the second meeting, all the sessions were held with a common structure composed of four parts:

1) group cohesiveness by free sharing of mutual novelties on the pregnancy evolution of each participant (e.g. information on the size of the fetus, the results of medical tests, appearance / reduction / disappearance of physiological discomforts during pregnancy etc.);

2) introducing a provocative exercise specific to experiential psychotherapy, based on art-therapeutic techniques;

3) analysis and verbal exploration on the experience within the exercise;

4)closing by highlighting new resources, significances, and emotional implications in order to integrate them within the realistic and healthy actions of the participants during the pregnancy and after.

Thus, given that parts 1, 3 and 4 of the group sessions are similar in their evolution, further we shall only describe the challenging exercises.

During the second session we used an exercise inspired from dancing and movement therapy with musical support from the "Earth Spirit" Carlos Nakai collection for flute. After an exercise on relaxation and guided meditation, we asked them to position in a circle and greet the entire group via movement. In return, the group responds the greeting by movement also reflecting it exactly the same.

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Then, one by one, each of the pregnant women enters the circle and is encouraged to act and express through dance and movement the relationship with their unborn baby. To prevent possible accidents and sustain the attachment theme, each one chooses a partner from the support group to keep close for physical support and more. Throughout the dance, the other pregnant women, sited in the circle, carefully pay attention to the movements of the pregnant woman in the center and also to their own thoughts, questions, emotions, needs, movements. One by one, each pregnant woman is part of the continuous circle and of the circle's content as well.

The purpose of the 3rd session of the group was to put the participants in touch with the maternal-fetal relationship specific rhythm, but also with the rhythm changes that occur during pregnancy. In order to do this, we introduced a provocative exercise using Boom Whackers polyphonic tubes which are percussion instruments. First, the participants are invited to play with the chords tubes, hitting them with their palms, thighs or the floor, and then, each creating a personal musical rhythm, rhythm that can later be followed by the group. This exercise them in increasing responsiveness to the personal rhythm, rhythm produced by another person and the changes of pace and awareness of thoughts, moods, needs and behaviors related to the sender and receiver experience.

In the 4th session we focused on differentiating between the past prenatal experiences, from the previous to the present pregnancy, from the previously spontaneously stopped evolving fetus and the fetus currently in the womb. This way, our intervention is in line with J. O 'Leary (2016), who emphasized the need to support mental representations of the parental role in connection to both the stop evolving fetus (the deceased baby) and the current one (the unborn baby). After a relaxation exercise, the participants were challenged by using plastic clay, to mold to a certain form the fetus from the pregnancy that ended in miscarriage and the fetus form the current one. This way, the pregnant women are actually aware that they use different symbols and mental representations for their fetuses and that they continue to develop an attachment relationship with each and every one of them, realizing that "they are parents to two babies, the one who dies and the one in the present pregnancy "(O'Leary 2016).

The 5th group session, our psychological intervention continues to support the needs of unborn baby, giving them voice. During the provocative exercise from this session, the participants have completed sentences / phrases beginning with a given start, as if the current unborn baby would actually talk to them about his needs.

Considering the temporal interference plans (past with present, previous pregnancy with current pregnancy) that we noticed during the individual sessions when talking about the ongoing pregnancy, in the 6th group session we intended to evaluate the status of this interference. For this purpose, we used the story with a given beginning as a prenatal experience exploring instrument. Each participant received an A4 sheet of paper on which the introductory sentence of the story was written: *"Once upon a time there was a kangaroo bearing in its pouch a precious crystal ...."*

Sessions 7 and 8 beyond the mindfulness exercises, were focused on the interaction with the fetus through different techniques: singing, speaking, reading, writing, touching, massaging, visualization, playing in order to stimulate the prenatal attachment behavior through the expressive communication and creative actions according to their personal resources. The focus was on becoming aware of their own

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bodily sensations, emotions and thoughts from here and now, the existence of fetal movements, issues that we explored verbally later within the group.

In the last group session, we focused through collage technique, on the integration of maternal-fetal attachment components and on assessment of their prenatal attachment progress during our psychological intervention program.

6. Findings

Our study focuses on presenting a psychological intervention in order to improve the prenatal attachment in pregnant women with a history of miscarriage and also to measure its effectiveness.

According to Table.1, the results in this study show that after our psychological intervention are significant differences in prenatal attachment, that is the MFAS overall score, in pregnant women in the experimental group compared to the control group (t (29.66) = 2.87, p <0.05).

Table 01. Results of MFAS scores: post-experiment stage

Equal variances assumed	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Giving of self	2,202	,148	-1,569	30	,127	-,938	,598	-2,158	,283
			-1,569	27,437	,128	-,938	,598	-2,163	,288
Interaction	8,173	,008	-1,973	30	,058	-1,875	,950	-3,816	,066
			-1,973	24,495	,060	-1,875	,950	-3,834	,084
Differentiation	3,293	,080	,185	30	,855	,063	,338	-,628	,753
			,185	26,826	,855	,063	,338	-,631	,756
Role taking	3,310	,079	2,900	30	,007	1,750	,603	,518	2,982
			2,900	25,122	,008	1,750	,603	,508	2,992
Attributing		,116	6,074	30	,000	6,563	1,080	4,356	8,769
			6,074	23,226	,000	6,563	1,080	4,329	8,796
Global MFAS	,038	,848	2,876	30	,007	5,375	1,869	1,558	9,192
			2,876	29,669	,007	5,375	1,869	1,556	9,194

On the MFAS subscale level, the results show that for the Attributing characterics to the fetus and Roletaking subscale level, pregnant women in the experimental group compared with ones in the control group had significantly higher scores or t (23.22) = 6.07, p <0.05 and t (25,12) = 2.90, p <0.05.

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Regarding the other scales - Interaction, Differentiation of Self from Fetus, Giving of Self, we can notice that the scores increase both for pregnant women in the experimental group and for the ones in the control group, with no significant difference between them. We believe that this is due to specific intrauterine fetal development, with frequent and strong movements that begin to structure in ceritain recognizable patterns known by pregnant women, but also as a response to the ways of interaction of pregnant women. In this regard, the results obtained are consistent with those obtained by Cranley showing that maternal fetal attachment increases during pregnancy.

We consider that Giving of Self subscale scores of the two groups are closely related to the history of miscarriage of the participants, whereas the adoption of healthy practices in the current pregnancy is for the pregnant women a way to avoid another perinatal loss and so ensure the viability of the fetus.

Significant differences between the two subgroups on the prenatal attachment overall score, but also on the Attributing characteristics to the fetus and Role-taking scores subscales, arising from our psychological intervention support its effectiveness in improving maternal-fetal relationship.

As result of our study, we can say that through the creative language used according the Unifying Experiential Psychotherapy in our psychological attachment intervention, the pregnant women had a direct access to their own “here and now” experiences with their unborn babies. In this way, the participants of or experimental group became aware of the way they get in touch with their fetus from a cognitive, emotional, and behavioural point of view, the difficulties preventing them from establishing a secure and intense attachment relationship to their fetus.

7. Conclusion

The results confirm that the psychological intervention is an important factor in improving the maternal-fetal relationship for pregnant women with a history of miscarriage. Just time as factor or moving from week to week in pregnancy is not always enough to reach a strong and secure maternal fetal attachment. Depending on the type and number of previous losses, structure of personality, social support, reaching a strong prenatal attachment requires or not involvement of pregnant women in psychological programs to support and improve their relationship with unborn babies.

In this regard, gynecologists should pay special attention to pregnant women with a history of prenatal loss and encourage them to participate in therapy groups focused on psychological counseling in order to optimize their maternal-fetal attachment.

Also, because there are pregnant women who have been through not only early but also late miscarriages (which occurred after the 13th week of gestation) or recurrent (minimum 3 miscarriages), it is necessary that gynecologists work closely with psychologists, who in return to provide the most specific psychological interventions, responding to psychophysiological peculiarities of the participating pregnant women.

The limitations of our study are considering the small number of expecting mother involved, and the lack of standardization of some variables (i.e.: age, abortion history, age of gestation, etc.), and for

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this reason is necessary to extend this psychological intervention to a larger group of pregnant women with miscarriage in history.

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