SHORT THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (PHD)

Health psychological study of couples undergoing in vitro fertilization (IVF)

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The Examination takes place online, on 10th March, 2021 at 11 am.

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1. INTRODUCTION

Nowadays, infertility has become a worldwide public health problem. Both infertility and assisted reproductive technology (ART) impose a serious physical and psychological burden on sterile couples.

Psychological support is an essential but not integrated part of reproductive health care yet. It is necessary to explore psychological aspects of infertility in order to provide theoretical and practical guidance for psychosocial care of infertility centers. Most psychological studies in this field focus on women's reactions, while male partners are pushed into the background. However, they are also involved in the biological process of infertility treatment and their role is determinant, therefore it is important to involve both partners in researches.

In my thesis, I interpret infertility and its treatment in a biopsychosocial context, since besides the medical approach we can't ignore the effects of the process on the individual, the couple and the family. We carried out two empirical researches on the topic: a cross-sectional preliminary study and a longitudinal main study. In the preliminary study, we focused on comparison of parents with a child conceived with ART and parents with a naturally conceived child with regard to coping and parental attitudes. In the longitudinal study, we explored

emotional state of infertile couples and their changes during the in vitro fertilization (IVF) treatment compared to the Hungarian general and patient population, and in relation to the treatment outcome.

In our study, we would like to highlight the importance of psychological support of couples undergoing assisted reproduction in an interdisciplinary approach. Our overall goal is to contribute to a better understanding of the psychological processes experienced by infertile couples in health care professionals of ART clinics, and thus enabling more effective care.

2. AIMS OF THE STUDY

(1) Preliminary study

The preliminary study aimed at testing whether IVF parents differ from parents with a child conceived naturally with regard to a) coping strategies, b) psychological immune competence, c) and parental attitudes. We hypothesized that the experience of infertility crisis and the different circumstances of becoming a parent influence these psychological variables.

The aim of the study was to identify adaptive coping strategies and personality traits that may contribute to successful coping

with infertility treatment, and to use the results to improve mental health of IVF couples and efficacy of treatment.

We used the results and experiences of the preliminary study to design our longitudinal study. The preliminary study confirmed the role of psychological factors in the development and treatment of infertility, thus then we put focus on the process of assisted reproduction and investigation of psychosocial factors influencing its outcome.

(2) Longitudinal study

The longitudinal study aimed at exploring emotional state (positive and negative affectivity, depression, anxiety) of infertile couples during the IVF treatment compared to the Hungarian general and patient population. We also aimed to explore how the emotional state of couples changed during the IVF cycle in relation to treatment outcome.

The aim of the study was to explore the role of couples' emotional dynamics in childbearing and the relationship between emotional reactions during the IVF treatment and its success. Based on these results, we sought to draw conclusions about the psychosocial factors influencing the outcome of treatment and make suggestions for planning the psychological support.

3. MATERIALS AND METHODS

Study participants

In the *preliminary study* (N = 168) a research group was compared with a control group. The research group consisted of infertile couples having a child conceived by successful IVF treatment (n = 84), while the control group consisted of parents of naturally conceived children (n = 84). In both groups participation required couples (1) to be at least 18 years of age; (2) have a blood-born child; (3) and to have the ability to read and write in Hungarian language and to be able to complete the questionnaires.

In the *longitudinal study* (N = 174) infertile couples undergoing IVF treatment took part. Participation required couples (1) to be at least 18 years of age; (2) to be about to begin and IVF cycle during the time of data collection; (3) and to have the ability to read and write in Hungarian language and to be able to complete the questionnaires. Couples were excluded from the study if (1) one or both of the partners had a psychiatric diagnosis; (2) or were currently receiving psychological care. In the longitudinal study, successful and unsuccessful IVF treatment groups were compared. The successful group consisted of couples who achieved pregnancy after IVF (n = 82),

while the unsuccessful group consisted of couples who did not (n = 92).

Procedure

For the *preliminary study*, the participants of the research group were recruited from the Assisted Reproduction Center, Clinical Centre, University of Debrecen. The participants of the control group were recruited from regional nursery schools and schools.

For the *longitudinal study*, participants were recruited from the Assisted Reproduction Center, Clinical Centre, University of Debrecen. Testing was performed at the following stages of the IVF treatment: at the beginning of the treatment (T1), before embryo transfer (T2), and before pregnancy test (T3). Subsequently, we divided the research group into two subgroups depending on the treatment outcome. Pregnancy status was defined by a positive serum ß-hCG test result 14 days after embryo transfer, which was reported in the medical charts.

Measurements

In the *preliminary study*, participants filled out a preliminary self-made sociodemographic questionnaire and three psychological questionnaires.

- *Sociodemographic questionnaire:* this questionnaire included questions concerning gender, age, marital status, qualification, residence, income, number of children and their age.
- Coping strategies were assessed using the 22-item *Ways of Coping Inventory*, which measures seven coping factors: Problem analysis, Goal orientated coping, Emotional and impulsive behaviour, Adaptation, Seeking social support, Seeking emotional balance, Withdrawal.
- Psychological immunity was measured by the 80-item *Psychological Immune Competence Inventory*. The instrument contains 16 scales, namely Positive thinking, Sense of control, Sense of coherence, Creative self-concept, Sense of self-growth, Challenge orientation, Social monitoring capacity, Problem-solving capacity, Self-efficacy, Social mobilizing capacity, Social creating capacity, Synchronicity, Goal orientation, Impulse control, Emotional control, Irritability control.
- We applied the *Parental Attitude Research Instrument* to assess parental attitudes, which contains 78 items. The instrument covers three dimensions (Democracy-dominance, Acceptance-rejection, Restriction-autonomy) and fourteen subscales.

In the *longitudinal study*, we applied a self-made demographic and infertility-specific questionnaire and three psychological questionnaires. Participants completed all questionnaires at the first measurement occasion (T1), while at the second and third measurement occasion (T2, T3) they filled out only those questionnaires that measure transient emotional states.

- The *Demographic and infertility-specific questionnaire* included questions concerning age, marital status, duration of marriage or cohabitation, residence, qualification, current employment, financial status, harmful habits, duration and cause of infertility, number of common children, and number of previous infertility treatments.
- Positive and negative emotional states were assessed using the *Positive and Negative Affect Schedule*. This measurement contains twenty items, ten describing positive (e.g. enthusiastic) and ten describing negative (e.g. upset) personality traits. In our study, participants were asked to rate how they felt at the present moment.
- The level of depression was measured by the short form of the *Beck Depression Inventory* that contains 9 items. The questionnaire measures the following components of depression: social withdrawal, indecisiveness, sleep disorders, fatigue, excessive worrying of physical

symptoms, inability to work, pessimism, dissatisfaction, inability to feel pleasure, and self-blame.

- The severity of anxiety was assessed using the *Spielberger State-Trait Anxiety Inventory*. The questionnaire contains 20 items for assessing trait anxiety and 20 items for assessing state anxiety.

Data analysis

We used the Kolmogorov-Smirnov test for testing normality. In the case of normal distribution, we used parametric tests, while if the data were not normal, we used non-parametric tests. In cases where both normally and non-normally distributed variables were included in the analysis, non-parametric analyzes were performed as a first step.

In the *preliminary study*, independent samples t-tests were applied in order to compare coping strategies between groups and genders. Mann–Whitney *U*-tests were performed to explore the differences between the groups in psychological immune competence and parental attitudes.

In the *longitudinal study*, one-sample t-tests were applied in order to compare mean scores of our sample and the mean scores found in the samples of the reference groups (general adult and patient populations). In comparison with the general adult population, we compared our findings on depression and

anxiety with the published results of Hungarostudy 2013 survey, a cross-sectional survey enrolling a nationally representative sample of the Hungarian population aged > 18 years. In comparison with the patient population, we compared our findings on positive and negative affectivity with the published results of a study, which examined Hungarian patients (n = 466) visiting their General Practitioners for various somatic complaints. Repeated measures ANOVA was performed to test the emotional state changes during the treatment in respect of the success of the treatment.

The statistical analyses were conducted with the Statistical Package for the Social Sciences (SPSS) version 15.0 and 22.0. Statistical significance was defined as $p < 0.05$ in all cases.

4. RESULTS

4.1. Results of the preliminary study

Sample characteristics

Altogether 168 people (84 couples) took part in the preliminary study. The research (IVF) group (n = 84) consisted of infertile couples having a child conceived through IVF, while the control group (n = 84) consisted of parents of naturally

conceived children. With respect to the measured demographic characteristics, no significant differences were found between the IVF and the control group.

Comparison of coping strategies between IVF and control group

Contrary to the control group, couples who were treated successfully with IVF are less prone to apply Emotional and impulsive behaviour coping strategy ($t(166) = -3.186$, $p < .01$), which difference also revealed itself specifically in the comparison of the men ($t(82) = -2.634$, $p < .05$). With regard to the women's comparison, IVF women apply Seeking emotional balance coping more frequently than comparison women ($t(82) = -2.909$, $p < .01$).

Gender differences in coping strategies

According to the results, there was a significant difference between men and women in both IVF and control group in Seeking social support and Withdrawal coping strategies. While men and women in the control group did significantly differ in Problem analysis ($t(82) = -3.608$, $p < .01$) and Adaptation ($t(82) = -2.321$, $p < .01$) coping strategies, this gender difference was not significant among IVF couples. IVF mothers differed from IVF fathers in Seeking emotional balance

($t(82) = -3.161$, $p < .01$).

Comparison of psychological immune competence between IVF and control group

Couples with IVF children had higher scores on every subscale of the Psychological Immune Competence Inventory compared with control couples. The statistical analysis showed that IVF couples achieved significantly higher Sense of coherence ($U = 2813$, $p < .05$) and Creative self-concept ($U = 2886.5$, $p < .05$) than those with naturally conceived children.

Comparison of parental attitudes between IVF and control group

IVF couples achieved significantly higher scores on Democracy-dominance scale than members of the control group ($U = 2684.5$, $p < .01$), which difference also appeared for comparison of parents with a child younger than 3 years of age ($U = 910$, $p < .05$). We also found a significant difference in mean scores on the Acceptance-rejection scale between IVF and control couples with a child younger than 3 years ($U = 929.5$, $p < .05$). The number of children raised in the family did not significantly influence the parental attitudes.

Subsequently, we also examined whether there is a difference in parental attitudes between IVF parents raising a

younger child and IVF parents raising an older child. IVF parents with children younger than 3 years of age raise their children in a more democratic ($U = 2369$, $p < .01$) and less intrusive ($U = 2296$, $p < .01$) environment than IVF parents with older children.

4.2. Results of the longitudinal study

Sample characteristics

Altogether 174 people (87 couples) undergoing their first or second IVF treatment took part in the longitudinal study. We found no remarkable difference between the successful ($n = 82$) and unsuccessful ($n = 92$) IVF groups in the demographic and infertility-specific characteristics, except for the age.

Comparison of IVF couples and reference groups regarding emotional state

With regard to positive and negative emotional states, we compared the IVF couples' positive and negative affectivity scores with the mean scores of a Hungarian patient sample ($n = 466$) in which patients visited their General Practitioners for a variety of somatic complaints. The negative affectivity scores of both IVF men and women were significantly lower than male and female patients' scores at every stage of the treatment ($p <$

.001). As regards the differences in positive emotional state, IVF men and women showed significantly higher level of positive affectivity than their male and female controls from the patient population during the whole cycle ($p < .05$).

With regard to depression and anxiety, we compared the IVF couples' depression and anxiety scores with the mean scores of the general adult Hungarian population ($n = 2000$). Compared to the comparative norms, IVF men's depression scores were significantly lower than those of the general adult population at T1, T2 and T3, just as among women ($p < .05$). Surprisingly, the trait anxiety level of IVF couples was significantly lower than the scores of the general adult Hungarian population ($p < .001$). We found no remarkable difference in state anxiety between the infertile men and the representative sample. In contrast, IVF women experienced significantly lower level of state anxiety than the female controls at T1 (T1: $t[51] = -3.858$, $p < .01$) and T3 (T3: $t[48] = -3.655$, $p < .05$).

Comparison of successful and unsuccessful IVF groups regarding emotional state changes during the treatment

The positive emotions were remarkably higher than the negative ones during the entire duration of the treatment.

With regard to women's comparison, a decrease in positive emotions was observable in both successful and unsuccessful IVF women between T1 and T2. At the same time, negative emotions tended to increase in the successful group, but decrease in the unsuccessful group. We found a tendentious difference in negative affectivity between the successful and unsuccessful groups at T2 ($F[1,77] = 3.65$, $p = .06$). Furthermore, there was a tendentious increase in positive emotions of the successful group between T2 and T3, compared to an inconsiderable change in the unsuccessful group. In addition, the negative emotions remarkably decreased in the successful group, while increased in the unsuccessful group.

With respect to men's comparison, we found an increase in positive emotions in both groups at the time of embryo transfer (T2), which was just in contrast to the trend described in women. In the successful group, the opposite trend was also seen in terms of negative emotions, since the negative emotions of men decreased, which was inconsiderable in the case of the unsuccessful group. Between T2 and T3, the positive feelings of men did not change, but decreased in the unsuccessful group. We found a significant difference in positive affectivity between the successful and unsuccessful groups at T3 ($F[1,77] = 4.94$, $p < .05$). By the time of pregnancy test, the negative emotions of men in the successful group did not change in contrast to men

in the unsuccessful group, where the negative emotions decreased.

With regard to depression, the depression level of male and female member of unsuccessful couples was higher than that of either member of successful couples. For successful couples, women's depression score was higher than that of men. For male and female members of unsuccessful couples, we found almost the same level of depression at the beginning of the treatment, which was considerably higher than that of successful couples. Moreover, for men, the difference was proved to be significant ($F[1,78] = 6.65$, $p < .05$). Between T1 and T2, the level of depression of men in the unsuccessful group significantly decreased ($p < .05$), reaching depression score of women in the successful group, but remained considerably higher than that of men in the successful group. By the time of pregnancy test, depression score of the male member of unsuccessful couples continued to decrease. In contrast, depression score of the female member of unsuccessful couples significantly increased ($p < .05$) between T2 and T3 and exceeded baseline level.

5. DISCUSSION

5.1. Conclusions of the preliminary study

Comparison of coping strategies between IVF and control group

According to the results, there is a significant difference between the two groups in *Emotional and impulsive behaviour* coping strategy, which also revealed itself specifically in the comparison of the men. It results from this that IVF couples are able to control their emotions in a better way than comparison couples in stress situations, as permanent negative emotions deprive the individual of a huge amount of energy. This finding is consistent with research findings showing that control of emotions is positively associated with pregnancy rates.

As regards women's comparison in coping strategies, IVF women reported increased *Seeking emotional balance* coping than comparison women, suggesting that thinking about joyful and pleasant issues rather than unpleasant and stressful thoughts about infertility and being able to re-engage in alternative meaningful goals might have helped infertile women to cope with fertility problem.

Gender differences in coping strategies

Our results show that women in both IVF and control group tend to apply *Seeking social support* and *Withdrawal* coping strategies more frequently than men. In accordance with this, getting into a stress situation, mothers are more prone to seek emotional and social support and avoid confrontation than fathers. At the same time, while men and women in the control group differed significantly in *Problem analysis* and *Adaptation* coping strategies, this gender difference was not significant among IVF couples. This can be explained by the fact that in the process of coping with infertility and the treatment active cooperation of both parties is needed in order to analyse the problem affecting both of them and to take actions towards making plans to solve it. In our study, we found a gender difference in *Seeking emotional balance* coping strategy between men and women in the IVF group in contrast to the gender differences found in the control group. Accordingly, IVF mothers differ from IVF fathers in that they aspire to emotional balance better. A possible explanation for this finding is that IVF women experience more emotional and physical stress related to infertility than men. Overall, these results indicate a less considerable manifestation of gender roles and an emotional conflict between the parties in the IVF group.

Comparison of psychological immune competence between IVF and control group

According to the results, IVF couples possess a "stronger" psychological immune system than parents of naturally conceived children especially as of S*ense of coherence* and *Creative self-concept*. Consequently, IVF couples have ability to understand the stimuli in a rational way and feel more confident about that their environment is predictable and things will work out. They do not escape trials, but interpret them as challenges. Furthermore, their highly creative self-concept makes them feel more worthy, and therefore rate their achievements more realistically than the control group. Our findings are consistent with previous research that suggest that the more challenging the individual perceives infertility, the more adaptive coping strategies they use; and that observed more positive emotional state and higher self-esteem among patients after a successful IVF cycle with live birth than before.

Comparison of parental attitudes between IVF and control group

In our study, parents with a child conceived through assisted reproduction bring up their children in a more democratic environment than parents with a naturally conceived child. IVF parents raising a child under the age of 3 reported not

only a more democratic but also more accepting parental attitude contrary to the control group. Our findings are supported by previous research suggesting that IVF mothers show greater emotional warmth towards their child and have more interactions with them than those with naturally conceived child.

The results also revealed that IVF parents with a child younger than 3 years have a more democratic and less restrictive parental attitude than IVF parents with a child older than 3 years. This result is consistent with previous research findings that show that the more positive parental attitudes and greater emotional warmth observed during early childhood appear to diminish over time. The higher level of parental restriction towards older children can be explained by the fact that due to different way of conception the parental attitude of IVF parents may become even more protective at later stages of child-rearing. Overall, our results regarding parental attitudes can be explained by the fact that experience of infertility and the circumstances of becoming a parent influence the subsequent parent-child relationship and parental style.

5.2. Conclusions of the longitudinal study

Comparison of IVF couples and reference groups regarding emotional state

The *positive and negative affectivity* of infertile couples were found to be significantly better compared to the patient population, which suggests that no awareness of disease relates to infertility among infertile couples. According to our research, the infertility problem does not imply disease-related conditions, in spite of the fact that infertility is a medically treated disease in a health care facility.

Compared to the average population, the more favorable results of infertile couples regarding *depression* and *trait anxiety* suggest that indicators of their emotional status are within the normal range. Our results are in accordance with previous research in which most infertile couples show resilience throughout fertility treatment. IVF patients presumably have more effective coping strategies in comparison to those who do not even undertake the treatment. Our results indicate that the desire to have a child and all the commitments and life goals related to it may mobilize positive energies and favorable coping mechanisms among these people, which may preclude the appearance of anxious and depressive feelings.

Comparison of successful and unsuccessful IVF groups regarding emotional state changes during the treatment

The predominance of the positive emotions and keeping distance from the negative emotions observed among the study participants reflect a healthy attitude, since it may only enable couples to even undertake burdens of the treatment.

The decrease in positive emotions in *women* between T1 and T2 suggests that women have to experience an unpleasant procedure at T2, when the embryo transfer takes place. Increase of negative emotions in the successful group may indicate an increased concern for success, while a slight change in negative emotions can mobilize limited coping resources in the unsuccessful group. We found a tendentious difference in negative affectivity between the successful and unsuccessful IVF women at the time of embryo transfer, thus women in the successful group presumably face and cope with the unpleasant experience of the expected procedure, which may be the "price of success". Our interpretation is also confirmed by changes of positive emotions between T2 and T3. These findings add to the existing literature by suggesting that it is the emotional attitude that psychologically differentiates between the successful and unsuccessful IVF women. The successful group seems to reflect emotional dynamics being consistent with the situation, while women in the unsuccessful group tend to show indifference,

which presumably affects childbearing motives and the success of treatment.

Increase in positive emotions at T2 observed in *men* is just in contrast to the trend described in women. In the successful group, the opposite trend was also seen in terms of negative affectivity, since the negative emotions of men decreased. In the relationship of couples, it suggests that the female partner of successful couples experiencing the unpleasant treatment expects and emerges more emotional support from the male partner. The decrease in men's negative affectivity may convey encouragement, but in the case of unsuccessful couples, it is inconsiderable. Between T2 and T3, the positive feelings of men did not change but definitely decreased in the unsuccessful couples. The difference between the two groups in positive affectivity even became significant at the time of pregnancy test. This result implies that in the case of successful couples, men may provide emotional support to their partner steadily until the end of treatment, while it remarkably decreases in the unsuccessful group by the time of pregnancy test; accordingly, the female partner of couples may be left alone. Between T2 and T3, the negative emotions of men in the successful group did not change, thus besides emotional support they may express their concerns in contrast to men in the unsuccessful group. The negative emotions of unsuccessful men

decreased, which also suggests a reduction in concern, as the burden of childbearing may cease due to assuming unsuccessful outcome of treatment. In addition, positive emotions remarkably decreased in the unsuccessful group by the time of pregnancy test. Consequently, the combination of these results suggests a change toward a more indifferent emotional attitude in the unsuccessful group.

The direction of change in positive and negative emotions is confirmed by the direction of change in *depression*. Compared to the successful couples, the higher level of depression may not enable the unsuccessful couples to experience the positive feeling of having a child; it can reduce the strength of childbearing motives and the coping potential related to it. For the successful couples, the higher level of depression among women compared to men can be derived from the greater physical burden of the treatment imposed on women. Our results are in line with the results of previous studies that showed that a higher level of depression was associated with lower pregnancy rates in women. The significant decrease in depression of men in the unsuccessful group between T1 and T3 may indicate relief as anticipating the final outcome, since they may not experience failure as women in the unsuccessful group whose depression scores significantly increased. The anticipation of failure may lead to an increase in depression for

women, while a decrease for men. There may be an inadequate emotional synchrony in the unsuccessful couples in terms of decision to have a child; the lack of emotional rapport and the emotional distance between the partners may hinder the purpose of conception.

6. MAIN STATEMENTS AND RESULTS

The findings of the preliminary study suggest that less use of emotional and impulsive behaviour coping and more use of withdrawal and seeking emotional balance coping can be qualified as adaptive coping strategies in overcoming infertility. In addition, higher levels of sense of coherence and creative self-concept were seemed to be beneficial as personality traits. Our results highlight the role of coping mechanisms and psychological immune competence in coping with infertility treatment. Furthermore, our results also confirmed that the different circumstances of becoming a parent influence the subsequent parental attitudes. IVF parents show a more democratic parental attitude than parents with a naturally conceived child. In summary, the preliminary study and its background confirm the role of psychological factors in the development and treatment of infertility and support the need for further exploration of psychological factors behind

infertility.

The longitudinal study suggests the importance of couples' emotional dynamics in childbearing. The lack of emotional synchrony between partners is a possible explanation for an unsuccessful IVF attempt. Participation of men in the IVF treatment is at least as determinant psychologically as the role of women in undergoing the biological process of the treatment. The emotional attitude and support of men become a determining factor in the biological success of women. Our findings suggest that it is worth exploring feelings and aspirations of couples related to childbearing and parenthood, as this may increase the efficiency of assisted reproduction.

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List of publications related to the dissertation

1. **Gabnai-Nagy, E.**, Bugán, A., Bodnár, B., Papp, G., Nagy, B. E.: Association between Emotional State Changes in Infertile Couples and Outcome of Fertility Treatment.
Geburtshilfe Frauenheilkd. 80 (2), 200-210, 2020.
DOI: http://dx.doi.org/10.1055/a-0854-5987
IF: 2.382 (2019)

2. **Gabnai-Nagy, E.**, Nagy, B. E.: Coping with infertility: Comparison of coping mechanisms and psychological immune competence in fertile and infertile couples.
J. Health Psychol. 21 (8), 1799-1808, 2016.
DOI: http://dx.doi.org/10.1177/1359105314567206
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List of other publications

3. **Gabnai-Nagy, E.**, Papp, G., Nagy, B. E.: Az érzelmi állapot és a megküzdési képesség hatása a mesterséges megtermékenyítés kimenetelére meddő párok körében. *Psychiatr Hung. 35* (3), 337-353, 2020.
4. **Gabnai-Nagy, E.**, Nagy, B. E.: Mesterséges megtermékenyítésen átesett meddő párok egészségpszichológiai vizsgálata. In: Klinikai gyermeklélektan és preventív egészségpszichológia a gyakorlatban. Szerk.: Nagy Beáta, Debreceni Egyetem, Debrecen, 367-404, 2014.
5. **Gabnai-Nagy, E.**, Nagy, B. E., Bodnár, B.: A mesterséges és természetes megtermékenyülés útján szülővé vált párok megküzdésének és nevelési attitűdjének összehasonlító vizsgálata. *Magyar Nőorv. L. 75* (5), 17-24, 2012.

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Conference presentations related to the thesis

Gabnai-Nagy E., Nagy B. E., Bodnár B., Hidegkuti I.: Asszisztált reprodukciós kezelés (IVF) lélektani vonatkozásai meddő pároknál. Magyar Nőorvos Társaság XXX. Jubileumi Nagygyűlés, 2014. május 22-24. Pécs

Gabnai-Nagy E., Nagy B. E., Bodnár B.: Meddőségi kezelésen (IVF) részt vevő párok egészségpszichológiai vizsgálata. Magyar Pszichológiai Társaság XXIII. Országos Tudományos Nagygyűlése, 2014. május 15-17. Marosvásárhely (Románia)

Gabnai-Nagy E., Nagy B. E.: „Ha nem jön a baba" - a meddőség krízise. Magyar Pszichiátriai Társaság VIII. Nemzeti Kongresszusa, 2014. január 22-25. Budapest

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Gabnai-Nagy E., Nagy B. E.: Asszisztált reprodukciós technika segítségével szülővé vált párok egészségpszichológiai vizsgálata. XIII. RODOSZ (Romániai Magyar Doktoranduszok és Fiatal Kutatók Szövetsége) Konferencia, 2012. november 9-11. Kolozsvár (Románia)

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Gabnai-Nagy E.: A mesterséges és természetes megtermékenyülés útján szülővé vált párok megküzdésének és nevelési attitűdjének összehasonlító vizsgálata. XVI. Budapesti Pszichológiai Napok, 2012. április 13-15. Budapest

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