

Emotional adjustment to IVF: steps to theoretically and empirically based interventions

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Emotional impact of IVF

- Who is at risk, effective interventions

Problem definition

- Clinical studies show high emotional impact of IVF?
- Prospective studies show conflicting results?

- Lack of knowledge about need for psychological care
- Lack of knowledge about necessary characteristics of psychological care

Research questions

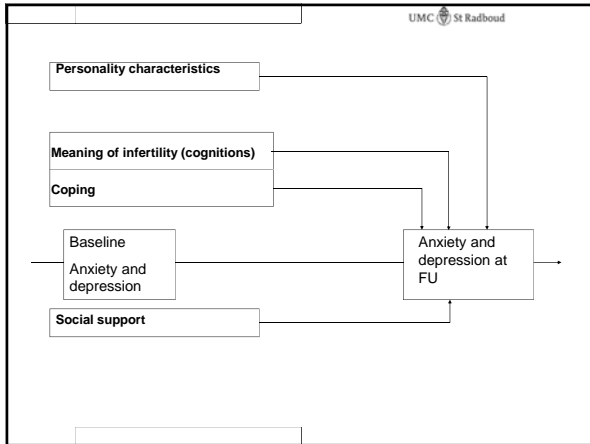
- What is the emotional impact of IVF?
- Who is at risk for emotional problems?
- How do you know who is at risk for emotional problems?
- What is effect of intervention to prevent emotional problems

Theoretical framework

- Stress coping theories
- Stress vulnerability models

Emotional response to IVF: Characteristics of the stressor

- Anxiety:
 - Threat of the treatment
 - Uncertainty about treatment outcome
- Depression:
 - Outcome is uncontrollable
 - Loss of ideals, dreams, expectations for the future



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Predictors of emotional response

- Personality characteristics: neuroticism, optimism, extraversion
- Coping
- Cognitions
- Social support
 - General support, marital relationship, sexual relationship

CM Verhaak, Kelo wetenschapsdag 2007; UMC St

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Cognitive coping:

<p>Helplessness</p> <ul style="list-style-type: none"> ● My infertility makes me feel helpless ● My infertility limits me in everything that is important to me ● My infertility controls my life ● Because of my infertility I miss things I like to do most ● My infertility makes me feel useless at times 	<p>Acceptance</p> <ul style="list-style-type: none"> ● I can accept my infertility well ● I can cope effectively with my infertility ● I've learned to live with my infertility ● I can handle the problems related to my infertility ● I've learned to accept the limitations imposed by my infertility
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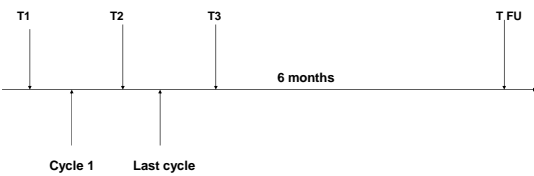
Hypotheses

- Increase in depression after failed treatment
- Consolidation or decrease of anxiety after failed treatment
- Neuroticism, helplessness, passive coping and lack of social support are risk factors

Emotional response depends on phase in treatment



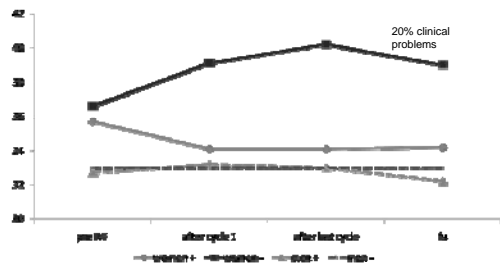
Design of the study
N=400 couples



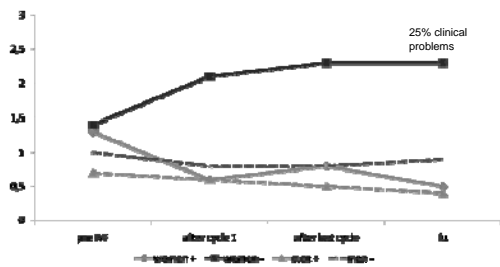
Emotional response over different treatment cycles

- General linear models: multivariate analysis of variance; repeated measures; outcome of treatment as factor
- Post hoc univariate analyses to indicate directions

Course anxiety from pre treatment to 6 months FU (N=400)



Course depression from pre treatment to 6 months FU



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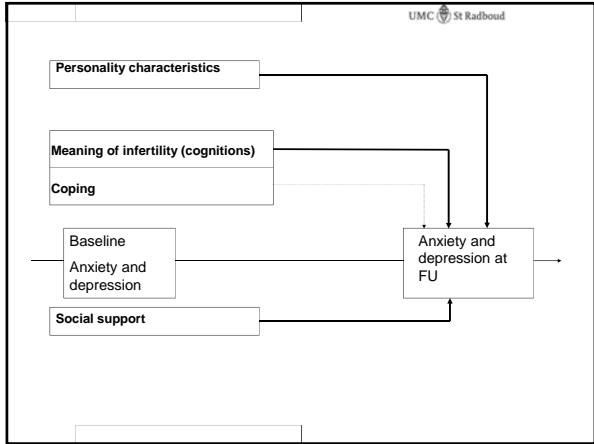
Conclusions emotional adjustment to IVF

- Unsuccessful IVF provokes grief and mourning
- Considerable part severe adjustment problems
- No recovery 6 months after treatment

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Who is at risk?

- Linear stepwise regression analysis:
 - First step: baseline anxiety or depression
 - Second step: personality
 - Third step: coping, cognitions, social support



Who is at risk?

- Pre treatment distress
- Helplessness regarding fertility problems
- Less acceptance of possible childlessness
- Lack of social support

Verhaak et al. Hum Reprod 2005; J Behav Med 2005

Journal of Behavioral Medicine, Vol. 28, No. 2, April 2005 (© 2005)
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Predicting Emotional Response to Unsuccessful Fertility Treatment: A Prospective Study

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The predictive value of a comprehensive model with personality characteristics, stressor related cognitions, coping and social support was tested in a sample of 107 nonpregnant women. The emotional response to the unsuccessful treatment was predicted-out of vulnerability factors assessed before the start of the treatment. The results indicated the importance of neuroticism as a vulnerability factor in emotional response to a severe stressor. They also underlined the importance of helplessness and marital dissatisfaction as additional risk factors, and acceptance and perceived social support as additional protective factors, in the development of anxiety and depression after a failed fertility treatment. From clinical point of view, these results suggest fertility-related cognitions and social support should receive attention when counselling women undergoing IVF or ICSI treatment.

KEY WORDS: fertility treatment, neuroticism, coping, stress-vulnerability models, predictive study.

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A longitudinal, prospective study on emotional adjustment before, during and after consecutive fertility treatment cycles

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BACKGROUND: A longitudinal study into the course of the emotional response to IVF from pre-treatment to 6 months post-treatment and factors that contributed to that course. **METHODS:** A total of 148 IVF patients and 71 partners completed self-report questionnaires on anxiety, depression, personality characteristics, meaning of fertility problems, coping, marital relationship and social support at pre-treatment. Assessments of anxiety and depression were repeated immediately following the final treatment cycle and again 6 months later (follow-up). **RESULTS:** Women showed an increase of both anxiety and depression after unsuccessful treatment and a decrease after successful treatment. Men showed no change in anxiety and depression either after successful or after unsuccessful treatment. In the 6 months after unsuccessful treatment, women showed no recovery. At follow-up, >20% of the women showed subclinical forms of anxiety and/or depression. Personality characteristics, meaning of the fertility problems, and social support determined the course of the emotional response. **CONCLUSIONS:** Most women adjusted well to unsuccessful treatment, but at follow-up, a considerable proportion still showed substantial emotional problems. Personality characteristics, pre-treatment meaning of the fertility problems and social support have demonstrated the adjustment to unsuccessful IVF in women. This allows early identification of women at risk as well as tailored interventions.

Key words: anxiety/depression/IVF/longitudinal study/prospective study

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Long term emotional adjustment

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Data gathering

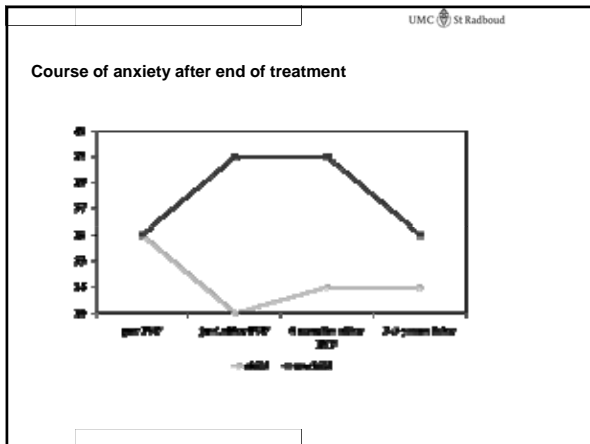
- Repeated assessment in women with completed assessments on T0, T1 and TFU.
- To increase response: focus on most important outcome measures: anxiety and depression
- N=298

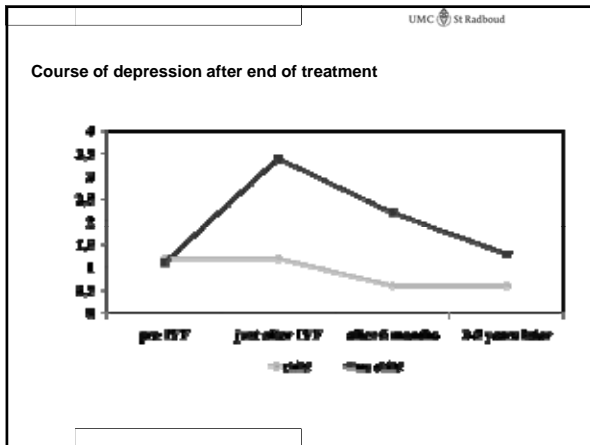
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Last treatment cycle

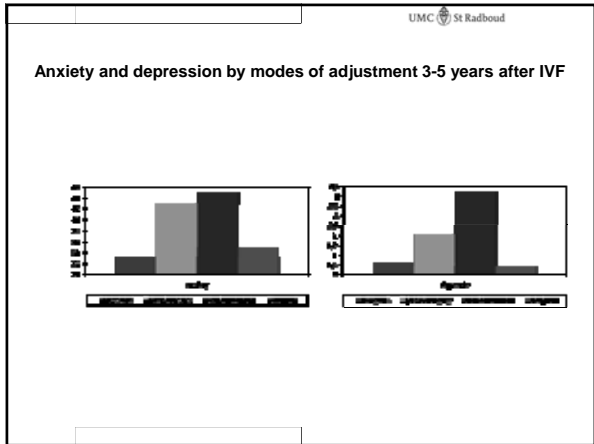
- Retrospectively determined
- Difficult to define end of treatment

CM Verhaak, Kees
wetenschapsdag 2007, UMC St





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- ### Adjustment to childlessness
- Actively continuing attempts to get pregnant 12%
 - Passively longing for a child 38%
 - Adoption 13%
 - Facing new goals 33%



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Long-term psychological adjustment to IVF/ICSI treatment in women

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BACKGROUND: The aim of this study was to gain more insight into long-term psychological adjustment to IVF in women. **METHODS:** In a prospective cohort study, 298 women entering their first IVF treatment cycle (including ICSI) completed standardized psychological questionnaires before the start of the treatment, just after the first treatment cycle, and 6 months and 3-5 years after the first treatment cycle. The main outcome measures were state anxiety, depression and mode of adjustment to nonconceived IVF. **RESULTS:** Anxiety and depression were found to follow up to return to baseline levels following treatment not resulting in a live birth, after an initial increase during treatment. On the contrary, treatment resulting in a live birth was found to lead to a more positive long-term emotional status. Women who focused on new life goals as a mode of adjustment 3-5 years after IVF without a live birth showed lower levels of anxiety and depression compared with those who persisted in their attempts to get pregnant. **CONCLUSIONS:** Treatment that resulted in a live birth led to more positive emotional adjustment. In addition, most women who did not give birth to a child after treatment adjusted well psychologically. Positive adjustment was related to developing new life goals rather than persisting in attempts to get pregnant. Helping women to change life goals after abandoning treatment might have beneficial effects on the adjustment process.

Key words: adjustment anxiety depression follow-up IVF

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Screening

- Validation of instrument based on risk factors

Anxiety and depression

- 10 items of STAI-state anxiety
- Depression: BDI-pc version: 7 items

Meaning of fertility problems:

Helplessness

- My infertility makes me feel helpless
- My infertility limits me in everything that is important to me
- My infertility controls my life
- Because of my infertility I miss things I like to do most
- My infertility makes me feel useless at times

Acceptance

- I can accept my infertility well
- I can cope effectively with my infertility
- I've learned to live with my infertility
- I can handle the problems related to my infertility
- I've learned to accept the limitations imposed by my infertility

Social support

- 7 items on perceived social support
 - If I'm sad there is someone to talk to
 - If I need practical help there is someone to assist me

Psychometric characteristics of the tool

	All women	Non pregnant women
Correctly predicted	74%	75%
Sensitivity	69%	70%
Specificity	79%	87%

Conclusions

- Screening tool identifies 74% correctly as 'at risk' or 'not at risk'
- Those at risk have fourfold chance of emotional problems after IVF

Clinical implications

- Screen all patients before start of treatment
- Active provision of psychological support to women at risk
- Passive policy to those not at risk: psychological support on request

How do you know who is at risk?

- Starting point: general risk factors in health psychology
- Investigate the predictive value in IVF patients
- Develop screening tool based on predictors
- Test validity of tool in new sample of IVF patients

psychological interventions

- Cognitive Behavioral Therapy and psycho education most effective on reducing distress
Boivin 2003 Soc Sci Med
- Psychological interventions improve treatment adherence
Haynes et al. 2002 Cochrane D Syst Rev; Rollnick et al. 1999
- Discussing psychosocial issues improves adherence and patient satisfaction
Ong et al. 2000 J Clin Onc; Zandbelt et al. 2005 Soc Sci Med

Pilot study pre treatment assessment

- 45 patients; 27 patients participated
- 7 identified as at risk
- All of them participated in an online psychological intervention

Module: stress management: reducing anxiety

- Identifying stress symptoms
- Monitoring stress
- Identifying stressful aspects of IVF
- Learning different ways to cope with stress: relaxation, distraction

Module cognitions: changing meaning of childlessness

- Introducing interrelationship between thinking, feeling, doing
- Identifying dysfunctional cognitions:
 - my life is useless without children,
 - if they talk about children, they don't pay attention to me
 - Childlessness will ruin my marriage

Social support: coping with subfertility in contact with others

- Dealing with difficult remarks: EVI
 - Don't think about it; just go on holiday
 - You can travel around as much as you want
 - Take a dog
- Talking about your fertility problems
- Modifying excessive expectations regarding family and friends; promoting more realistic expectations

Module social support in relationship: marital relationship

- Talking about fertility problems and childwish
- Acceptance of different ways of dealing with childwish
- Acknowledgement of differences in meaning of subfertility and acceptance of it
- Relationship next to fertility problems: stimulation of positive activities together

From assessment to treatment

- Allocation of patients to different modules based on risk profile and preference
- Assessment of effect of treatment after finishing module
- Feedback of assessment

Effect of psychosocial interventions

- Different goals:
 - Support in stress management
 - Stimulate adaptive coping
 - Helping cognitive restructuring
 - Stimulating social support

RCT

- Screening patients at risk
- Randomization patients at risk in control group and intervention group
- Assessment of differences in anxiety and depression at post treatment in both groups, controlled for baseline assessment

Research still in progress

- Inclusion starts March 2010
