

UNIVERSITY OF COPENHAGEN Institute of Public Health

Faculty of Health Sciences

Risk of treatment failure: psychological consequences and quality of life

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Das 1

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Infertility

- Non-event, a non-transition
- Chronic, low-control stressor
- Challenges existentially life expectations
- Loss of imaginations
- Hidden stigmatization – unsupportive social interactions
- ART - another low-control stressor



Das 2

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Infertility – a social situation

A challenge to learn to manage infertility in relation

- To oneself
- To the partner
- To different social relationships
 - family, family-in-law, friends, workmates

Schmidt. Dan Med Bull 2006; 53:390-417.



Das 3

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Focus - treatment failure

- Association with psychological well-being
- Predictors of high/low fertility problem stress
- Predictors of high/low marital benefit
- Unsupportive social interactions
- Reasons for early drop-out of treatment
- Long-term consequences of definite childlessness
- Clinical implications



Diag 4

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Depression and anxiety among (former) fertility patients

Start of treatment

Volgsten et al. Abstract, XVIII Nordic IVF Meeting, Oslo, January 2008

- 11% of women and 5% of men had a major depression
- Depression among men was associated with male infertility
- 15% of women and 4% of men had an anxiety disorder
- Only 21% of the fertility patients with a psychiatric disorder had some form of treatment

Definite involuntary childlessness

Lechner et al. Hum Reprod 2007;22:288-294.

- 11% clinical level of depression
- 23% anxiety disorder



Diag 5

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Psychological well-being - women in IVF

Before IVF

- No difference in depression level compared to norm groups
- Elevated level/no difference in anxiety level

Few longitudinal studies

During treatment

- Increase in depression after one or more cycles without having achieved pregnancy
- Increase/no increase in anxiety
- More powerlessness, guilt, anger, frustration, isolation and depression (compared with the pregnant group)

Holter et al. Hum Reprod 2006; 21: 3295-3302.
Verhaak et al. Hum Reprod Update 2007; 13: 27-36.



Diag 6

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Psychological well-being - women in IVF

One month after first treatment attempt

- More guilt, isolation, depression and powerlessness (compared to the pregnant women)

Six months after end of treatment

- No recovery from enhanced depression and anxiety levels

3-5 years after end of treatment

- Anxiety and depression returned to baseline values at start of treatment – among women having achieved a birth significant decrease in anxiety and depression compared to baseline

Holter et al. Hum Reprod 2006;21:3295-3302.
 Verhaak et al. Hum Reprod Update 2007;13:27-36.
 Verhaak et al. Hum Reprod 2007;22:305-308.

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Psychological well-being – men in IVF

Even fewer longitudinal studies

During treatment

- No changes in anxiety and/or depression
- Stronger feelings of powerlessness (compared to men/pregnant)

One month after first treatment attempt

- More anger, anxiety, powerlessness, less happiness, satisfaction and control (compared to men/pregnant)

Six months after end of treatment

- No changes in anxiety and/or depression

Holter et al. Hum Reprod 2006;21:3295-3302.
 Verhaak et al. Hum Reprod 2005;20:2253-2260.

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Predictors of high or low fertility problem stress

Copenhagen Multi-centre Psychosocial Infertility (COMPI) Research Programme

Longitudinal cohort, 1-year follow-up, n= 816 men and women who had not achieved an ART pregnancy/delivery

High fertility problem stress

- Difficulties in partner communication
- Active-avoidance coping
- Formal infertility-related communication strategy – NS, but consistent pattern of OR > 1.00

Low fertility problem stress

- Men – active-confronting coping
- Women- meaning-based coping

Schmidt et al. Hum Reprod 2005;20:3248-3256.

Diag 9 

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Predictors of high or low marital benefit

Marital benefit
The childlessness has brought the partners' closer together and has strengthened the relationship.

High marital benefit

- Men – active-confronting coping, meaning-based coping

Low marital benefit

- Men – secrecy, active-avoidance coping

Schmidt et al. Pat Educ Couns 2005;59:244-251.



Dias 10

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Unsupportive social interactions

Qualitative interviews, n= 48 infertile women

Coercive social exchanges
Forced to tell about the fertility problem
Obligation to hide negative feelings
Constrained in/excluded from interactions because of the fertility problem

Rejecting exchanges
Reject the offered support because of its nature/perceived inappropriateness

Sandelowski & Jones. Image: J Nurs Scholarship 1986;18:140-144.



Dias 11

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Unsupportive social interactions – pregnancy/delivery not achieved

123 women with fertility problems

Cross-sectional analyses
More infertility unsupportive social interactions were associated with higher levels of depressive symptoms and overall psychological distress.

Longitudinal analyses
Unsupportive social interactions were associated positively with depressive symptoms and overall psychological distress only among those who had not achieved pregnancy/delivery at follow-up.

Mindes et al. Soc Sci Med 2003;56:2165-2180.



Dias 12

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Discontinuation of treatment

- A high proportion of couples in ART discontinue treatment while treatment options still exists
- Reason is often a high level of psychological stress
- Discontinuation after the first IVF/ICSI cycle is associated with higher levels of anxiety and depression pre-treatment

Olivius et al. Fertil Steril 2004;81:258-261
 Rajkhowa et al. Hum Reprod 2006;21:358-363
 Smeenk et al. Fertil Steril 2004;81:262-268



Diag 13

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Long-term consequences of treatment failure – definite childlessness (I)

Longitudinal cohort study, n= 298 IVF women, from start of treatment to 3-5 years after end of treatment

105 women did not give birth

Modes of adaptation

Persisting with treatment	n= 11
Still longing for a child (passive)	n= 34
New life goals	n= 33
Alternative mode (adoption)	n= 12

- Significantly higher levels of anxiety and depression among those still pursuing a desire for pregnancy
- More anxiety and depression among definite childless women compared to the women who had a child before start of treatment

Verhaak et al. Hum Reprod 2007;22:305-308.



Diag 14

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Long-term consequences of treatment failure – definite childlessness (II)

Qualitative interviews, n= 14 involuntary childless women 20 years after fertility treatment

- Childlessness has a strong impact
- A major life theme
- Sexual life was affected in negative and long-lasting ways
- Effects increased when women's peer group entered the "grandparent phase"
- Coped by caring for others

Wirtberg et al. Hum Reprod 2007;22:598-604.



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Long-term consequences of treatment failure – definite childlessness (III)

Cross-sectional, questionnaire-based, n=116 definite childless women and men (mean age 39 years)

- Women experienced more health complaints, anxiety, depression, dissatisfaction with social support, more passive coping style compared to women/general population
- Men experienced more dissatisfaction with social support compared to men/general population
- Passive coping style and dissatisfaction with social support positively associated with health complaints, depression, anxiety and complicated grief
- Active coping style was related to less distress

Lechner et al. Hum Reprod 2007;22:288-294.

Dias 16 

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Clinical recommendations

- Inform fertility patients about predictors of high and low psychological well-being
E.g., communication strategies, active coping strategies
- Psychological screening and counseling of new fertility patients in order to identify patients with increased needs of psychosocial support
- Professional treatment of patients having major depression and anxiety disorders
- Increased development of user-friendly ART in order to reduce drop-out rates as well as to increase birth rates after ART
- When treatment is terminated without a liveborn child – initiating discussions about future life and the importance of achieving new life goals

Dias 17 
