

Sadder but fitter

The evolutionary function of depressive symptoms following fetal loss

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Abstract

A literature review about an evolutionary model of fetal loss depression is presented. This model conceptualizes depression following miscarriage or stillbirth as an evolutionary protective mechanism to avoid further fetal loss. It postulates that depressive symptoms delay the next reproduction and save maternal resources. These symptoms along with hypochondric symptoms of depression which lead to a search for causes and reappraisal of environmental factors, are probably adaptations to causes of further fetal loss (e.g. epidemics, famines, infections, environmental toxins).

A PDF-file of this poster is available at www.binser.de.

Situation

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cues for
recurrent
fetal loss
(fitness costs)

Reaction

Beutel, M., Willner, H., Deckard, R. & Von Rad, M. (1996). Similarities and differences in couples' grief reactions following a miscarriage: Results from a longitudinal study. *Journal of Psychosomatic Research*, 40, 245-253.

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reactive,
not chronic
depression

Depressive Symptoms

motivational

physiological

social

Hypochondria

cognitive

loss of energy,
hypersomnia &
hyperphagia

physiological
stress reaction

diminished
sexual & social
contacts

compulsive
thoughts &
self-reproaches

Functions

Hamamy, H. & Alwan, A. (1997). Genetic disorders and congenital abnormalities: strategies for reducing the burden in the Region. *Eastern Mediterranean Health Journal*, 3, 123 - 132.

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Sherman, P. W. & Flaxman, S. M. (2002). Nausea and vomiting of pregnancy in an evolutionary perspective. *American Journal of Obstetrics and Gynecology*, 185, 5190-197.

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protection of
maternal
resources

delay of sub-
sequent
reproduction

works against time variable
causes: famines, epidemics

search for
causes &
reappraisal

works against controllable
causes: e.g. noxious food,
infections

Effect

Binser, M. J. (2003). Evolutionäre Funktionalität von depressiven Symptomen nach Fehl- und Totgeburten. Unpublished diploma thesis, Department Psychology, Ludwig-Maximilians-University.

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healthy
birth
in the EEA

Discussion

Empirical evidence for most paths of the model was ascertained (Binser & Försterling, 2004). It shows that fetal loss depression meets the criteria of an emotional mechanism sensu Cosmides and Tooby (2000). An empirical test of the entire model has not been conducted yet. However, other theories can hardly explain specific predictions of this model, such as the strong influence of the maternal physical health or childlessness on depression*.

Hedonism may be the purpose of human species, but the purpose of its genes is surviving. Thus, depression makes "sadder but fitter".

*despite controlling the desirability of a new child

--- = no empirical evidence (up to now)
— = empirical evidence