Families, Family Interaction and Health

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Lessons Learned: Reflections on the Psychosomatic Family Debate

Minuchin, S., Rosman, B.L., Baker, L.: *Psychosomatic Families: Anorexia Nervosa in Context.* Cambridge, MA: Harvard University Press (1978).

Minuchin al. (1978)

“In our research we have been able to document the power of family rules by measuring their effect on the FFA in the bloodstream of the diabetic. The soft data of transactional patterns have been given scientific confirmation.”

"The physiological evidence also supported the hypothesis that the psychosomatic symptom plays a role in family homeostasis."

Minuchin al. (1978)

“The physiological measurement showed the presence of the child decreased the parent's emotional arousal, at the cost of a continued rise in the child's arousal, propelling him toward disease. The sustained arousal of FFA during the recovery period attested to the maintenance of the pattern in the face of unresolved family conflict.”

Coyne, J.C. & Anderson, B.A.: The "psychosomatic family" reconsidered: Diabetes in context. *Journal of Marital and Family Therapy, 14,* 113-124 (1988).

Coyne, J.C. & Anderson, B.A.: The "psychosomatic family" II: Recalling a defective model and looking ahead. *Journal of Marital and Family Therapy, 15,* 139-148 (1989).

Coyne and Anderson's Critique

Free fatty acid levels do not change under experimental stress conditions for non-diabetic individuals, raising questions about the validity of free fatty acid as a measure of stress.

Unusual and ill-defined sample of "psychosomatic diabetic" children diagnosed by a pediatrician, "who indicated that there were no organic or physiological reasons for the difficulty of medical management."

Coyne and Anderson's Critique

Ignored role of nonadherence, including deliberate self-destructive and attention-seeking acts of a very small minority of patients.

Ignored important individual differences in insulin resistance and blamed patients and families when adherence to usual regimen proves insufficient for metabolic control.

Coyne and Anderson's Critique

Distracted clinicians from highly effective interventions that did not address alleged role that symptoms played in families of adolescents with diabetes experiencing difficulty in metabolic control.

Lessons Learned

Beware of Strong Claims Based on Small Samples and Overanalyzed Data

Beware of Intermediate Endpoints Being Accepted in Place of Clinical Outcomes

Beware of Speculations About ‘Direct Physiological Links’ That Do Not Rule Out Obvious Biomedical Confounds

Beware of Speculations About ‘Direct Physiological Links’ That Do Not Rule Out Obvious Behavioral Links (Adherence)

Yang, H. C. and T. A. Schuler (2009). Marital Quality and Survivorship: Slowed Recovery for Breast Cancer Patients in Distressed Relationships. *Cancer* 115(1): 217-228.

Marital distress is not only associated with worse psychological outcomes for breast cancer survivors, but poorer health and a steeper decline in physical activity. These novel data demonstrate recovery trajectories for breast cancer survivors to be constrained for those also coping with ongoing difficulties in their marriage.

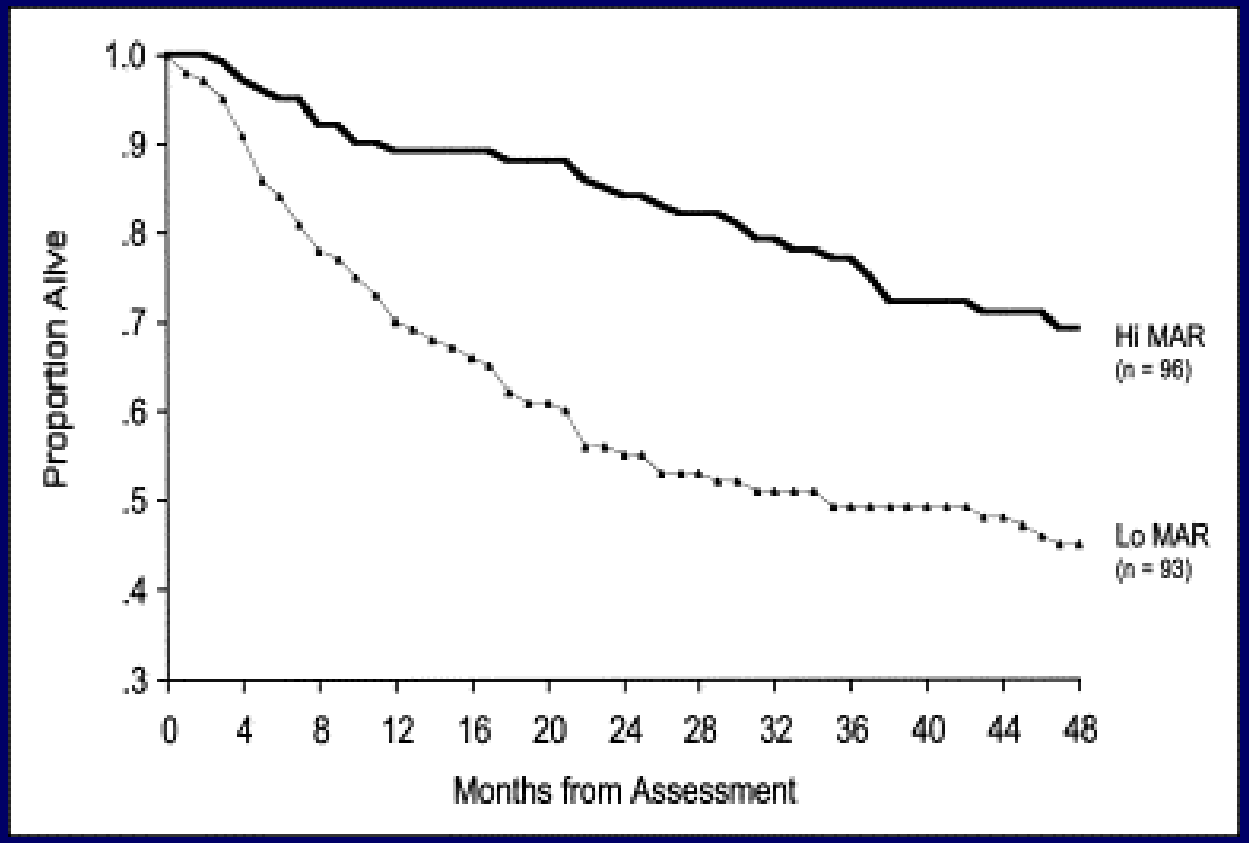
Weihs, K. L., T. M. Enright, et al. (2008). Close relationships and emotional processing predict decreased mortality in women with breast cancer: Preliminary evidence. *Psychosomatic Medicine* 70(1): 117-124.

Twenty-one subjects developed recurrent disease and 16 died during an 8-year follow-up. Decreased mortality was predicted by confiding marriage and number of dependable, nonhousehold supports. Acceptance of emotion, after controlling for emotional distress, also predicted decreased mortality.

Coyne, J.C., Rohrbaugh, M.J., Shoham, V., Sonnega, J.S., Nicklas, J.M., & Cranford, J.A.: Prognostic importance of marital quality for survival of congestive heart failure. ***American Journal of Cardiology, 88*****, 526-529 (2001).**

A composite measure of marital quality predicted 4-year survival as well as the severity of illness did (both $p < 0.001$). Adjusting for CHF severity did not diminish the prognostic significance of marital functioning, and prediction of survival from marital quality appeared stronger.

Survival By Marital Quality (MAR)



Plausible Explanation

Adherence to complex regimen, including dietary restrictions, medication, and exercise may benefit greatly from well-organized family and engaged, efficacious spouse.

Rule this out before speculating about direct links between family interaction and death.

Konski, A., et al., Continuing Evidence for Poorer Treatment Outcomes for Single Male Patients: Re-treatment Data from RTOG 97-14. *I J of Radiation Oncology, Biology, Physics* 66(1) 229-233; 2006.

Married men and women and single women receiving 30 Gy had significantly longer time to re-treatment, p = 0.0067, p = 0.0052, and p = 0.0009 respectively. We failed to show a difference in re-treatment rates over time in single men receiving either 30 Gy or 8 Gy.

Konski, A et al. The disadvantage of men living alone participating in Radiation Therapy Oncology Group (RTOG) head and neck trials. *J Clin Oncol* 24: 4177-4183, 2006

This study evaluated whether males without partners were disadvantaged for survival in Radiation Therapy Oncology Group (RTOG) head and neck cancer clinical trials.

The apparent disadvantage of unpartnered men is striking, even after controlling for disease and other demographic variables. Disadvantage held for treatment interruption, local progression and death.

Obviously, we can not expect to modify partner status of men with prostate cancer in an effort to improve their survival. Rather, intervention development might benefit from a better understanding how having a partner is related to access, process, and outcome of cancer care, and how these benefits could be otherwise obtained in the unpartnered men.

Hypotheses range from adherence, symptom management, and timely and effective response to emergent medical problems, to the more general provision of social support and structure to everyday life.

Ask simple questions because the answers to complicated ones probably will be too complicated to test, and, even worse, too fascinating to give up looking for.

Be careful of the assumptions used to fill explanatory gaps.

Death is not Everything

Because of improvements in medical treatment of cardiovascular disease, cardiology itself is beginning to focus on outcomes other than mortality.

Recent trials have required randomization of as many as 14,000 patients to be able to demonstrate that a new drug or device is able to improve survival significantly over current treatment.

At some point, we have to ask whether gains in survival continue to be clinically relevant.

Lesperance & Frasure-Smith

Should We Attempt More Studies With Early Breast Cancer Patients?

In the U.S. the 5-year survival rate for women with localized breast cancer is now 99% (American Cancer Society, 2007).

This high rate of survival makes it difficult to demonstrate that any additional treatment would yield a clinically significant improvement.

An integration of 28 trials with 16,513 women of whom 3782 had died concluded that both tamoxifen and cytotoxic chemotherapy reduce five year mortality (Early Breast Cancer Trialist's Collaborative Group, 1988). Yet, when trials were considered individually, only a single trial had an effect significant at $p < .01$.

Work from Other Investigator Groups

Kiecolt-Glaser JK, Loving TJ, Stowell JR, et al. Hostile marital interactions, proinflammatory cytokine production and wound healing. Archives of General Psychiatry 62 (12): 1377-1384 2005.

Conclusions

Claims about direct links to disease processes or to death that ultimately do not hold up are damaging to overall credibility of field.

Should not distract us from readily testable hypotheses about behavioral links via adherence to regimen or access to care.

Seduction of death: to pursue it as an outcome may distract us from demonstrable contributions to improving adherence and quality of life for patient and family.

Coyne, JC, Are most positive findings in health psychology false.... or at least somewhat exaggerated? *European Health Psychologist*, in press.

Problems with a "discovery process" that relies on unplanned findings from an underpowered study crossing the threshold of $p \leq .05$ significance.