

## **GENDER DIFFERENCES IN ENVIRONMENTAL INFLUENCES ON MARITAL SATISFACTION: A PATH ANALYSIS**

Sheila Baillie, E Wayne Hill, and Connor M Walters

### **Abstract**

*A path analysis of a random sample of 86 couples consisting of male pastoral counselors and their wives demonstrated that husbands and wives do not necessarily have the same perceptions of their environments. Environmental factors were found to have both direct and indirect effects on marital satisfaction for both spouses; however, the effects for wives were not the same as those for husbands. These suggest that meeting the housing needs and values of both spouses may be a factor in marital well-being.*

### **Introduction**

People often comment that the true test of a marriage is to build or remodel a house. Although these comments are usually accompanied by laughter, the home, whether being built, remodeled, or just being lived in, may have more effect on marital relationships than most people acknowledge. The purpose of this analysis was to determine what direct effects or indirect effects environmental factors may have on marital satisfaction for husbands and for wives. It was hypothesized that the environment would affect marital satisfaction for both spouses, but still there would be differences between men and women. Differences were expected based on previous research which has suggested that men and women experience their environments differently and that gender may be an important variable in assessing marital satisfaction (Kazak, Jarmas, and Snitzer, 1988).

The data used in this analysis were part of a larger study of the personal and professional well-being of pastoral counselors. Pastoral counselors come from multid denominational backgrounds and, with at least a Master of Divinity and other graduate training, are certified to practice individual and marriage counseling. They are usually affiliated with pastoral counseling centers or in private practice as therapists, though commonly employed by hospitals or in academia at seminaries or medical schools. The subject of this research is particularly important to pastoral counselors since the ability of the pastoral counselor to function effectively in the counselor-client relationship may be directly related to the pastoral counselor's own personal well-being.

### **Theoretical Base**

A causal model of hypothesized direct and indirect effects on marital satisfaction was used for analysis of both husbands and wives. This is shown in Figure 1. The model was derived from the person-environment congruence theory (Kahana, 1975, 1982). According to the theory, people seek out and are most likely to be found in environments that are congruent with their individual needs. When the environment is not congruent with the person's needs, stress and discomfort result. Goodness of fit is considered to be an antecedent to well-being. In the case of married couples, person-environment congruence may not be defined by the same environmental factors; hence, each spouse must be examined separately.

---

Sheila Baillie, E Wayne Hill, and Connor M Walters are all Assistant Professors in the Department of Family, Child, and Consumer Sciences at Florida State University in Tallahassee.

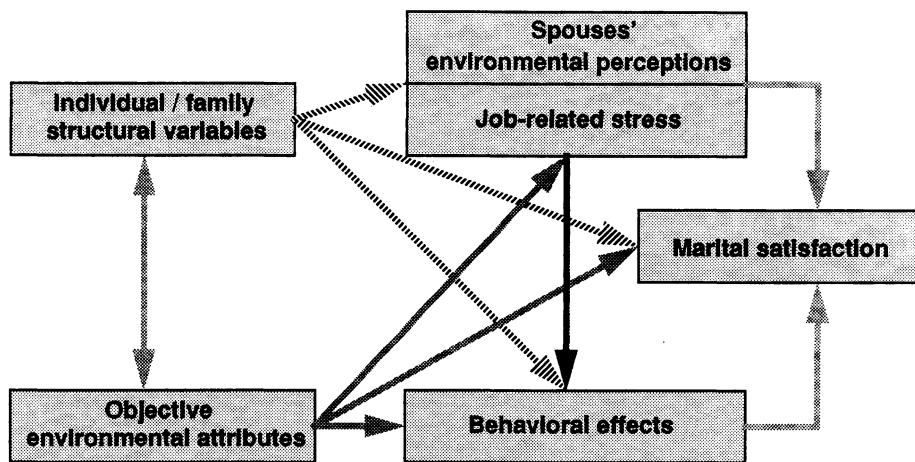


Figure 1. Causal model of hypothesized direct and indirect effects on marital satisfaction.

The dependent variable in the model is marital satisfaction, which has been identified as an important factor in a person's overall sense of well-being. Campbell (1981), in a review of the sense of well-being in America, suggested that well-being depends on the satisfaction of three kinds of needs: 1) the need for having: i.e. acquisition of material possessions; 2) the need for relating: i.e. interpersonal satisfaction; and 3) the need for being: i.e. sense of intrapersonal competence and worth. This study examined the relationship between two of these areas, the need for having (the home) and the need for relating (marital satisfaction).

The recursive causal model uses two sets of exogenous variables: individual/family structural variables and objective environmental attributes. These exogenous variables were assumed to be intercorrelated and determined by factors outside the model. The individual/family structural variables included household income, the number of people living in the household, how long the person had been married, whether it was the individual's first marriage, the individual's age, and education. Previous research has indicated that income and financial well-being may be positively related to marital satisfaction (Berry and Williams, 1987; McAllister, 1986; Thoresen and Goldsmith, 1987). Persons per household was felt to be an important variable since crowding in the home has been found to contribute to the severity of family problems (Booth and Edwards, 1976; Choidin, Jacobsen, and Yahnke, 1975). The objective environmental attributes were the same for both spouses in each couple and included the type of housing they lived in, housing tenure type, age of the house, number of bedrooms, number of bathrooms, and the size of community in which they lived. Housing type has been linked to marital discord, perception of lack of privacy for wives (Edwards, Booth, and Edwards, 1982), and psychological strain among women (Gillis, 1977). Number of bathrooms has also been linked to stress levels within families (Inman and Sinn, 1987; Inman, 1988).

Three sets of endogenous variables were used, in which the variability may be explained by the exogenous or endogenous variables in the system. The first set of endogenous variables to enter the system as intervening variables were spouses' environmental perceptions. These variables included each spouse's perception of whether the size of the dwelling was adequate for the family's needs, whether there was

adequate private space in the home for family members to be alone if they wanted, whether there was adequate space for family members to be together and to entertain, whether home maintenance was a problem, whether household income was adequate, and whether the husband's role as a pastoral counselor caused them stress. Stress caused by the pastoral counselor role was felt to be an important variable for inclusion in the causal model since stress and job satisfaction have both been found to be significant correlates of marital satisfaction, particularly among males (Terry, and Scott, 1987; Yogev, 1986). For many of the sample households the pastoral counselor role also was a factor in the home environment since counselors received clients in their homes or conducted counseling-related telephone calls from the home. Perception of home maintenance problems was included since perception of control over task distribution has been shown to be an influence on marital satisfaction (Madden, 1987).

How the individual felt at home and whether he or she felt the housing environment caused stress in their marital relationship were also used as intervening variables. These behavioral effects were hypothesized to be directly influenced by the spouse's perceptions of the environment and to have a direct effect on marital satisfaction.

## **Methodology**

### ***Data Collection and Sample***

A random sample was drawn from the national membership list of the American Association of Pastoral Counselors (AAPC). Since comparisons of professional well-being were also to be made among the membership categories, a stratified random sample was used. One hundred names were selected randomly from each of the three membership categories, Members, Fellows, and Diplomates. Usable surveys were obtained from 143 of the 300 pastoral counselors selected, for a response rate of 46.7 percent. Usable responses were also obtained from 97 spouses. For the purpose of this analysis only responses from complete couples were used. To eliminate possible gender bias on some questions, only couples in which the pastoral counselor was male and the spouse was female were used, leaving 86 complete usable couples.

Respondents ranged in age from 31 to 69 for counselors and from 28 to 69 for their spouses. The mean age of the respondents was 48, with the majority of both husbands and wives between the ages of 40 and 59. The respondents were very well educated, which was expected of professional counselors. Nearly all the counselors and half the wives had graduate degrees. Respondents had been married to their current spouse from 1 to 45 years, with an average of 21.8. About one third of the counselors and one fourth of the wives had been married previously. Nearly all respondents had children; about half no longer had children residing with them. The ages of children living at home ranged from 1 to 31, with the majority being adolescents. Respondents were fairly affluent, with over half having a household income of over \$60,000 annually and only two households earning less than \$30,000. Mean household size was 2.9 with a range of 2 to 5.

The data were collected during the summer of 1989 using a self-administered questionnaire. A cover letter and two return envelopes were mailed to the sample of pastoral counselors. Each contained a detailed questionnaire for the counselor and a shorter questionnaire for the counselor's spouse, if married. Spouses were asked to complete and return their surveys separately to avoid influencing each others responses. A follow-up postcard was mailed out 10 days after the first mailing.

### ***Measures of Marital Satisfaction***

The dependent variable, marital satisfaction, was operationally defined by pastoral counselor and spouse in a self-report of marital satisfaction on the dyadic satisfaction subscale of the Dyadic Adjustment Scale (Spanier, 1976). Respondents were asked to check their level of agreement with eight statements on a five-point, Likert-type scale. Two additional questions on the happiness of the marriage and the future of the mar-

riage had a range of six possible responses. Separate, individual scales were maintained for counselors and spouses by summing their respective scores on each subscale. The possible range was 10 to 52 with higher scores reflecting a better relationship. The internal consistency of the marital satisfaction subscale is excellent, with an alpha of 0.94 (Spanier, 1976). The scale has shown known-groups validity by discriminating between married and divorced couples, and also shows evidence of concurrent validity, correlating with the Locke-Wallace Adjustment Scale (Locke and Wallace, 1959).

#### ***Measures of Individual/Family Structural Variables***

Six individual/family structural variables were used in the analysis. Three of these were household variables and were asked of the husbands only. These included the number of persons currently residing in the household, the household income, and the number of years the couple had been married. The other three individual variables were asked of each spouse individually and included their age in years, whether this was their first marriage, and their level of education. Employment status was not included because all of the counselors and nearly all of the spouses were employed.

#### ***Measures of Residential Environment***

Measures of objective environmental attributes were also asked of husbands only, because possible responses were listed as quantifiable data which did not rely on individual perceptions. These included size of the community they lived in, type of housing unit, age of the housing unit, type of housing tenure, number of bedrooms, and number of bathrooms.

Subjective measurements of spouses' environmental perceptions were asked of both counselors and their spouses. These perceptions included adequacy of the size of the home for the family's needs, adequacy of total household income in meeting the family's needs, whether there was adequate private space where family members could be alone when they wanted, whether there was adequate space in the home for all family members to be together and to entertain friends, and whether they perceived maintenance of the home to be a problem.

#### ***Measure of Job-Related Stress***

One other subjective question was included in the analysis regarding whether the respondent felt the husband's role as a pastoral counselor caused stress for him or her. Although this was not an environmental factor, it was anticipated that job-related stress may affect housing-related stress and should, therefore, be included in the analysis.

#### ***Measures of Behavioral Effects***

Two measures were used to represent behavioral effects that may require coping strategies. One measure consisted of a single question asking how often the respondent felt their housing environment caused stress or tension in the marital relationship. Five possible responses ranged from always to never. "Housing environment" was not defined for the respondents, allowing them to use their own personal perception of the social and physical aspects of the home environment. The second measure was an index of how often the respondent felt bored, secure, isolated, hopeful, fearful, angry, competitive, vulnerable, or content while at home. Responses were coded so that scores ranged from 9 to 45 with higher numbers being a more positive response. This measure also may be impacted by social as well as physical aspects of the home environment.

#### **Analysis of Data**

Pearson product-moment correlations and Spearman rank-order correlations were used to determine the strength of relationships between spouses on different variables, and to examine the relationships between exogenous and endogenous variables to verify the position of intervening variables in the model. A path analysis with stepwise multiple regression was used to test the causal relationship among the variables and their

effects on marital satisfaction. The stepwise regression procedure automatically used controls for multicollinearity by recomputing the tolerance of all variables in the equation at each step. A recursive model was used with a unidirectional causal flow. Individual/family structural variables and objective environmental attributes were considered to be exogenous variables with causes determined outside the causal model. Although technically ordinal and dichotomous variables are not the best choice for regression analysis, this technique has been used successfully by previous researchers and assumed to be accurate (Boyle, 1970; Labovitz, 1970).

An examination of correlation coefficients for both sexes supported the position of how respondents feel at home as an intervening variable between marital satisfaction and all other variables. These are shown in Tables 1 and 2. Spouses' perceptions of housing as a stressor also was supported as an intervening variable between marital satisfaction and the exogenous variables (individual/family structural characteristics and objective environmental attributes). For the most part the position of individual environmental perceptions as intervening variables was supported by the examination of correlation coefficients. Although there were some exceptions, more significant coefficients were found among dependent variables than among exogenous variables.

## Results

### ***Characteristics of Exogenous and Endogenous Variables***

***Objective environmental attributes.*** The majority of respondent couples lived in single-family, detached housing which they owned. Over half lived in homes that were at least 20-years old and relatively large. The means were 3.4 bedrooms and 2.4 bathrooms. Nearly three fourths of the respondents lived in cities of over 50,000 in population.

***Spouses' environmental perceptions.*** Subjective measures of the adequacy of space showed that similar percentages of men and women perceived their space to be adequate. Low-rank order correlations, however, indicated that husbands and wives did not necessarily agree on what was adequate. In general, spouses moderately agreed on adequacy of overall house size ( $r = 0.46$ ) but disagreed over whether or not the home had adequate private space for all family members ( $r = 0.21$ ) and whether there was adequate space for family gatherings and to entertain ( $r = -0.02$ ). Spouses also tended to disagree over home maintenance. Women were more likely to regard maintenance as a problem. Husbands perceived income to be less adequate than did wives, with only a moderate correlation ( $r = 0.39$ ) between spouses.

***Spouses' perception of job-related stress.*** No correlation existed between spouses ( $r = 0.07$ ) regarding perception of stress stemming from the husband's role as a pastoral counselor. Over three fourths of the pastoral counselors felt this role caused them stress. Approximately one third of the wives felt their husband's role as a counselor caused stress for the wife.

***Behavioral effects.*** Husbands and wives were in moderate agreement over whether the house, in general, caused stress or tension in their marital relationship ( $r = 0.32$ ). The level of agreement was lower ( $r = 0.26$ ) regarding how they felt at home and in terms of whether they felt bored, secure, isolated, hopeful, fearful, angry, competitive, vulnerable, or content.

### ***Marital Satisfaction***

Both men and women exhibited high levels of marital satisfaction. The mean score for men was 42.2 with a range of 23 to 48 on a possible scale of 10 to 50. For wives, the mean was 43.0 with a range of 27 to 50. The correlation between spouses ( $r = 0.63$ ) was also higher than for the other perceptual variables.

Table 1. Correlation coefficient matrix of intervening variables with dependent variables and exogenous variables among male pastoral counselors.

Variable	Spouses' Environmental perceptions					Vocation causes stress	Housing as stressor	Feel at home	Marital satisfaction
	1	2	3	4	5				
<b>Individual/family structural characteristics</b>									
Household income	.25	.10	-.01	-.08	.13	.05	.32*	.10	.14
Age of respondent	.14	.09	.01	-.13	.02	.24	.30*	.17	.18
No. in household	.08	-.28*	.00	.22	-.23	-.22	-.29*	-.08	.02
Length of marriage	-.07	.03	.20	-.03	.06	.14	.10	.00	-.04
Education	.05	-.07	.39**	.06	-.11	-.03	.13	.02	-.03
First marriage	.01	-.04	.16	-.19	.00	.08	.07	.07	-.02
<b>Objective environmental attributes</b>									
Housing type	-.13	.02	.01	-.06	.00	-.18	.00	-.02	-.09
Tenure	-.14	.10	.04	-.09	.01	.03	.10	-.01	.04
Age of home	-.01	.00	-.05	.00	-.05	.19	-.03	.06	-.05
Number of bedrms	.30*	.10	.05	-.11	-.09	.09	.11	.01	.10
Number of bathrms	.30*	.12	.06	-.01	.06	.06	.11	-.08	.01
Community size	-.22	-.10	-.12	.08	.01	-.12	.10	.13	.09
<b>Spouses' environmental perceptions</b>									
1) Adequate size of room							.25	.02	.10
2) Adequate private space							.32*	.02	.13
3) Adequate space to gather r							.00	-.07	-.14
4) Home maintenance is problem							-.56**	-.31*	-.38**
5) Adequate income							.19	.04	.31*
<b>Vocational role causes stress</b>									
Housing as stressor							.13	.31*	.05
Feel at home							.31*	.31*	.36**
									.54**

\*p < 0.01. \*\*p < 0.001.

Table 2. Correlation coefficient matrix of intervening variables with dependent variables and exogenous variables among female spouses.

Variable	Spouses' environmental perceptions					Vocation causes stress	Housing as stressor	Feel at home	Marital satisfaction
	1	2	3	4	5				
<b>Individual/family structural characteristics</b>									
Household income	.15	.25	-.06	-.04	.39**	.05	.14	.07	
Age of respondent	.07	.31*	.01	-.02	.07	.11	.12	-.07	
No. in household	-.27*	-.19	-.07	.19	-.25	-.06	-.13	-.02	
Length of marriage	.16	.21	.00	-.01	.05	.11	.12	-.04	
Education	-.12	.00	-.17	.06	-.01	-.05	-.02	-.18	
First marriage	.09	.00	-.02	-.11	-.08	-.02	.14	.03	
<b>Objective environmental attributes</b>									
Housing type	-.09	-.49**	.02	-.09	-.04	.04	-.13	-.02	
Tenure	-.08	-.17	.09	.06	-.01	.03	-.18	-.06	
Age of home	-.23	-.08	-.14	.20	-.21	.31*	.00	-.19	
Number of bedrms	.19	.14	.15	-.03	-.04	.13	-.06	.09	
Number of bathrms	.29*	.18	.12	-.16	.19	-.09	.00	.12	
Community size	-.04	-.02	-.21	.07	-.01	.03	-.08	.04	
<b>Spouses' environmental perceptions</b>									
1) Adequate size of room							.31*	.26*	
2) Adequate private space							.24	.08	
3) Adequate space to gather							.14	.34**	
4) Home maintenance is problem							-.36**	-.17	
5) Adequate income							.34*	.17	
Vocational role causes stress							.35**	.20	
Housing as stressor							.21	.26*	
Feel at home								.56**	

\*p < 0.01. \*\*p < 0.001.

## Path Analysis

### **Male Pastoral Counselors**

The path analysis showing the effects of exogenous and intervening endogenous variables on marital satisfaction of male pastoral counselors is given in Figure 2. All paths with statistically significant ( $p < .05$ ) path coefficients (standardized Beta coefficients) were included in the diagram.

Only two variables from the model had a direct effect on marital satisfaction: how they felt at home and whether they felt household income was adequate. These two variables accounted for 38 percent of the variance in marital satisfaction ( $R^2 = 0.38071$ ). Six other variables had an indirect effect on marital satisfaction. These included the number of people in the household via perceived adequacy of income, and the pastoral counseling role and housing as stressors via how they felt at home. Age had an indirect effect through the perception of both the pastoral counseling role and the home environment as stressors. Actual income had an indirect effect through housing stress and how they felt at home. Perception of home-maintenance problems also had an indirect effect through housing stress and how they felt at home.

When the path coefficients were taken into consideration, the strongest effects were the direct effects (DE) of how they felt at home ( $DE = 0.533$ ) and perception of adequacy of income ( $DE = 0.290$ ). The strongest indirect effects (IE) were for the perception of the pastoral counseling role as a stressor ( $IE = 0.146$ ) and the perception of housing as a stressor ( $IE = 0.142$ ). The other indirect effects all had path coefficients of less than 0.075. The residual for marital satisfaction was 0.7869. This indicated that there are other unexplained variables not included in the model.

### **Female Spouses**

The path analysis showing the effects of exogenous and intervening endogenous variables on marital satisfaction of the wives of pastoral counselors is shown in Figure 3. Statistically significant path coefficients ( $p < 0.05$ ) are included in the diagram.

Three variables had a direct effect on marital satisfaction of wives. These included whether they felt the home had adequate space to be together, the size of community they lived in, and how they felt at home. These three variables explained almost half of the variance in marital satisfaction ( $R^2 = 0.47752$ ). Only two variables had any additional indirect effect. These included whether they felt the husband's role as pastoral counselor caused stress via how they felt at home, and the age of the home via whether the pastoral counselor role caused stress. The strength of the path coefficients indicated that how they felt at home was the strongest influence ( $DE = 0.590$ ), followed by perception of adequate space to be together ( $DE = 0.392$ ), community size ( $DE = 0.179$ ), pastoral counselor role as stressor ( $IE = 0.176$ ) and age of the home ( $IE = 0.055$ ). The value of the residuals for marital satisfaction (0.7228) was somewhat lower than for the males.

## Discussion

This study examined the effects of residential environment on marital satisfaction of pastoral counselors and their wives. The findings tend to support the hypotheses that environmental perceptions may have an effect on marital satisfaction and that these effects may not be the same for men and women.

The findings of this analysis may not be applicable to the general population due to the specialized sample used. However, if the marital relationships of the persons in this sample were affected by the environment and perception of resources, then these factors may affect the general population as well. Pastoral counselors are trained in marriage and family therapy; therefore, it would seem plausible that they would have an increased awareness of factors impacting on their own relationships and consequently be better equipped to cope with the influences of environmental and job-related stress. The significant influence of stress from the husbands's role as a pastoral counselor on

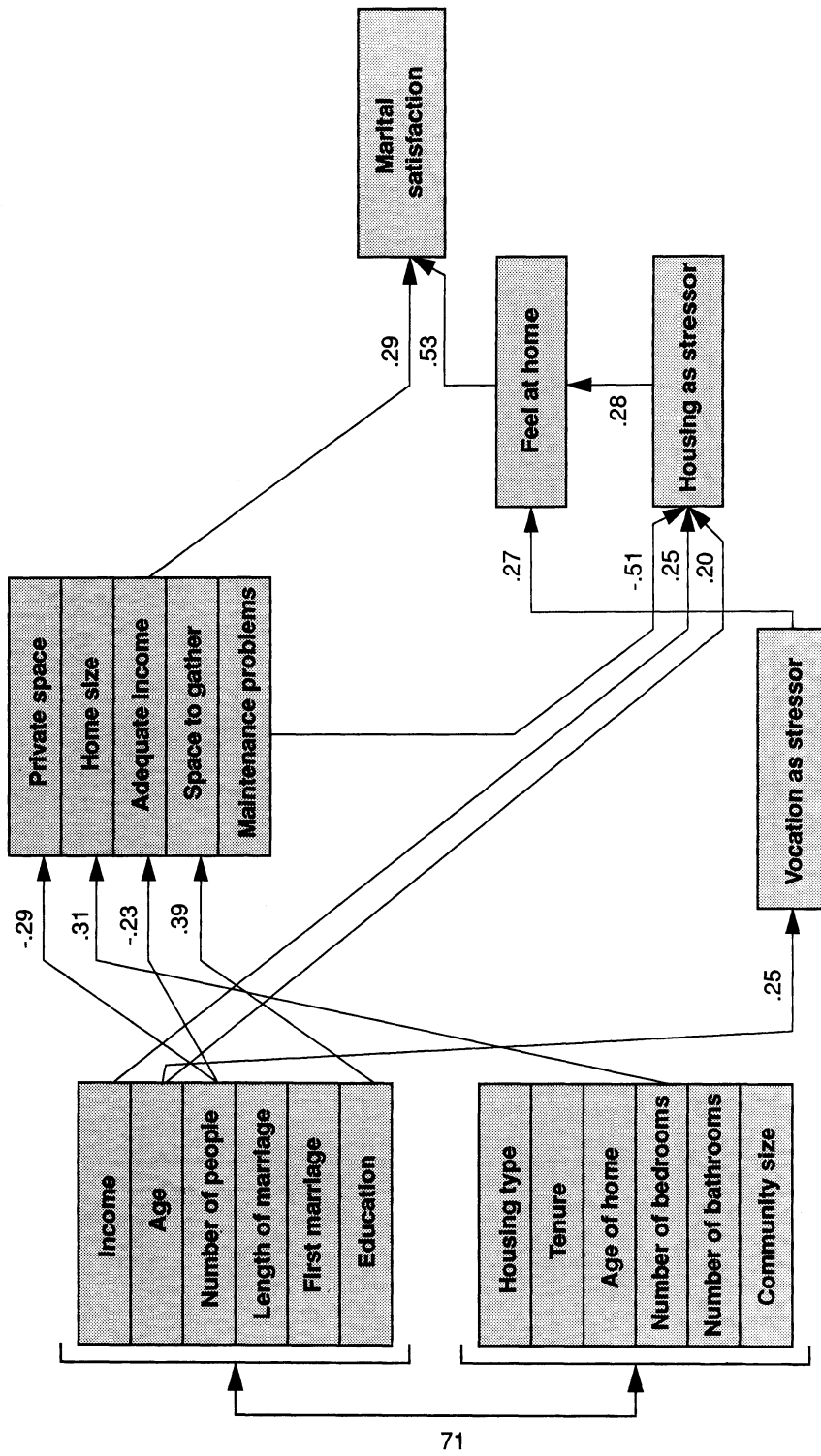


Figure 2. Path analysis of effects on marital satisfaction for male pastoral counselors showing statistically significant, standardized Beta coefficients ( $p < 0.05$ ).

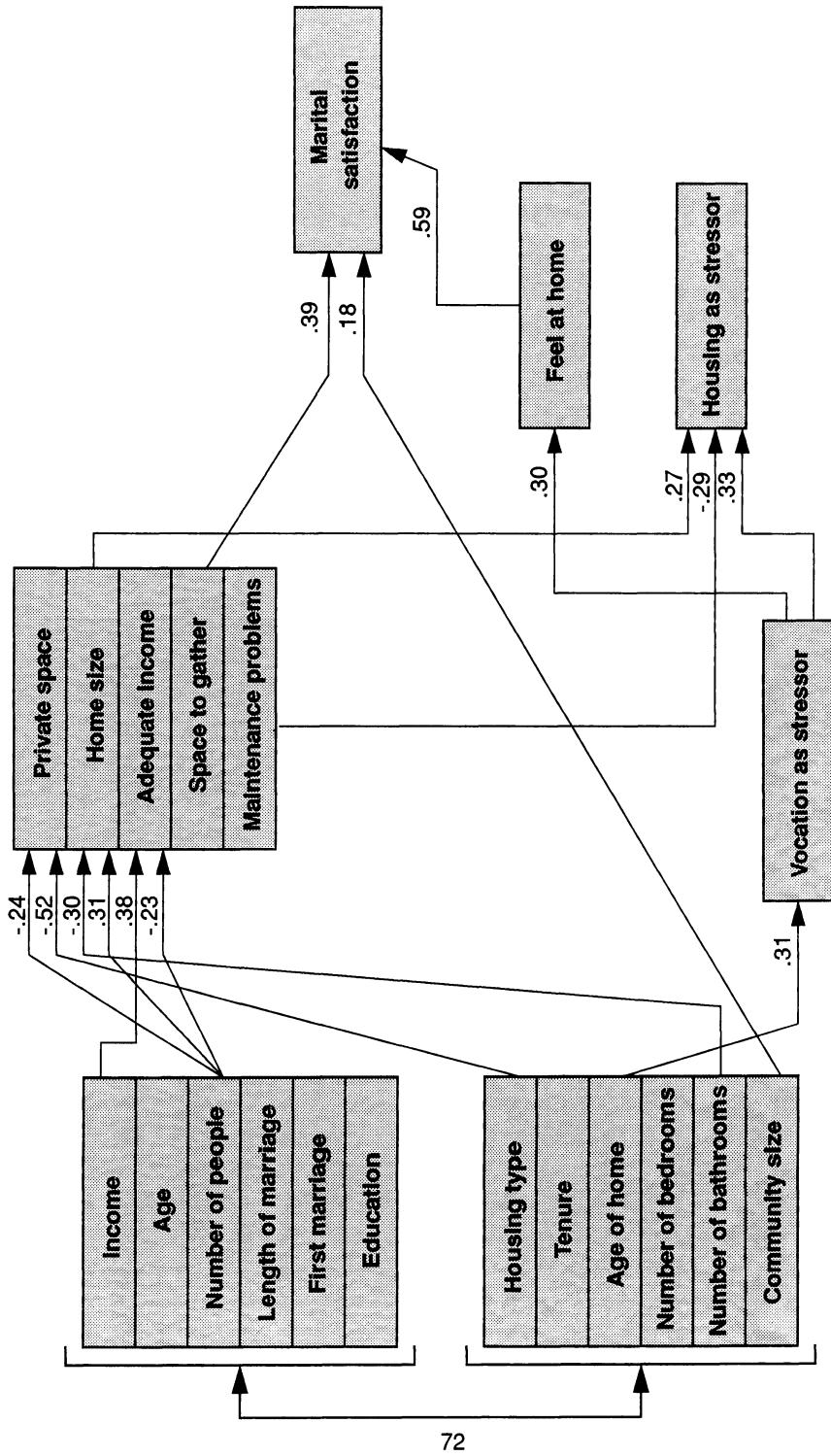


Figure 3. Path analysis model of effects on marital satisfaction for female spouses of pastoral counselors showing statistically significant, standardized Beta coefficients ( $p < 0.05$ ).

both spouses would suggest that perhaps pastoral counselors and other helping professionals would be advised to nurture their own family well-being. A number of wives commented that, although their husbands were perceived as excellent counselors by their clients and members of the community, they did not do very well in relating to their own families.

Results of this study support the role of income in marital satisfaction, but only for men and not their wives. For wives, neither actual income nor perception of income had any effect on marital satisfaction, how they felt at home, or whether they felt the housing environment caused stress in the relationship. Actual income and number of household members were the only determinants of perception of adequate income for wives. Nonetheless, income played a much more significant role for husbands. Actual income had a direct effect on whether husbands felt the housing environment caused stress in the relationship. It also had indirect effects on how they felt at home and on marital satisfaction. Perception of the adequacy of income had a direct effect on marital satisfaction and was determined only by the number of household members, not by actual income. These findings, along with the direct effect of community size and perception of adequate space to be together, as direct effects on marital satisfaction for wives, would suggest economic factors may be more important for men and social factors more important for women.

The role of objective environmental attributes in the perception of environment shows some interesting differences between men and women. For men, only one objective housing attribute, number of bedrooms, had a significant influence on environmental perceptions, while four of the six individual/family structural characteristics had significant effects. For women only two of the individual/family structural variables had an effect on environmental perceptions; however, the objective attributes were much more significant in influencing their environmental perceptions. Four of the six objective attributes had a direct effect on environmental perception or marital satisfaction. Another interesting difference between men and women was in the perception of whether the size of the home was adequate for family needs. Among husbands, this variable was determined solely by the number of bedrooms in the home. For wives, the variable was determined by the number of bathrooms in conjunction with the number of household members. The findings that point to housing as a source of stress in the marital relationship suggest that perhaps women are better able than men to separate environmental problems from interpersonal relationships. Both male and female spouses perceived housing as a stressor. For men, however, housing stress had a significant effect on how they felt at home and on marital satisfaction. Housing stress had no such effects on women. Among men, housing as a stressor was directly affected by their income, age, and perception of home maintenance as a problem. In turn, these factors affected their marital satisfaction and how they felt at home. Among women, housing-related stress was determined by perceived adequacy of home size, perception of home maintenance as a problem, and stress caused by the husband's role as a pastoral counselor. It was not significantly influenced by any of the individual/family structural variables other than an indirect effect of the number of household members. Housing-related stress was a dead-end path for women and had no significant effect on how they felt at home or on their marital satisfaction.

### **Implications**

Further research is needed in the area of environmental influences on marital relationships. These findings are only preliminary but indicate that men and women indeed may experience their environments differently. If so, relationships may be strengthened or at least not impaired by environments which more closely meet the needs of both partners. The data from this study were not detailed enough to produce design guidelines other than to suggest that low-maintenance design and adequate space for privacy and entertaining would be beneficial. However, further research in the area of the influences of gender differences in housing values and preferences on marital satisfaction

Baillie, Hill, and Walters

could lead to guidelines which would be useful to helping-professionals and other housing consumers.

The findings of this study also suggest that family-life educators would be well advised to include housing in spheres of marital negotiation or as a topic to be included in discussions of gender differences. Traditionally, family life educators have used topics such as childbearing and employment to give students opportunities to practice effective communication skills or to point out subtle individual or stereotypical gender responses to common areas of negotiation in marriage. Housing needs may be an important and equally effective spring board for discussion.

### References

- Berry R.E., & Williams, F.L. (1987). Assessing the relationship between quality of life and marital and income satisfaction: A path analytic approach. *Journal of Marriage and the Family*, 49(1), 107-116.
- Booth, A., & Edwards, J.N. (1976). Crowding and family relations. *American Sociological Review*, 41(4), 308-321.
- Boyle, R. (1970). Path analysis and ordinal data. *Journal of Sociology*, 75, 461-480.
- Campbell, A. (1981). *The sense of well-being in America: Recent patterns and trends*. New York: McGraw Hill.
- Choldin, H.M., Jacobsen, E., & Yahnke, G. (1975). Effects of crowded dwellings on family life. *Sociological Symposium*, 14, 59-75.
- Edwards, J.N., Booth, A., & Edwards, P.K. (1982). Housing type, stress, and family relations. *Social Forces*, 61(1), 241-257.
- Gillis, A.R. (1977). High-rise housing and psychological strain. *Journal of Health and Social Behavior*, 18(12), 418-431.
- Inman, M., & Sinn, M. (1987). Family stress in the interior living environment related to bathroom spaces. *Home Economics Research Journal*, 16(1), 103-108.
- Inman, M. (1988). Environmental perceptions and stress in residential settings of specific density containing one or more bathroom spaces. *Housing and Society*, 15(1), 85-93
- Kahana, E. (1975). A congruence model of person-environment interaction. In P.G. Windley, T.O. Byerts, & F.G. Ernst (Eds.), *Theory development in environment and aging*. Washington, DC: The Gerontological Society.
- Kahana, E. (1982). A congruence model of Person-environment interaction. In M.P. Lawton, P.G. Windley, & T.O. Byerts (Eds.), *Aging and environment: Theoretical approaches*. New York: Springer.
- Kayak, A.E., Jarmas, A., & Snitzer, L. (1988). The assessment of marital satisfaction: An evaluation of the Dyadic Adjustment Scale. *Journal of Family Psychology*, 2(1), 82-91.
- Labovitz, S. (1970). Assignment of numbers to rank order categories. *American Sociological Review*, 35, 515-524.

- Locke, H.J., & Wallace, K.M. (1959). Short marital adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living*, 21, Aug, 251-255.
- Madden, M.E. (1987). Perceived control and power in marriage: A study of marital decision making and task performance. *Personality and Social Psychology Bulletin*, 13(1), 73-82.
- McAllister, I. (1986). Marital satisfaction in Australia: A path model. *Australian Journal of Sex, Marriage and Family*, 7(4), 199-206.
- Spanier, G.B. (1976). Measuring dyadic adjustment: New scales for assessing quality of marriage and similar dyads. *Journal of Marriage and the Family*, 38, 15-28.
- Terry, D.J., & Scott, W.A. (1987). Gender differences in correlates of marital satisfaction. *Australian Journal of Psychology*, 39(2), 207-221.
- Thoresen, R.J., & Goldsmith, E.B. (1987). The relationship between army families' financial well-being and depression, general well-being, and marital satisfaction. *Journal of Social Psychology*, 127(5), 545-547.
- Yogev, S. (1986). Relationships between stress and marital satisfaction among dual-earner couples. *Women and Therapy*, 5(2), 313-330.