A FACTOR ANALYTIC STUDY OF THE MEASURES OF WORK-FAMILY RELATIONSHIP

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ABSTRACT:
Three of the measures were factor analyzed. Their factor structures have been presented, followed by their descriptive statistics. In order to examine the overlaps among the factors, correlations among factors and other variables were computed. Multiple regression analyses were conducted for ascertaining the relative contributions of various factors to family-work relationships.

KEYWORDS: *factor analyzed , factor structures , descriptive statistics, family-work relationships.*
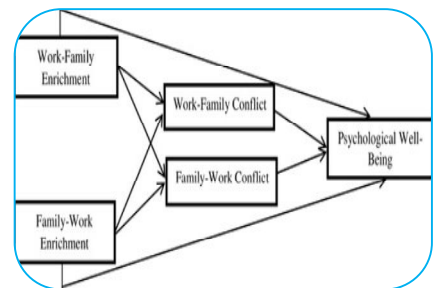
INTRODUCTION

Finally the factors and variables of our interest were examined by the analysis of variance to test the significance of difference in the effects of (a) whether the managers were located in service and works division, (b) whether their wives were working or not working, and (c) whether the two factors had any interactive effects.

FACTOR STRUCTURE

The items within each measure for male respondents were factor analyzed by the principal axis method. The number of factors was extracted till the eigen values remained more than or equal to one. The extracted factors were rotated to the varimax solution. The factor structures of each of the measures were described separately. The eigen values and the percentages of factors is shown in the Appendix. The actual number of items within each factor, their names and factor loadings is also shown in the Appendix.

FACTOR STRUCTURE OF THE NATURE OF JOB MEASURE

Factor structure of the nature of job was indicative of four aspects of job, namely, job demands, nature of job, quality of work life and job involvement. Six factors were extracted. The factor structure is described below.

Factor I was identified by eight items having the highest loading on job demands. The two highest loading items (with loading in the parenthesis) were the following:
1. His regular contact with plant was required (**.90**)
2. He often checked with plant in the night (**.89**)

Factor II consisted of four items which described **Self Actualization through Job**. The factor indicated that if the executives considered their job to be the best one and felt that their job provided them the

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opportunity for utilizing their abilities, they perceived their work life as happy and successful and considered their job having the potential to self actualize.

Factor loadings of items ranged from .70 to .63 and following were found as the items having the highest loadings (in the parenthesis):
1. My work life is quite happy (**.70**)
2. My abilities are fully utilized (**.67**)
3. This is the best job that I can have (**.65**)
4. My life is quite successful (**.63**)

Factor III consisted of two items and was named as **Heavy and Tiring Job**. Those who endorsed the items perceived their job as heavy and tiring. The items (with the loading in the parentheses) were reported as follows:
1. My job is not so tiring (**-.79**)
2. My job is very heavy (**.73**)

Factor IV was identified by four items having the highest loading on the attractiveness of the job. It was called **Attractive Job**. The factor meant that the managers perceived their job as attractive, challenging and full of variety. The items (with the highest loading in the parentheses) are given below:
1. My job is very interesting (**.82**)
2. My job is full of variety (**.81**)
3. My job is quite challenging (**.71**)
4. I am to keep this job, even if I get plenty of money in some other job (**.47**)

Factor V was labeled as **Significant Job** having two items. The items having the highest loading (in the parentheses) were the following:
1. I often forget the family while doing my job (**.74**)
2. I do not feel over qualified for this job (**.65**)

Factor VI consisted of four items having the highest loading (in the parentheses) on the importance of the job and this factor was labeled as **Important Job**. The items were:
1. My job is very risky (**.76**)
2. My job is most important to me (**.56**)
3. I am quite involved in my job (**.54**)
4. I do not feel tired after reaching home (**.52**)

The importance of job meant that the managers felt so involved in their job that they not only considered their job too important to find it risky or tiring even after long hours of work.

Factor Structure of the Family-Work Relationships

The factor structure of the relationships was based on the items which were developed to map the encroachment of work upon family, the encroachment of family upon work, spill over or negative relationship between work and family. There was one item which did not load on any of the factors, although the concept of the item was quite close to the first factor, namely, positive relationship between work and family. So, this single item was treated separately. The following were the factors of family-work relationship:

Factor I had five items which taken together reflected a **Positive Relationship Between Work and Family**. It suggested that the executives who cared for their work also took care of their family. They could manage to cope up with both by integrating the obligations of work and family. Their success in work sphere increased the chances of success in their family. Following were found to be the high loading (in the parentheses) items:

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1. It is not true that the family has to be ignored for success in career (**.86**)
2. Care of the family does not mean that the career would suffer (**.79**)
3. Factor loadings of items ranged from .86 to .41

Factor II was made up of three items and manifested conscientiousness of the managers. Therefore, the factor was named as **Conscientiousness**. The items with the loadings (in parentheses) were as follows:
1. It is true that the working wife is also a good house wife (**.81**)
2. I rarely go out from the work place to attend family obligations (**.58**)
3. I often return from work late in the evening (**-.41**)
   This factor indicated that conscientiousness of executives implied that those who attached ethical values to their job, always took their work responsibilities more seriously. They gave more time and attention to their job.

Factor III was labeled **Balancing Between Work and Family Demands**. Four items were identified as defining this factor. The items (with their loadings in the parentheses) defining this factor were as follows:
1. I rarely go home for lunch (**-.75**)
2. My wife often gets irritated by late night phone calls from the plant (**-.67**)
3. I often feel irritated by the household chores (**-.54**)
4. I cope with both work and family problems (**.48**)
   Those who endorsed the items maintained a balance between work and family. They did go home for lunch but did not get irritated by home work. They had wives who were not irritated by the night calls from the plant either. They coped well with both work and family demands.

Factor IV consisted of two items which contained the idea of maintaining the sanctity of work by not attending family errands at the cost of work. Thus the factor was labeled as **Family Not At Work's Cost**. The items (with their loadings in the parentheses) were as follows:
1. I rarely use office phone for familial work (**.82**)
2. I rarely manage to talk with family members from the plant phone (**.81**)

Factor V was identified by two items which were the following (with their loadings in the parentheses):
1. I often take leave in a family emergency (**.84**)
2. I return from work quite late in the evening (**-.54**)
   Thus the factor was labeled as **Attending Family Emergency**. The factor showed that there were executives who gave priority to attend to the family emergency and often took leave for meeting family obligations. Therefore, they returned home early for attending family affairs.

Factor VI had only one item having a very high loading (**.90**) and was integrated in the text.
" I feel that success at work is essential for a satisfactory home life (**.90**)"
The item indicated that those managers who endorsed this item felt that the success at work was essential for a happy family life.

Cognitive Complexity Measure
There were six items measuring the manager's cognitive complexity or simplicity. They pertained to decision making, impression forming, having different views regarding different matters, remembering variety of things, having flexibilities in ideas about certain matters and accommodating contradictory views.
They items taken together were designed see whether the managers (a) can handle a variety of ideas which are not necessarily consistent with each other, (b) can develop a complete picture of other persons and objects, and (c) can be flexible to deal with other persons who hold different views. A couple of sample items are given below:

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There are people (a) who remember lots of relevant and irrelevant things, (b) who remember fewer but relevant things. Which is true for you?

There are two types of persons (a) who can judge other people as soon as they see them, and (b) those who take quite some time before they form any definite views about the person. Which is your type?

Type B was to be scored as cognitively complex person.

Descriptive Statistics and Factor Structure

As reported above, three sets of factors were extracted from the items regarding (a) the nature of the job, (b) the family life, and (c) the work-family relationships. There was a measure of the wife's role in the family also. This measure was also subjected to factor analysis. Factor scores were computed on the basis of the subject's scores on the items loading on a particular factor. The mean scores and SDs were computed for each of the factors. Because the factors had unequal number of items, proportional mean scores were also computed by dividing the actual mean by the number of items constituting a factor. The proportional mean scores were ranked to identify the strength of their endorsement by the executives. The findings were reported separately for the four sets of factors.

The Nature of Job. Item numbers, mean scores, SD, proportional mean and ranks of the nature of job factors are being shown in Table 1 below.

Table 1
Means, SDs, Proportional Mean Scores and Ranks of the Nature of Job Factors

Factors	No. of Items	Mean	SDs	Proportional Mean	Rank
Demanding job	8	17.51	7.31	2.16	5
Self actualizing job	4	13.88	2.79	3.49	3
Heavy and Tiring Job	2	3.65	2.27	1.35	6
Attractive Job	4	14.52	3.76	3.65	1
Significant Job	2	7.15	1.74	3.56	2
Important Job	4	8.88	2.39	2.24	4

Wives' Role in the Family as Perceived by Wives. Number of items, mean scores, SDs, proportional mean and ranks of the nature of family life factors which described executives' perceptions of their quality of life are being displayed in Table 2 below

Table 2
Means, SDs, Proportional Mean Scores and Ranks of Factors of Wife's Role in Family as Perceived by Wives

Factors	No. of Items	Mean	SDs	Proportional Mean	Rank
Positive Attitude to Work	10	11.45	14.88	1.18	5
Sharing and Satisfactory Marital Life	8	27.74	4.65	3.45	1
Indifferent Husband	4	6.14	2.07	1.57	3
Emotional Attachment	4	12.37	2.93	3.09	2
Indifference	3	4.26	1.96	1.44	4
Housewife Role	7	1.68	3.09	.25	6

Table 2 revealed that the sharing and satisfactory marital life was ranked first in importance. Emotional attachment to family was endorsed as second. Rest of the factors' proportional mean scores was lower. The least preferred item was the house wife role.

The Family Life as Perceived by Managers

Factor analysis of the items regarding family yielded several factors. The coefficients of correlation among the factors were computed and are being displayed in Table 3

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Table 3
Intercorrelations Among Factors Regarding the Family Life as Perceived by the Managers (Respondents)

Factors	1	2	3	4	5	6	7
Sharing and Satisfactory Married Life		.06	.04	-.23**	.06	.00	.20*
Wife's Work as Positive Factor			.09	-.14	-.02	-.12	-.07
Care for Children				.05	.07	-.07	-.27**
Non-working Wife's Expectations					.05	.03	-.11
Cold War						.01	.00
Unmindful of Family Obligations							.48**
Family Orientation							

Note: * p < .05; ** p<.01, N = 160

Table 3 disclosed that only four out of 21 coefficients were significant. Three of them were highly significant (**p < .01**) and one was moderately significant (**p < .05**). The sharing and satisfactory married life had strong negative correlation with non-working wife's expectations (**r = -.23, p < .01**). It suggested that the executives tended to share thoughts most with their wife, it their non-working wife did not have unrealistic expectations.

Wives' Roles in the Family. Table 4 displays the findings regarding wives' roles in the family.

Table 4
Intercorrelations Among Measures of Wives' Role in the Family

Factors	1	2	3
Husband's Work Encroachment upon Family		-.00	-.17*
Sharing in Outside Activities			.05
Not Getting Angry			

Note: * p < .05; ** p<.01, N = 160

There was only one coefficient of correlation which was significant. This indicated that if pre-planned programme was postponed because of the fact that the husband's demanding job did not allow them to leave the factory, the wives felt angry (**r = -.17, p < .05**).

Correlation Between Respondents' Professional Background and their Family Life

The coefficients of correlation between the managers' qualifications and their attitude towards their wife's job (**r = -.20, p < .05**) as well as being more careless about their family obligations were negatively correlated. The findings suggested that the managers who were more qualified were not quite positive about their wives taking a job and they were the ones who were more sensitive to their family obligations (**r = -.20, p < .05**).

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Table 5
Correlations Between Respondents' Professional Background and the Nature of Job

Nature of Job	Respondents' Professional Background						
	Service/Work	Grade	Length of Service	Nature of Recruitment	No. of Promotions	Qualification	Duty Cycle
Sharing and Satisfactory Marital Life	-.12	-.02	-.11	.04	-.06	.12	-.05
Wife's Work as Positive Factor	.13	.15	.14	-.16	.09	-.20*	-.10
Care for Children	-.14	.34**	.43**	-.20*	.41**	-.02	.18*
Non-working Wife's Expectations	-.17*	-.11	.01	-.16	.06	.05	-.02
Cold War	.00	-.13	-.00	-.17*	.05	.08	.07
Unmindful of Family Obligations	.07	.01	.13	-.06	.02	-.20*	.05
Family Orientation	-.14	-.14	-.14	-.02	-.11	.18*	.14

Table 5 revealed that the executives' grades (**r = .34, p < .01**), the length of service (**r = .43, p < .01**), and the number of promotions showed strong (**r = .41, p < .01**) positive correlation with the care for their children. As the grade, the length of service, and the number of promotions increased, the executives seemed to be taking more care of their children. Only the nature of recruitment had a moderate negative correlation (**r = -.20, p < .05**) with the care for children. The nature was recruitment was also correlated in a moderately negative way with cold war in the family (**r = -.17, p < .05**).

It suggested that the executives who were directly recruited as managers cared less for their children and had less experience of cold war with their spouses in the family. It was also found that the managers who worked in shift cycle were less caring for their children as the two factors showed negative correlation with each other (**r = -.18, p < .05**). The moderate negative correlation between non-working wife's expectations and the departmental affiliation of the executives (**r = -.17, p < .05**) indicated that those who worked in the Works division perceived that their non-working wives had less expectations than the wives of the executives working in service division. The qualification of the managers was positively related with their family orientation (**r = .18, p < .05**), but it had a negative correlation with the unmindfulness of family obligations (**r = -.20, p < .05**). This suggested that the more qualified managers were more family oriented and hence were more aware of their family obligations.

Correlation Between Respondents' Personal Background and Quality of Family Life and Health

Correlations were computed for the respondents' personal background with quality of family life and health. The results in this regard are being displayed through Table 4.21, as given below:

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Table 6
Correlations Between Respondents' Background and Quality of the Family Life and Health

Respondents' Background	Quality of Family Life & Health Factors									
	Good Health	Free from Diseases	Servant for Help	Wife having full time job	Good Marital Relation	Sharing of thoughts with wife	Improved Marital Relation	Less Quarrel with wife	Happy Family Life	Stress in Life
Works/Service	.03	.03	.15	.12	-.12	-.08	.00	-.01	-.15	.07
Age	-.05	-.18*	-.21*	.12	.01	-.14	-.05	-.04	-.05	.05
Length of Married Life	-.03	-.20*	-.17*	.06	.03	-.10	.02	-.04	-.02	.05
No. of Male Child	-.02	-.16	-.12	-.07	-.02	-.14	-.05	-.11	-.01	.08
No. of Female Child	-.01	-.02	.01	-.17*	.02	-.09	.13	.09	-.04	.12

Table 6 displayed that five coefficients were significant (**p < .05**). Age was moderately and negatively correlated with freedom from disease (**r = -.18, p < .05**) which indicated that with growing age, the managers were more likely to be vulnerable to various ailments.

The results suggested that during the early years of married life while they were younger, the managers had more servants but they grew in age, they had fewer servants (**r = -.21, p < .05**). The findings also indicated that those managers who had a full time working wife had fewer female child (**r = -.17, p < .05**), although this finding might just be due to chance factors.

Analysis of Variance

One of our interests was to see whether the nature of work and spouse having a job or being a full time housewife made any difference to the way in which the executives relate to their work or to their family. In order to answer this question, the sample of the executives was divided into those who were located in the various departments of either Works or Service divisions. The two sub groups were further divided into those whose wives were working and those whose wives were not working that is who were full time housewives. Thus, there was 2 x 2 factorial design with unequal N for investigating the effects of Divisions and whether the wife was working or not working. The age of the manager was analyzed as a correlate and hence was not considered as a factor in ANOVA. The findings of significant main and interaction effects along with mean scores are being displayed here in Tables 4.26 to 4.33.

ANOVA and Mean Scores of the Perception of the Job as Demanding

Table 7 disclosed that only the Divisions played a significant role in perceiving the job as demanding or non-demanding. The main effect of working or non-working wife and interaction effects were not significant (**p < .05**). The comparison of means revealed that the managers in the Works division perceived their job as more demanding (**X = 20.21**) than their counterparts in the Service division (**X = 14.33**). The variance was found to be significant (**F = 20.91, p < .01**).

The mean table and the summary table are being given below:

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Table 7
ANOVA and Mean Scores of the Perception of Job as Demanding
Mean Table

		Wife		
		Not Working	Working	X
Divisions	Service	15.00 N = 42	13.67 N = 18	14.33
	Work	20.86 N = 35	19.76 N = 25	20.21
	X	17.93	16.71	

Summary Table

Sources	Degree of Freedom (df)	Mean Score (MS)	F
Wife Non-Working/Working (A)	1	39.9151	0.865
Division Service/Work (B)	1	965.2959	20.9111**
Interaction (A x B)	1	0.3576	0.008
Within Cell	116	46.1625	

Note: * p < .05; ** p < .01; N = 120

ANOVA and Mean Scores of the Perception of the Job as Demanding

Table 8 disclosed that the working place of the managers, that is, Works/Services division made a significant (**p < .05**) difference to the perception of the job as being attractive. The mean comparison also disclosed that the manager working in the Service division (**X = 15.51**) perceived their job as more attractive than those who were working in the Works division (**X = 13.61**).

The mean table and the summary table are being given on the next page:

Table 8
ANOVA and Mean Scores of the Perception of Job as Attractive
Mean Table

		Wife		
		Not Working	Working	X
Divisions	Service	15.88 N = 42	14.61 N = 18	15.51
	Work	13.66 N = 35	13.56 N = 25	13.61
	X	14.77	14.08	

Summary Table

Sources	Degree of Freedom (df)	Mean Score (MS)	F
Wife Non-Working/ Working (A)	1	1.2499	0.172
Division Service/Work (B)	1	41.24	5.683*
Interaction (A x B)	1	12.3195	1.698
Within Cell	116	7.2564	

Note: * p < .05; ** p < .01; N = 120

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CONCLUSION:

The study analyzed three measures, examining factor structures, correlations, multiple regression analyses, and variance analysis to examine family-work relationships. Factors such as managers' service and works division, wives' working status, and interactive effects were examined.

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