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**COMPARING MODELS
Of
WORK-FAMILY RELATIONS**

Yann B Malara

**A Thesis
In
The Faculty
of
Commerce and Administration**

**Presented in Partial Fulfilment of the requirements
for the Degree of Master of Science in Administration at
Concordia University**

December 1997

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ABSTRACT

Comparing Models of Work-Family Relations

Yann Malara

This study examines the work-family environment to compare three theories of work-family relations. These three theories are spillover, compensation and segmentation. In the spillover theory, one environment (work or family) spills into the other environment (family or work), negative emotions will be carried from one environment (e.g. work) to the other environment (e.g. family). In the compensation theory people, if unfulfilled in one environment (e.g. family), compensate to have their needs fulfilled in the other environment (e.g. work). In the segmentation theory the work environment and the family environment are seen as separate, they do not influence each other. Within the theories of spillover and compensation, models of direct and indirect work-family relations were tested. Data for the study was collected from nurse in three hospitals in Ontario and Québec. The results of from the study using structural equation modeling showed that nurses segmented their work stresses from their family, and their family from their work. Neither the spillover nor the compensation models were supported. The implications and potential applications are discussed.

ACKNOWLEDGEMENTS

I would like to thank my supervisor Pr Linda Dyer, who helped me tremendously during my thesis. I would also like to thank my committee, Pr Etezadi Amoli and Pr Jean Mcguire, for their help. Finally I would like to thank Pr Vishwanath Baba, Pr Terri Lituchy and Pr Julian Barling.

Je voudrais remercier mes parents, mon frère, ma tante et mon grand-père pour leur support tout au long de la thèse. Merci à Deirdre Foucauld qui m'a aidé à formuler ma pensée. Finalement merci à Frédéric Ducoulombier, à la famille Gagné et à la famille Chartre.

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CHAPTER ONE

Comparing Models of Work-Family Relations

Work and the family are basic institutions of any society. The examination of the interaction between work and the family is not a new idea. Discussions can be traced back to the times of the Greeks and the Romans (Wilenski, 1960), and to the industrial revolution (Kabanoff, 1980). Early sociological studies on the subject can also be traced to the 1930's and the 1940's, with a growing interest throughout the 1950's, and a steady increase since the late 1970's (Barling, 1990). The reasons for this reflect the changes that have occurred in the workplace and family. Changes in the work place include such factors as downsizing and increases in technological sophistication (Barling & Sorenson, 1997). Changes to the family include the increase of dual income parents and the increase of single parent families (Kabanoff, 1980). Changes have also occurred in the participation of women in the Canadian labour force that has increased from 10.6% in 1911 to 51.9% in 1994. The number of women as a percentage of total employment has grown from 36.9% in 1976 to 45.2 in 1994, due primarily to a majority of mothers participate in the labour force (Statistics Canada, 1974 & 1994). The result of all these changes in the family environment is that now only 16% of Canadian families fit the traditional definition of the family with the father working and the mother staying at home.

Because of all these changes more research has to be done in the area of work family relations to understand the new work-family environment.

1.1 Historical Perspective.

1.1.1 Pre-Industrialization.

The relation between work life and family life has evolved over the past few centuries. Before industrialization, society did not clearly define the separation between work and the family. Most families in the pre market, agrarian societies were self-sufficient. Barter economies did not consider work as employment, but rather as part of survival. The entire family was part of the work force; family members were co-workers, including the children. Farm life saw work done in the home. The economic unit was the family (Miguel, 1994). “The absence of developed infrastructures of society not only raised the importance of the family, but also fostered family cohesion, mutual aid, and support.” (Googins, 1991). Family included several relatives who lived in the same community, in contrast to the concept of the nuclear family that exists today. Thus the interaction between work and the family was not a source of sociological discussion as the differences between the two were small. These conflicts were mostly inter-personal, they originated from conflicts between family members.

The growth of the market economy created the distinction between work and family. Workplaces became distinct from the home. The growth of towns saw the

establishment of defined crafts and trades, such as tanning, woodworking, and milling flour. The introduction of factories, such as those that produced cloth, led to women and children entering the paid labour force. Work was no longer limited to the home. Work and family were becoming separate functions. This separation inevitably led to competing interests between work and family on matters of time allocation. Households slowly stopped making their own clothing and bread. These items and others could now be purchased, in this way the homemakers were able to engage in factory work. Extended families were no longer necessary for survival, since more and more services could be purchased. This increasing influence of the society on the family helped create the nuclear family as an independent unit in society.

1.1.2 Industrialization.

The beginning of industrialization caused urbanization, sporadic employment because workers were not attached to the land but moved from industry to industry. Progress came at a price, a price paid in part by the family. Industrialization “reshaped every institution, values and custom associated with work.” (Googins, 1991, pg 77). During this period, factories helped define work as employment. Work became a job, something that could be gained (hiring) or lost (layoff) with the changing economic conditions. The physical design and the functioning of the factory led to a division between the employer and the employees. This division promoted the employer’s view of his employees as a part of the production line. Since industrialists wanted to reap the maximum of benefits from their investments, both labour and capital, they established the

predominance of the workplace. The workplace became a structured setting with employees who were disciplined to be loyal to the organization. This redefined the relationship between work and the family. To assure productivity, industrialists became involved in social programs such as building homes, providing medical care, and education. Limited childcare too, was introduced during this period. These measures however were not charitable on the part of the industrialists, but rather a means to breach the competing goals of work and family. If workers were preoccupied with the family matters, production and or profits would suffer. These industrial welfare programs also enabled the payment of low wages. For some, low wages meant it was necessary for women to seek employment, as two wages were needed to sustain the family. “The relationships, struggles, and conflicts between workers and employers and between families and the workplace grew out of this era. The period of industrialization served as a forerunner to the work/family conflicts that intensified in the subsequent years” (Googins, 1991, pg 87).

1.1.3 Twentieth Century.

The next radical change in the setting of the work environment came during the 1930's and 1940's. The Depression of the 1930's and World War II followed one after the other and had a tremendous impact on work -family relations. During the Depression, the available work there was given primarily to men (Fox, 1980). Women and minorities were the first to get laid off. It is during this period that discussions emerged regarding the negative impact of working women, and wives in particular. These discussions have

continued until today. Among the most powerful statements cited were: the employment of women was detrimental to men; women took jobs that rightfully belonged to men; and working wives and mothers caused family problems. During the Depression, another element was added to the work-family interaction, this element was the government. The government became more involved in directing social policy.

The Second World War saw a dramatic change in the composition of the work force. The war effort required the participation of both men and women, singled and married. The primary duty of the men was to serve on the front lines. Women fought on the home front by working in the factories (Fox, 1980). The scorn cited against women, particularly wives and working mothers, during the Depression was set aside during the war effort, however, sociologically, the primary role of women remained that of a homemaker (Googins, 1991).

After the Second World War, the soldiers returned to North America, resulting in a large increase in the labour supply, in a market where limited jobs were available. Again displacements occurred. The rationale, that men were the primary family wage earners was used to justify the displacement of women and minorities from the labour force. This rationale came into being because the economy was very prosperous, and society as a whole saw one income to be sufficient to sustain a family (Barnett & Rivers, 1996). A variety of factors reinforced the social acceptance that the woman's rightful place was in the home. The post war period saw the shift of families from the urban core to the suburbs. The growth of the suburbs also had an impact upon the work-family relationship.

Newly created suburban living went further to reinforce the separation of work life and the family. The role of work and family according to gender was also reinforced. The primary role of women was seen to be in the home, while the primary role of men was seen to be working outside the home (Gookins, 1991).

1.1.4 Recent Trends.

The last three decades, from the 1970's until today has seen the entrance of women into the work force in greater numbers than any other time in history (Alvi, 1994). Even if families have larger pay cheques each year and more couples are dual earners the average real family income (inflation adjusted) has increased very little in the past fifteen years. The family now needs two incomes to maintain the same standard of living (Bar, 1993). Women are also willing and are allowed to enter the work force, because of changes in the role of women in the society (Barnett & River, 1996). "In the 1950's, 70 percent of all households were made up of working fathers, a homemaker mother, and one or more children" (Higgins & Duxbury, 1992, pg 391). Since the 1980's this number has fallen to less than 10 percent of the population.

Dual earner families have had to deal with a host of problems, such as the responsibility for childcare since both parents were at work outside of the home. Some of the problems were an effect of both parents entering the labour force, of the parents having less time to raise a family. Of the nuclear family being separated from the extended family support, with the nuclear families moving to the suburbs or in different cities and

thus diminishing the impact the impact of the extended family and also the help the extended family could give. Help in raising children, in taking care of the grandparents. Another problem was the nuclear family being pressed by economic needs, because of the recessions in 1981 and again in 1989 which stagnated the real wages (inflation adjusted), and augmented the unemployment rate. In this climate both companies and families have had to come to terms with changes to the workplace to accommodate these demands for competing attention by the workplace and the family. (Googins, 1991).

The success or failure of companies, government and workers to meet the changing demands placed upon the worker has led to a growth industry in human resource studies and management studies regarding work and the family. Companies such as Work/Family Directions, Inc, Work & Family Connection, Inc or Work, Family and Life Consulting are now helping businesses build a stronger relationship with their employees by co-ordinating work life and family life.

1.2 Current Research

From the examination of the evolution of work and the changes in the patterns of families at the time of industrialization, several different theories emerged. Among the prominent theories that were developed are *Spillover*, and *Compensation*. Tracing the forerunner of these theories to the study of the interaction between work and leisure is possible. Wilensky (1960, page 544-546) traces the major theories labelled *Spillover* and *Compensation* to the nineteenth century social commentators Tocqueville and Engels.

Engels noted in the class struggle, technological change would make work meaningless. Tocqueville painted a dreary picture of class uniformity as a result of the piling up of goods and services to the point that they become burdensome and destroy the sense of larger community life. “Class society or mass society notwithstanding, both writers were alert to the fact that a man’s work routine places a heavy hand on his routine of leisure that attitudes and practices developed in one sphere of life can spill into another—killing time at work can become killing time in leisure, apathy in workplace can become apathy in politics, alienation from the other” (Wilenski, 1960, pg 545). These concepts of *spillover* and *compensation* were redefined in the twentieth century and applied to the work-family context. The next theory which evolved was that of separate worlds as first supported by Parsons (1959) who introduced the notion of *segmentation* between the work and the family in the work-family literature. In studies of blue-collar workers in the 1960’s this approach of segmenting work life from the family life was popular and applied (Lambert, 1990).

Researchers in work family relations have been trying to understand the relationships between work and family. To understand the relationships between work and family, researchers have looked at work attributes such as the number of hours worked, the amount of conflict at work, the amount of support from co-workers. Researchers focused on these work attributes to see if they could be seen as influencing the family life. Researchers also looked at family attributes such as the amount of marital conflict, the amount of family support, the number of young children. For the purpose of seeing if these family attributes could be influencing the work life. In studies on work-

family researchers have used three types of framework to explain the different links that could or could not be found between work life and family life. These three frameworks are the *spillover*, *compensation* and *segmentation* theories.

1.2.1 Spillover Theory.

In *spillover* theory work and family operate as one entity. “There is no boundary between the workplace and the home. Therefore, what happens at work will also happen at home.” (Young & Kleiner, 1992, pg 24). Staines (1980) defines spillover as a positive relationship between work and family, whence positive work experiences would be associated with positive family experiences and negative work experiences would be associated with negative family experiences.

As an example of negative spillover we could imagine that a nurse experiencing negative emotions from her shift might be affected during her shift and might continue being affected from her stressful shift in her home. A similar situation would be for a nurse going through marital problems, not only her home life might be affected but also the quality of her work. Her reactions at work might be negatively affected from the problems carried over from her home life.

All of these examples have been of negative emotions or experiences spilling from one environment (work or family) to the other environment (family or work). However it does not only have to be the negative aspects of work life or family life that can be transferred from the work to the home or vice versa. Joyful experiences in the work such as a promotion, or the

feeling of elation once a project is completed can be passed on to the family life. Just as positive family life experiences can enhance the work environment.

Overall, spillover theory is the most popular stance adopted by researchers examining work and family, and it is also the theory with the most supporting evidence, although weakly, as is shown by a review article by Rice et al (1980). Researchers such as Bromet et al (1986) looked at a sample of blue collar working wives and found some support for the spillover theory from the self-reports of the subjects. In their study wives who reported spillover in their work or relationship were younger and had high levels of distress (job and marital strain). This study however the researchers asked the participants about the presence of spillover *after* focusing on marital and work-related stresses, this could have influenced the respondents in replying that spillover existed in their lives. By making respondents think about the concept of spillover the researchers might have made the participants aware of the goals of the study. The participants being more aware of the hypothesis of the study could have influenced the results by wanting to help the researchers confirm their hypothesis.

A study by Doby and Caplan (1995) also looked at spillover, however with the perspective of a threat to the reputation of the subject. The researchers hypothesized that a worker experiencing emotional distress because of a loss of a good reputation, unfavourable critiques by the supervisor, or co-worker could bring negative emotions from the workplace to the family life. In this study a group of staff accountants carried their work anxiety into their homes and thus show that negative emotions can be

transferred from the work environment to the family environment. This study has again the weakness of looking at the work's impact on the family and not the mutual impact of both work and family.

Willians & Alliger (1994) took a sample of working parents and found that women felt more spillover from work to family but also from the family to work. They also found that negative moods spilled more easily than positive moods over the course of the day (participants were asked to fill questionnaires when beeped by the researchers during the day). For the researchers negative moods are more pervasive and persistent during the entire day, and less easily disrupted than positive moods.

1.2.2 Compensation Theory

Compensation theory also predicts that the workplace and family life are part of the same environment. However “work and home have a compensating effect on each other. One can usually make up for what is missing in one environment from another. If one feels unfulfilled at work, the negative experience could be compensated by a more positive experience at home.” (Young & Kleiner, 1992, pg 24). Staines (1980) defines compensation as a negative relationship between work and family. The term negative refers to the fact that negative work experiences would be associated with positive family experiences and vice versa.

An example of compensation theory would be a nurse who encounters difficulties at work because of tensions in the workplace and might want to disengage from his work. This nurse might feel dissatisfied with his work and redirect his energies towards his home life where he feels rewarded or acknowledged for his efforts. In the same pattern a nurse experiencing marital problems might invest more time and energy in his work where he might see the impact or usefulness of his efforts. The other aspect of this theory is that it can be not only seen as a disengagement from one sphere as described above but also as total involvement in one sphere to the detriment of the other. A worker might feel very involved in his work experience and fully satisfied from the expected outcomes coming from this work involvement. However with this high work involvement the nurse might not want to put any efforts into building or maintaining an enjoyable family life. In a similar way a nurse putting most of his energies in the home, for example after the birth of children might not feel the need to involve himself in the workplace. A slightly different way of seeing compensation theory is with involvement theory. In involvement the individual puts all of his energies in one environment (e.g. work) and does not have much energy left for the other environment (e.g. family). The relationship between the work and the family would still be negative as in the compensation theory, however the sequence is reversed.

Studies in work-family relations have not exploited the potential of the compensation theory. However studies in the field of work and leisure have, for example Miller & Weiss (1982) showed that individuals with low occupational status were more likely to stress the importance of winning in leisure than individuals with high status. For the study 211 members of bowling teams with different occupational status were researched. It is possible to infer that the individuals with a low occupational status were compensating by winning in the bowling leagues. Kirkcaldy and Cooper (1993) in a cross cultural study of managers from Britain and Germany found differences between the stress coping styles of managers from the two

countries. British managers were found to carryover their stress from their work directly into their leisure, showing evidence of the spillover theory. While the German managers showed evidence of compensation between work and their leisure. With evidence collected from the work-leisure literature it is possible that the compensation theory also has an effect in the work-family environment.

1.2.3 Segmentation Theory

In the segmentation theory, work and family operate as separate entities, there is no interaction between the work life and the family life. "Segmentation theory advocates that work and family are distinct entities, and experiences from one will not affect or influence experiences in the other" (Young & Kleiner, 1992, pg 24). Stated otherwise, work has no impact on the family unit, nor has the family unit any influence on work life.

For example, a person in a very stressful job might feel overwhelmed by work and as such might want to 'build a wall' to separate work from the family unit. "Recent research suggests that if segmentation occurs, it does not occur 'naturally'. Instead, workers "actively attempt to separate work and family life in order to deal with work-related stresses" (Lambert, 1990). Work and the family may be inherently independent or because workers deliberately keep them separate. An example of voluntary segmentation is given by Ridley (1973) who studied a sample of married female teachers and their husbands. While the female teachers, on the whole were successful at separating work from their family it was because their job involvement was generally lower than their husband's. For the wives work was a secondary role, as such they could make a

distinction and separation between their work and their family, they could stop their work life from entering their family life. As for the husbands because they had a higher job involvement, they could not but let their work spill into their family lives.

We also have Parasuraman et al (1992) who looked at two career couples and found that relations within the work environment (work attributes) and within the family environment (family attributes) were stronger than relationships between work environment and family environment. The attributes of the work environment, defined as role conflict, role ambiguity, and role overload were related to job satisfaction, but not to family satisfaction. Family conflict and parenthood were found to be related to family satisfaction but not to job satisfaction. Thus it may seem that this study demonstrates a true separation between work life and the family for the sample of employed MBA students in four east coast universities. The authors of this research explain their results and defined them as *segmentation*. This was because the subjects were able to compartmentalise or segment different spheres of their lives to minimize strain arising from multiple roles.

Finally a study by Jackson et al (1985) looked at shift workers and their spouses found mixed support for the segmentation theory. In the study the researchers looked at many work and family attributes and their impact on the job satisfaction and family satisfaction. In the study work and family attributes were grouped in two categories. One category was of structural interference with the family. This category was composed of variables such as the number of overtime hours spent commuting, the number of hours

spent commuting, the number of children under 18 years of age. The second category was named emotional interference with the family. This category was composed of variables such as physical health condition (digestion, heart problems), by negative psychological moods (tension, tiredness). The authors measured the employee's dissatisfaction with the job-family relationship as a dependent variable of the emotional and structural interference.

With hierarchical regression analysis the researchers regressed the job-family satisfaction on the predictors measuring structural and emotional interference. The study found that structural interference had little impact on the quality of family life, this information fits with the segmentation theory. However the emotional interference was related to family life. These mixed results from this study show us that the work family relationship could be more complex than captured by most studies. One problem with this study is that except for the number of children under 18, only work variables were included in the predictors of the job-family satisfaction. Because of this we can only have a one sided picture of work family relations.

1.3 Comparing the Three Theories

Spillover has been the most intuitive theory of work family relations and has been studied the most. So it is not surprising that Staines (1980) in his review of work and non-work finds more support for spillover theory. However in the field of work-leisure researchers such as Miller & Weiss (1982) have found evidence for the compensatory theory in male members of bowling teams. They found that individuals with low occupational status

attempted to obtain status recognition in their leisure activities. It is therefore possible that compensation theory can be applied to work-family relations. Finally segmentation theory is seen as too simplistic, the work-family relationship is seen as many complex links between the work and the family. The segmentation theory however serves a useful purpose since it is the only way of explaining non statistically significant links between work and family.

Lambert (1990) states that some of the studies reviewed by Staines (1980) can be seen as supporting compensation theory, and others as supporting segmentation theory. Given these different outcomes, Lambert (1990) concludes that segmentation, spillover and compensation all account for work and family relationships, and can occur simultaneously and that the theories should be considered as overlapping and not competing. The three theories have mostly been studied with one theory competing against another. However it is possible for a worker's family conflicts to spill into his work, and that he compensates for his work conflicts. The processes of spillover, compensation and segmentation do not have to act singly. Different types of stressors can behave in a different manner. As such work pressure could spill into the family while family conflict goes through a process of compensation. As such the theories should be tested simultaneously, with simultaneous testing it could be possible to see both compensation and spillover affecting the work-family relationship.

1.4 Direct and Indirect Effects.

Work may spill into the family directly or indirectly. Researchers such as Belsky et al (1985) suggest that work can influence the family indirectly through its impact on the worker's behaviour, emotions and attitudes at work which are then carried into the family. However Lambert (1990) argues that work can influence the family directly, no matter how the worker feels about his work.

One way of differentiating between direct and indirect effects is to use the terms developed by Rice et al (1979). They distinguish between the *Objective* and the *Subjective* components of work and non-work. The *Objective Work Conditions* are the "structural characteristics such as the physical conditions and the nature of the job" while the *Objective Family Conditions* are the "family size, the condition of one's neighbourhood". The *Subjective* components are the reactions to the *Objective* conditions. These *Subjective Reactions* are for the work "job satisfaction, motivation and absenteeism" and for the family are "family satisfaction and family participation" (Lambert, 1990, pg 244-245).

To put it graphically we have (fig 1.1):

Objective Work Conditions
(work conflict, work pressure)

**Subjective Reactions to
Work Conditions**
(work satisfaction)

Objective Family Conditions
(family conflict, family support)

**Subjective Reactions to
Family Conditions**
(family satisfaction)

In an example of direct spillover (fig 1.3.1) a nurse feels the impact of work pressure, which might diminish her enjoyment at work, and at the same time affect her enjoyment of her family life. In the same manner a nurse going through marital problems, could directly feel these problems affecting her family life and also her work life and this simultaneously.

The indirect spillover model (fig 1.4.1) however constructs the events in a slightly different manner. The same nurse encountering high work pressure might feel the impact in a diminished work satisfaction. Then having her work satisfaction reduced might in turn reduce the nurse's family satisfaction. In the same manner the same nurse encountering marital problems might feel less satisfied with her home life. Furthermore the same diminished family satisfaction might also diminish the work satisfaction.

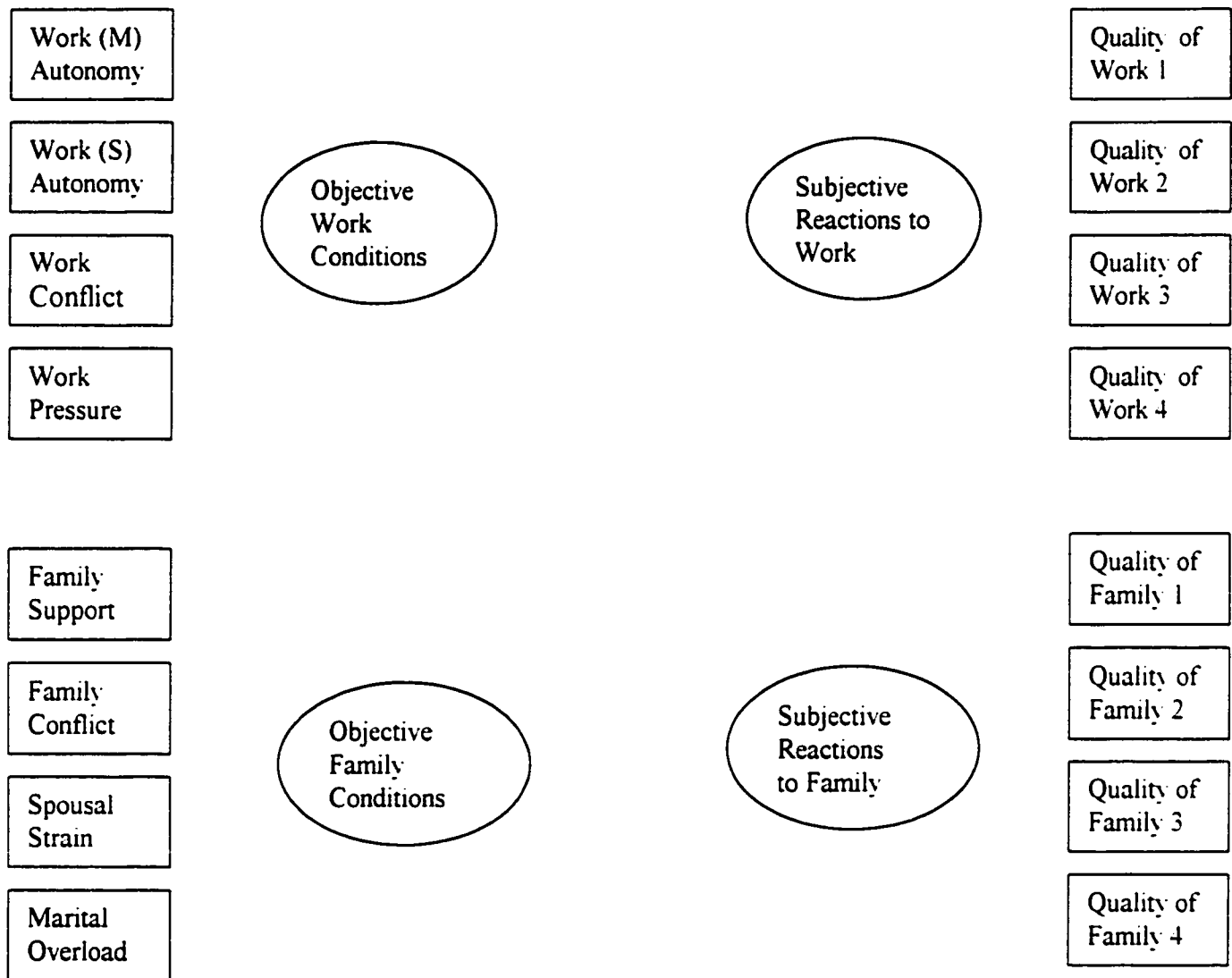
The utility in researching *direct* and *indirect* effects is because “Studies of *spillover* have usually assumed indirect effects rather than specify and assess models incorporating both direct and indirect effects” and thus determining if the relationship between work and family is indirect or not. It is important because authors assume that “work affects family life indirectly through its impact on worker's behaviours, emotions and attitudes at work which are then carried into the family.” (Lambert, 1990, pg 244). However it is highly probable that characteristics of work affect directly the home. For example, no matter how satisfied a worker is, his job demands such as frequent travels may directly interfere with his involvement with his family by being physically absent often, and thus diminishing his family satisfaction. Therefore it is not known if job or family objective conditions spill over directly in the other sphere, or if objective conditions affect the other sphere through the subjective reactions.

The interest in knowing more about direct and indirect effects is to be able to use the right solutions to help a balance between work and family. If we assume that direct spillover

from work affects the family then the solution would be to better the *objective work conditions*, while if we assume an indirect spillover then the subjective experiences of the individual would have to be improved. In any situation the objective work (or family) conditions have to be modified, since without modification of the objective work (or family) conditions the work nor the family satisfactions cannot be modified. In an example of work-family relations Lambert (1990) cites a study by Bohen and Viveros-Long (1981) in which the workers were very pleased with the instauration of a flexitime policy, however the workers felt that the flexitime hours were not enough to help them balance their work life and family life. If we assume an indirect spillover model then the program is a success in improving the family life, since the family life is affected by the work satisfaction. If however we assume a direct spillover model we observe that the flexible hours do not improve the family life.

1.5 Models to be Tested (Fig 1.2)

The three models of work-family relations will be based on this general format .

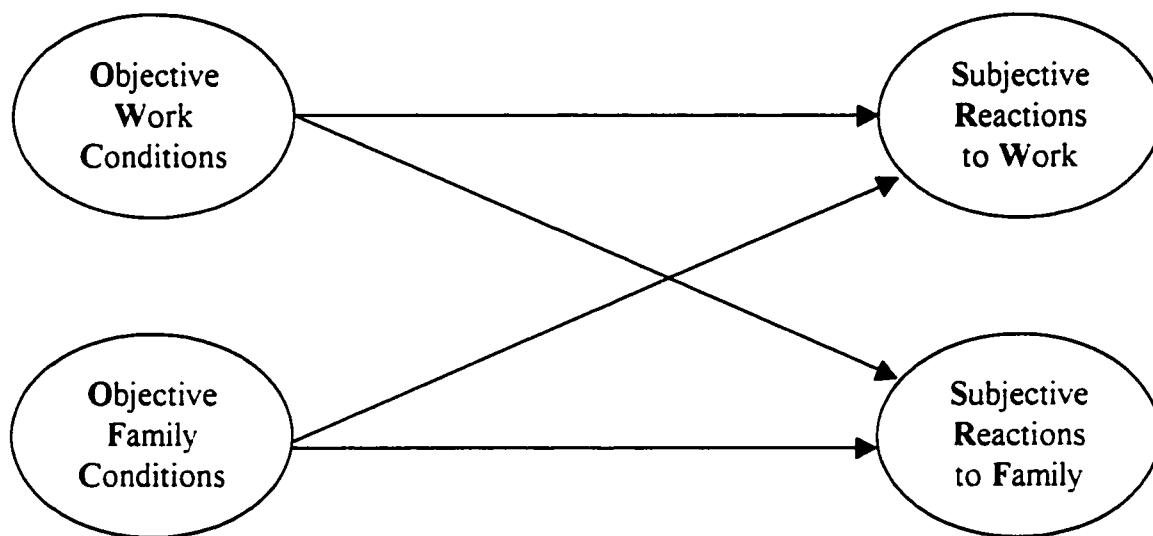


The Objective Work Conditions are composed of work autonomy (method), work autonomy (schedule), work conflict and work pressure. The Objective Family Conditions are composed of family conflict, family support, marital role, spouse conflict. The Subjective Reaction to the Work is composed of the quality of work life, and the Subjective Reaction to the Family is composed of the quality of family life. The four

concepts objective work conditions, objective family conditions, subjective reactions to the work conditions, subjective reactions to the family conditions are linked differently in the three models.

1.5.1 Direct Model of Work-Family Relationship.(fig 1.3)

In the first model we will test the direct work-family relationship.

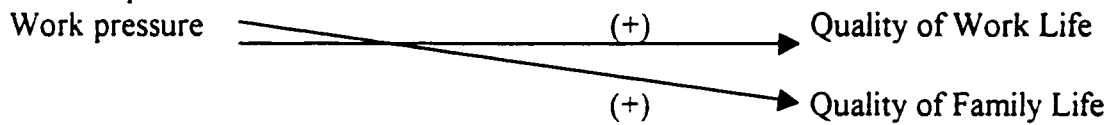


If we assume the direct spillover theory then the objective work conditions will be positively linked to the subjective reactions to family conditions, and the objective family conditions will positively affect the subjective reactions to the work conditions. If however we assume the direct compensation theory is true then the objective work conditions will negatively the subjective reactions to family conditions, and the objective family conditions will negatively affect the subjective reactions to the work conditions.

Finally if we observe no relationship between the objective work conditions or the objective family conditions to the subjective reactions to the work conditions or to the subjective reactions to family conditions then we can assume that the segmentation theory is true.

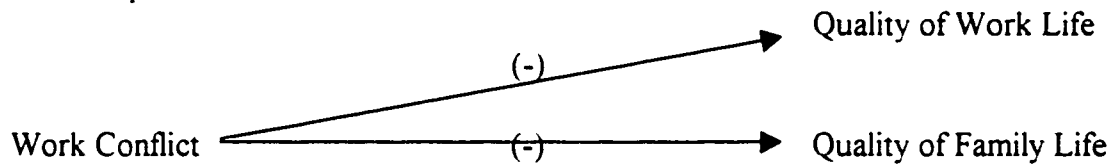
Spillover (direct) (Fig 1.3.1)

for example:



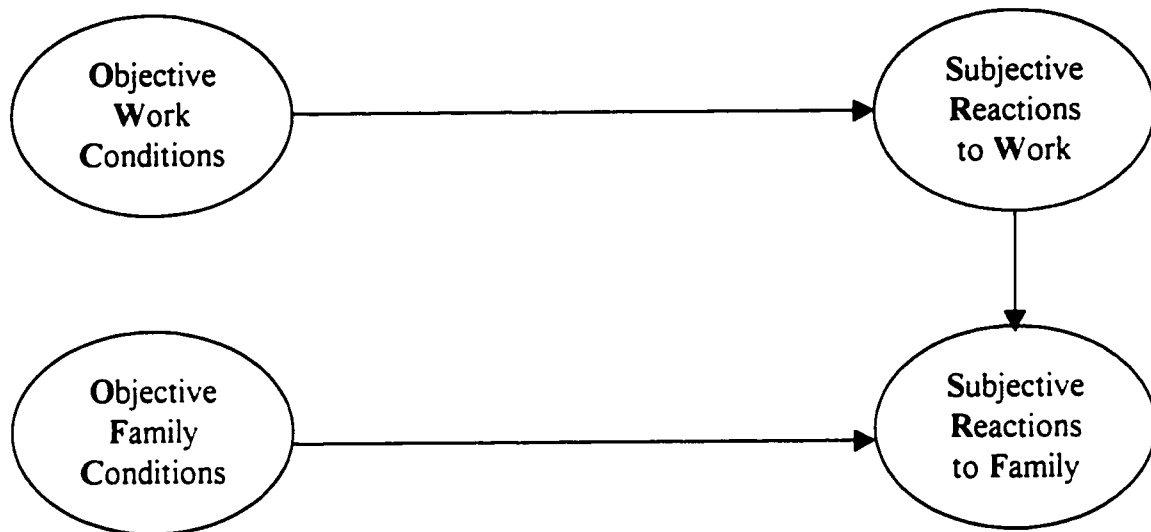
Compensation (direct)

for example:



1.5.2 Indirect Model from the Work to the Family. (fig 1.4)

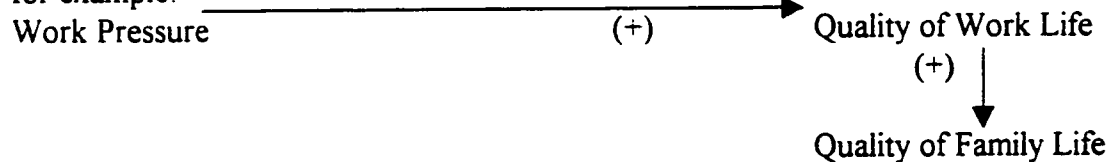
The second model tested will be the indirect paths from the work to the family.



If we assume that the indirect spillover theory influences the work-family relations then the subjective reactions to the family conditions will be positively linked to the subjective reactions to the work conditions. If however we assume that the indirect compensation theory reflects the work-family relations then the subjective reactions to the work conditions will negatively affect subjective reactions to the family conditions.

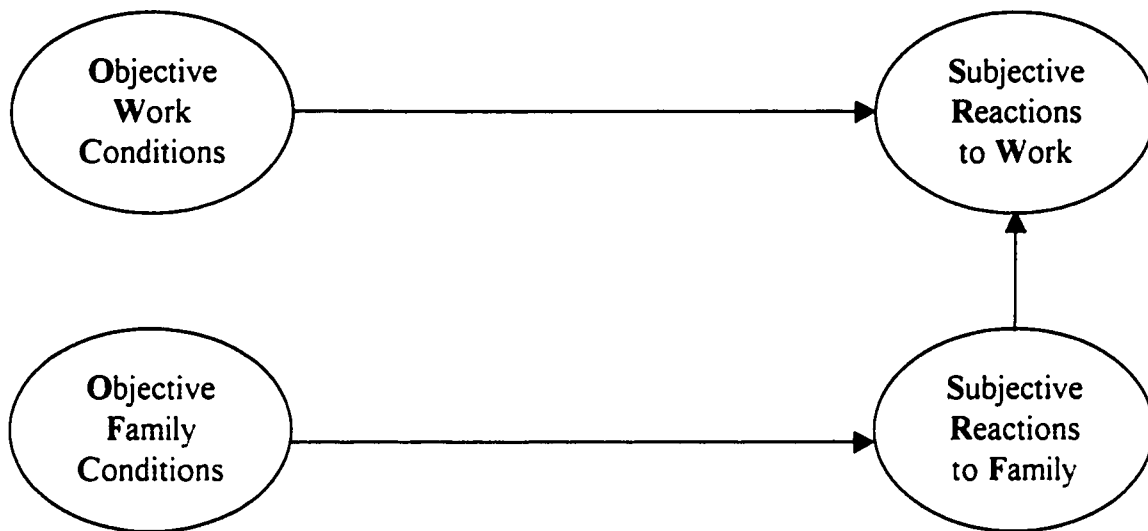
Spillover (indirect) (Fig 1.4.1)

for example:



1.5.3 Indirect Model from the Family to the Work. (fig 1.5)

The third model tested will be the indirect paths from the family to the work.



1.6 Summary

Work and the family, it has been seen, have undergone many changes. From the agrarian society to the current industrial/technological society, work has evolved. The family has changed too, from the extended family living on the farm to the nuclear family living in the city. The brief historical overview into work and family gives an insight into the basis of the theories that have evolved to explain the dynamics of work and family.

Work and leisure studies have compared concurrently the three basic theories, *Segmentation*, *Spillover*, and *Compensation*, to see which one best reflected the data gathered. This multilevel comparison, however, has not been undertaken regarding work and the family (Donner, Semogas, Blythe, 1995). This study will look at work and the

family applying the three main theories, *Segmentation*, *Spillover*, *Compensation* with the *direct* and *indirect* effects concurrently. By seeing which model the data best fits it will be possible to observe if the direct or indirect work-family relationships reflect more the reality also the paths between the variables will enable us to confirm the existence of spillover, compensation and segmentation theory.

CHAPTER TWO

METHOD

2.1 Participants

Nurses are studied in this thesis because they have many different attributes that are especially relevant in this area of research. One of them is that nurses form a very large population; in almost any city there will be working nurses. They will also be socialized in a similar way (Donner, 1992), and their work remains similar from hospital to hospital. These factors make nurses a homogeneous group that can be accessed across the country and on which studies can be generalized. As the group is mostly comprised of women and have as group have been socialized to be caregivers (Donner, Semogas, Blythe, 1995) they suffer from the double burden. The double burden is when the nurse works a full day then comes back home for her “second shift” of the day. As caregivers nurses are socialized to care of patients during the day and continue this behaviour at home. What is interesting about nurses in this study of work-family relations is that working shifts, and having a double burden puts a stress on the nurse (Donner, Semogas, Blythe, 1995). This stress in the everyday life of the nurse might show more clearly relationships between work and family. The fact that their work stays relatively similar from hospital to hospital makes the collection of data and the generalisation of the results easier.

2.2 Procedure

The participants were from three medium sized hospitals in Canada (200-300 nurses). These hospitals were selected because they were of similar size (medium) in similar urban environments (suburbs), to minimize the differences between the three

hospital sample. Of these hospitals two were in the province of and the other in the province of Ontario. The researcher presented the project in the winter of 1996-97 to the nursing administration of the three hospitals to get their approval. Once the administration of hospitals had approved the research, they helped co-ordinate the distribution and collection of the questionnaires. For the survey the nurses were contacted through their respective hospital administration and were asked by their head nurse to complete a questionnaire. The questionnaires were then dropped in a box in the kitchen of the nurses to ensure anonymity. The researcher then collected the box after a period of three weeks in the spring of 1997.

2.3 Sampling results

Each hospital received 175 questionnaires to distribute, this number was recommended by each of the hospital's administration. A total of 525 questionnaires were distributed. Of these 525 questionnaires distributed 197 were completed and collected. Ninety-seven questionnaires were collected from one Quebec hospital for a return rate of 56%, 68 from the other Quebec hospital for a return rate of 39%, and 32 from the hospital in Ottawa for a return rate of 18%. The difference in the rate of return of the questionnaires in Québec and Ontario might be attributable to the closure of three hospitals in Ottawa region which caused nurses to be displaced from their jobs by nurses with more seniority who themselves had just lost their jobs. Forcing these displaced nurses to displace other nurses. These problems caused an enormous amount of job anxiety and accumulated burnouts at the time of the survey.

Of the 197 questionnaires collected, 186 were fully answered and usable in the study, the 16 non-usable questionnaires were not fully completed, entire scales were omitted. The 186 questionnaires were composed of two groups of nurses, those in a relationship who completed the entire questionnaire and those not in a relationship who did not fill the marital role nor the spouse conflict items. The two groups were of unequal size, 146 nurses were in a relationship and 40 were not. Because such a difference in size between the two groups made multi-group analysis difficult, the smallest group had to be dropped. The total number of questionnaire used in this study is therefore of 146 nurses. Since the number of completed questionnaires was lower for Ontario than for Québec a Chi-square test of significance was used to see if there were differences in the distributions of the variables of the questionnaire for the two provinces. Since no major differences were found in the questionnaires from Ontario and Québec it was deemed safe to combine the sample for Ontario and from Québec.

The sample of nurses was composed at 93% of women and 7% of men, an overwhelming majority of women, which is what this study wanted. The average age for the nurses was of 39.8 years (SD 8.1). The average number of hours worked was of 33 (SD 8.5). The average number of years worked in the current position was of 12.6 (SD 7.6). 74% of the nurses had at least one child as a dependent. 89% of the nurses were Registered Nurses, 7% Registered Practical Nurses, 2% Health Care Assistants and the other 2% other types of health care workers. As a whole this sample represents well the population of nurses across Canada.

2.4 Data Accuracy

The raw data file was first examined to see if errors had been made in the inputting. A visual inspection revealed that the data set formed a rectangular matrix, with the proper number of columns and rows, and that all positions within the matrix were filled. Then, the range of the items in the data file were checked to see if out of range cases had been included. Out of range cases were verified from the original questionnaire and corrected. The next step in verifying the accuracy of inputted data file was to select 5% of the data randomly and compare these cases with the original questionnaire. Once these steps taken the next step was to complete missing cases.

2.5 Missing values

In the entire matrix of data, 17 cases were missing on 12 of the 43 variables. These missing data permitted only 132 questionnaires to be used to build the models if listwise deletion was used. To fill these missing cases the method of using a highly correlated item was used. The item that had a missing case was correlated with the other items that were hypothesized to compose the variable. The missing case was then inputted as the copy from the correlated item for the same row. This technique permitted the use of the entire data set, so 146 cases were used for the analyses.

2.6 Measures

All of the measures were taken from previously published articles on work and family. These measures having well performed in other work-family surveys were deemed more than adequate to model the work-family relations.

The questionnaire was built so as to have the variables pertaining to the work environment in the first section of the questionnaire. These variables were work autonomy, work conflict, work pressure and the work in self-construct. The second section was composed of the quality of work scale. The third section was composed of the family environment variables, family support, family conflict, marital role, spouse conflict and family in self-construct. The fifth section was composed of the quality of family scale. Finally the last section of the questionnaire was composed of the demographic variables (see appendix for the entire questionnaire).

2.6.1 Objective Work Conditions

Work Autonomy

Autonomy is a sense of perceived control over one's environment, it is a basic human need which, if unfulfilled, can affect an individual's physical and psychological well being (Langer, 1983). Autonomy or the degree to which employees feel they can make their own decisions and influence what happens on the job has been found to be strongly related to job satisfaction, motivation and performance.

The measure of work autonomy constructed by Breugh (1985) has 9 items separated into three dimensions: Work method, work scheduling and work criteria. Each subscale has three items on a 7 point continuum.

In their study, reliabilities were of $\alpha=0.77$ for the entire scale, for method autonomy an $\alpha=0.97$, for scheduling autonomy of $\alpha=0.97$, for criteria autonomy of $\alpha=0.96$ (Breugh & Becker, 1987). In this study only two of the subscales are used, method autonomy and scheduling autonomy. An example of method autonomy is “I am allowed to decide how to go about getting my job done (the methods to use)”. An example of scheduling autonomy is “I have some control over the sequencing of my work activities (when I do what).”

Work Conflict

Work conflict is the extent to which a person experiences incompatible role pressures within the work domain. The incompatibility may stem from multiple role senders, one role sender, or a lack of fit between the focal person and role requirements (Kopelman, Greenhaus & Connolly; 1983). The scale is made of 8 items on a 5 point Likert, and the reliability is of $\alpha=0.80$ for the study of Kopelman et al (1983). The scale was also used by (Gutek, Searle & Klepa; 1991) with a reliability of $\alpha=0.81$. An example of work conflict is “On the job I work under incompatible policies and guidelines.”

Work Pressure

Work pressure measures the extent to which respondents feel constrained or hampered by aspects of their jobs (Sutton & Rousseau, 1979).

It consists of 4 items on a point 5 scale with no reliability estimates available. An example of work pressure is “I often feel overcome by pressures from this job.”

2.6.2 Objective Family Conditions

Family Conflict

Family conflict refers to the extent to which a person experiences incompatible role pressures within the family domain. The incompatibility may stem from one role sender, multiple role senders, or a lack of fit between the focal person and role requirements (Kopelman et al, 1983). There are 8 items on a 5 point scale, with an reliability of $\alpha=0.87$ for the study of Kopelman et al (1983). The scale was also used by (Loerch, Russel & Rush, 1989) with a reliability of $\alpha=0.80$ and by (Parasuraman, Greenhaus & Skromme Granrose, 1992). An example of family conflict is “My family does not enjoy doing some of the things I like to do.”

Marital Strains and Household Strains

Marital strain refers to role overload, stemming from a combination of distinct roles. Marital strains is divided into the two following factors:

- (1) Non-reciprocity, the lack of reciprocity and the feeling on the respondent's part that the marriage or partnership inhibits her/his personal growth (Kandel et al, 1985). The reliability in their study for the 8 items is $\alpha=0.83$. An example of non-reciprocity is “I do too much for my partner.”

(2) Depersonalisation, the feeling of emotional distance between the respondent and her/his spouse (Kandel et al, 1985). The reliability in their study for the 3 items is $\alpha=0.73$. An example of depersonalisation is “I cannot talk with my partner about important things.”

Family Support

Family support refers to the perception that the individual has that the family helps lessen the hardships that he/she is going through. When one perceives family support, one believes that his/her needs for support, information, and feedback are fulfilled (Procidano & Heller, 1983).

The reliability of the scale of 20 items on a 7 point Likert for the study of Procidano & Heller (1983) was of 0.90. In this study five out of the twenty items were included. These five items completed the picture of the family. An example of family support is “I have a deep sharing relationship with a number of members of my family.”

2.6.3 Work outcomes

Quality of Work Life (QWL)

The quality of work life scale assesses an individual's job-related well being and the extent to which work experiences are rewarding and fulfilling (Duxbury & Higgins, 1991; Higgins, Duxbury & Irving, 1992; The Michigan Organisational Assessment Questionnaire, 1975). Job satisfaction is one of the components of QWL, but does not tap the entire structure. There are 8 items on a 7-point Likert, with a reliability of $\alpha=0.90$

(Higgins, Duxbury & Irving, 1992). An example of quality of work is “not doing my best ----- doing my best”

2.6.4 Family Outcomes

Quality of Family Life (QFL)

Quality of family life is similar to Quality of Work Life. It is a construct that assesses an individual's family-related well-being and the extent to which his/her roles in the family are rewarding (Duxbury & Higgins, 1991; Higgins, Duxbury & Irving, 1992; The Michigan Organisational Assessment Questionnaire, 1975). Family satisfaction is one of the components of QFL, but does not tap the entire structure. There are 8 items on a 7 point Likert, with a reliability of $\alpha=0.92$ (Higgin, Duxbury & Irving, 1992). An example of quality of family life is “Do not know my family well ----- Know my family well”

All of the scales self were on a 7 point Likert, this was done to minimise the confusion in filling the questionnaire.

The questionnaire was first built in English and then translated into French by a professional translator for the Québec hospitals. The translated questionnaire was back-translated in English to compare with the original and see if concepts had been well translated. Since the back-translated questionnaire measured the same concepts as the original questionnaire the translation was kept.

2.7 Data preparation

The scales representing the objective work conditions, and the objective family conditions were collapsed. For example the six items of the work conflict scale were grouped to form a one item work conflict variable, the other variables were also grouped to form one item variables.

The quality of work life and quality of family life scales were verified, but were found to be lack in reliability, the Cronbach alpha was very low, 0.65 for the quality of work life scale and 0.68 for the quality of family life scale. Closer examination of the scale of quality of work life and quality of family life showed that the scales were composed of two sub-scales. The scale of quality of work life could be divided in two separate structures, one section composed of items focused on the structural dimension of work life or of the family life for example “Not working my best ----- Working my best”. The second section was composed of items focused on the emotional dimension of work life or family life, “Happy ----- Sad”.

It was deemed that the structural sub-scale of the quality of work life represented better the relationship nurses had with their work. For this reason items such as Not doing my best ----- Doing my best, Not working my hardest ----- Working my hardest were used. However items such as Sad ----- Happy, Not important ----- Important representing the emotional sub-scale of the quality of work life were not used. The sub-scale containing the emotional items of quality of family life was deemed to

represent better the quality of family life. For this reason items such as Sad -----
Happy, Not important ----- Important were used. However items such as Do not
know my family well ----- Know my family well, Not flexible ----- Flexible
representing the structural sub-scale of the quality of family life were not used.

CHAPTER THREE

RESULTS

The method of Structural Equations Modelling was used in comparing the models of work-family relations because of a number of advantages that it possesses. One advantage was that all the paths could be tested simultaneously. This simultaneous testing of the paths permits us to compare the effects of the work on the family and the effects of the family on the work concurrently. Path analysis could have given similar results, however SEM is much more precise.

3.1 Description of the data

The nurses seemed to feel that they possessed a high amount of work autonomy (mean=4.5, std dev=1.27, $p<0.001$), a medium amount of work conflict (mean=3.4, std dev=1.04, $p=0.7$), and a high amount of work pressure (mean=5.2, std dev=1.78, $p<0.001$). From these numbers we can picture the nurses as having a lot of pressure and of conflict in their jobs, and at the same time experiencing autonomy in their work, but only in the way they work, not in their schedules. Nurses seem very satisfied with their jobs since the items in the quality of work life are all very high (Quality of work 1, mean=5.4, std dev=0.99, $p<0.001$; Quality of work 2, mean=5.2, std dev=1.34, $p<0.001$; Quality of work 3, mean=5.2, std dev=1.35, $p<0.001$; Quality of work 4, mean=5.3, std dev=1.29, $p<0.001$).

For their family life the nurses felt that they had a high amount of family support (mean=5.6, std dev=0.92, $p<0.001$), a high amount of family conflict (mean=3.5, std dev=1.29, $p<0.001$), a very low amount of spousal strain (mean=2.8, std dev=1.38, $p<0.001$), and of marital role overload (mean=2.9, std dev=1.38, $p<0.001$). All of the items for the quality of family life being high (Quality of family 1, mean=4.4, std dev=0.85, $p<0.010$; Quality of family 2, mean=6.0, std dev=0.98, $p<0.001$; Quality of family 3, mean=6.3, std dev=0.88, $p<0.001$; Quality of family 4, mean=6.3, std dev=0.92, $p<0.001$) we can say that the nurses are very satisfied with their home life.

The variables in the model have a high level of kurtosis, for one quality of work variable it is of 9.1, for a quality of family it is of 4.6. This high kurtosis means that some of the variables are not normally distributed. However the assumption of normality in the distribution is very important to structural equation modelling as in some other statistical techniques (e.g. regression). Without the normality of the data the models cannot be estimated properly. Without a proper estimation method for the model, errors can occur in the fit of the model. Two solutions exist for the problem of normality. One solution is to transform the variables to make them normal, such a transformation would be to square root the data, or to use a logarithm transformation on the data. The second solution and the one in this research used was, to take into account the non normality of the data into the model with an estimation method that, would compensate for the non normality. The elliptical estimation method was used to estimate the models. The elliptical estimation assumes a distribution of the data which is not normal and in this manner can properly estimate the models even if the data is not normal.

3.2 Measurement model (Fig 3.1)

Before testing the structural models of direct and indirect paths the underlying measurement model of work-family relations was evaluated using a confirmatory factor analysis. This measurement model shows us if the concepts of objective work conditions, objective family conditions, subjective reactions to work conditions and subjective reactions to family conditions do exist. If the model is supported then we can assume that there exists a work-family environment and that the constructs used to represent this relationship do represent the work-family relationship. In this measurement model all four construct were allowed to freely correlate. The four constructs being objective work conditions, objective family conditions, subjective reactions to the work conditions and the subjective reactions to the family conditions.

Measurement model of work-family relations (fig 3.1)

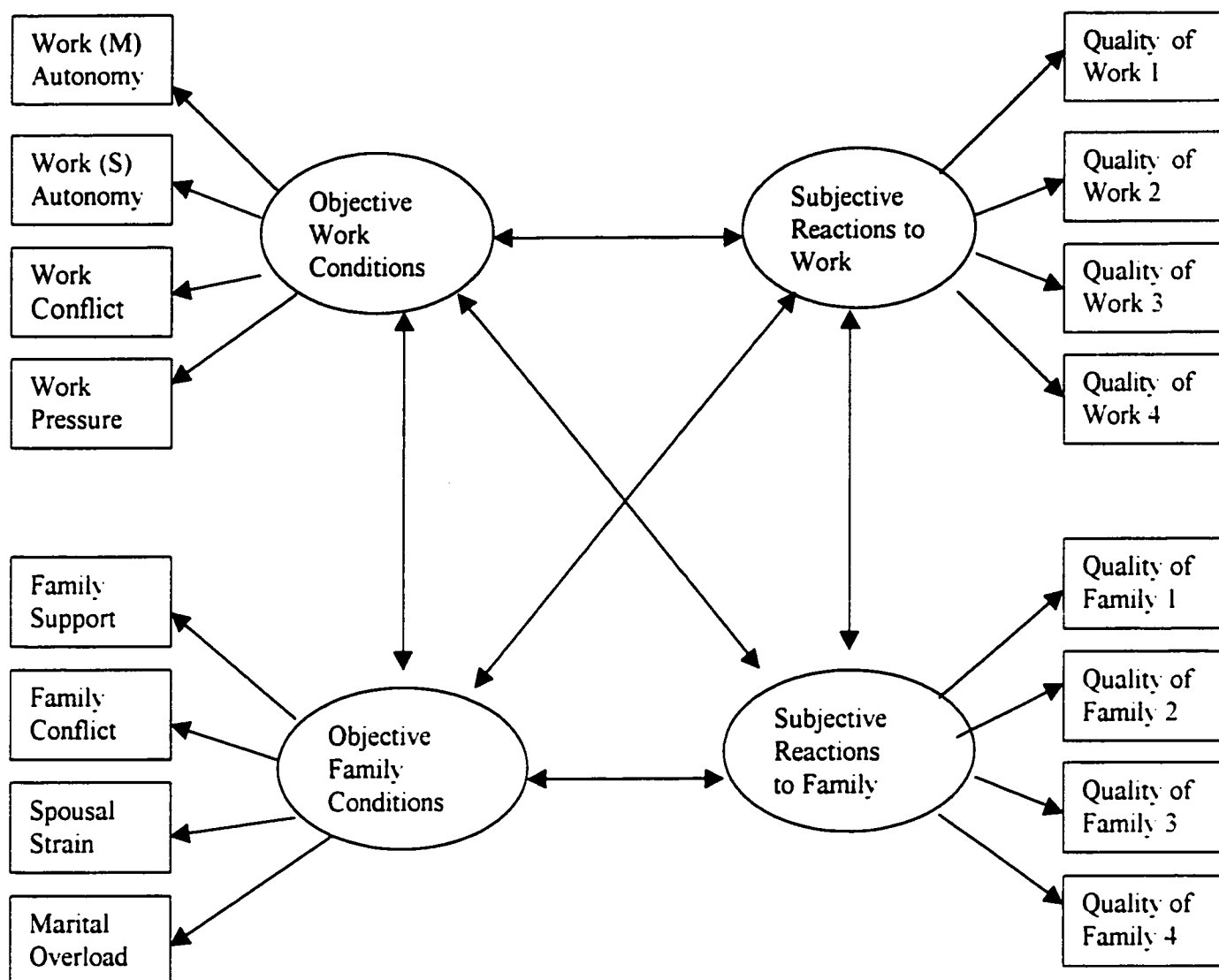


Figure 3.1: Predicted measurement model of work-family relations. For greater clarity, arrows indicating measurement errors, and disturbances are not shown.

The measurement model estimated with elliptical general least squares (EGLS) shows a good fit, the Chi-square is equal to 76.7 with 98 degrees of freedom, $p=0.9$, the Non Normed Fit Index is 1.58, the Comparative Fit Index is 1.0 (it is possible for the NNFI to be above 1.0). Since the Chi-square statistic is not significant and the CFI is well above the 0.90 cut off point we can accept the measurement model as having a good fit.

With this model accepted it can be concluded that the work-family relationship model is viable. In the measurement model we see that all the loadings are significant, which means that all of the variables load onto their respective factor. (see table 3.1, and graph 3.1).

The table below represents the loadings, the standardized paths between the variables and their respective factor.

Standardized solution for the measurement model work-family relations (Table 3.1)

| Variable | Standardized Path | Factor |
|--------------------------|-------------------|---|
| Quality of Work life 1 | 0.656 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 2 | 0.716 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 3 | 0.716 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 4 | 0.629 ** | Subjective Reactions to Work Conditions |
| | | |
| Quality of Family life 1 | 0.935 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 2 | 0.812 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 3 | 0.709 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 4 | 0.540 ** | Subjective Reactions to Family Conditions |
| | | |
| Work Autonomy Method | 0.644 ** | Objective Work Conditions |
| Work Autonomy Schedule | 0.411 ** | Objective Work Conditions |
| Work Conflict | - 0.855 ** | Objective Work Conditions |
| Work Pressure | - 0.492 ** | Objective Work Conditions |
| | | |
| Family Support | 0.465 ** | Objective Family Conditions |
| Family Conflict | - 0.602 ** | Objective Family Conditions |
| Marital Role Overload | - 0.866 ** | Objective Family Conditions |
| Spousal Strain | - 0.776 ** | Objective Family Conditions |
| | | |

*p<0.05, **p<0.01

The Cronbach alpha for the factors are: For the subjective reactions to the family conditions, 0.79; For the subjective reactions to the work conditions, 0.76; For the objective work conditions, 0.64; For the objective family conditions, 0.74. There are two variables whose loading should be higher, the work pressure and the family support variables. These variable may reduce the reliability of the objective work conditions and of the objective family conditions. When the work pressure variable is eliminated the objective work conditions scale is improved to an Cronbach alpha 0.66, also when the family support variable is eliminated from the objective family conditions scale the Cronbach alpha is improved to 0.76. For the next models the work pressure and family support variable were eliminated since they did not contribute to the model.

From the correlations between the-factors (table 3.2), we see a strong link between the objective family conditions and the subjective reactions to the family conditions. Otherwise all the other correlations are relatively small.

Table 3.2. Correlation table of factors for measurement model

| | Objective work conditions | Objective family conditions | Subjective reactions to work | Subjective reactions to family |
|--------------------------------|---------------------------|-----------------------------|------------------------------|--------------------------------|
| Objective work conditions | 1.0 | | | |
| Objective family conditions | 0.184 | 1.0 | | |
| Subjective reactions to work | -0.219 | -0.107 | 1.0 | |
| Subjective reactions to family | -0.105 | -0.512 ** | 0.049 | 1.0 |

*p<0.05, **p<0.01

3.3 Path Analysis of the Structural Models

The data was fitted in the tree models, the direct work-family relations (fig 3.2), the indirect work to family relations (fig 3.3), and the indirect family to work relations (fig 3.4). The structural models were analysed using EQS 5.3 (Bentler, 1996).

3.3.1 Model of direct work family relations (fig 3.2)

The fit of this model estimated with elliptical general least squares (EGLS) was determined by the Chi-square of 51.3 based on 75 degrees of freedom, the p=0.9; the NNFI of 1.7, the CFI of 1.0. A CFI above 0.90 is considered a good fit for a structural model. The model of direct work-family relations is then seen as having a very good fit.

On table 3.3 we see the standardized path coefficients that indicate the magnitude of the effect for each path.

Model of direct work-family relations (fig 3.2)

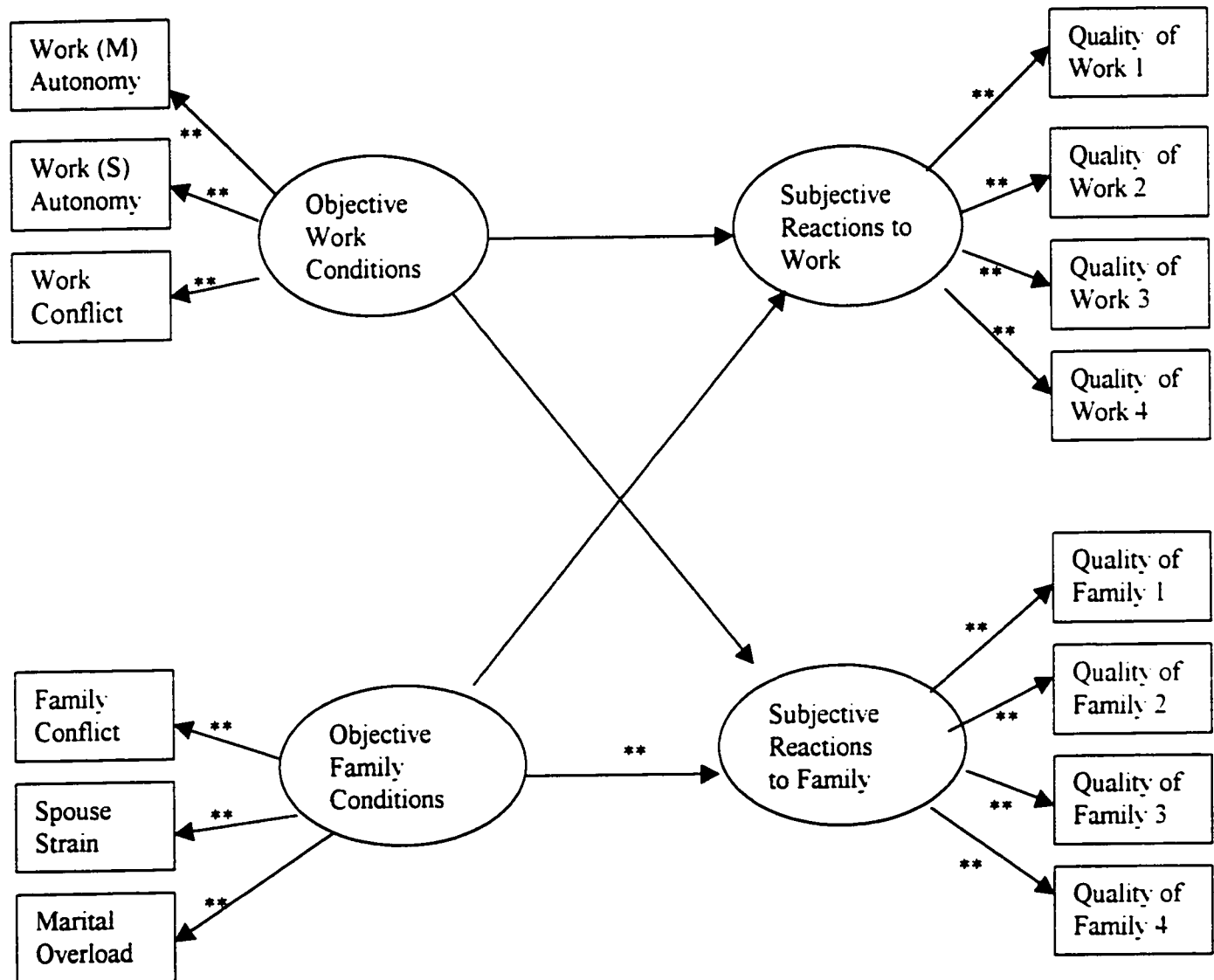


Figure 3.2: Predicted measurement model of work-family relations. For greater clarity, arrows indicating measurement errors, and disturbances are not shown.

* $p < 0.05$, ** $p < 0.01$.

The table below represents the loadings, the standardized paths between the variables and their respective factor.

Standardized solution for Model of direct work-family relations (Table 3.3)

| Variable | Standardized Path | Factor |
|-----------------------------|-------------------|---|
| Quality of Work life 1 | 0.784 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 2 | 0.656 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 3 | 0.710 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 4 | 0.569 ** | Subjective Reactions to Work Conditions |
| | | |
| Quality of Family life 1 | 0.943 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 2 | 0.839 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 3 | 0.720 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 4 | 0.531 ** | Subjective Reactions to Family Conditions |
| | | |
| Work Autonomy Method | 0.902 ** | Objective Work Conditions |
| Work Autonomy Schedule | 0.508 ** | Objective Work Conditions |
| Work Conflict | - 0.568 ** | Objective Work Conditions |
| | | |
| Family Conflict | - 0.555 ** | Objective Family Conditions |
| Marital Role Overload | - 0.842 ** | Objective Family Conditions |
| Spousal Strain | - 0.783 ** | Objective Family Conditions |
| | | |
| Factor | Standardized Path | Factor |
| | | |
| Objective Work Conditions | 0.124 | Subjective Reactions to Work Conditions |
| Objective Work Conditions | - 0.136 | Subjective Reactions to Family Conditions |
| | | |
| Objective Family Conditions | 0.027 | Subjective Reactions to Work Conditions |
| Objective Family Conditions | 0.426 ** | Subjective Reactions to Family Conditions |
| | | |

*p<0.05, **p<0.01

In figure 3.2 we see that out of the four paths that represent the direct work-family relationship only one is significant. The path between the objective family conditions and the subjective reactions to the family conditions is significant at a 1% level, the objective family conditions spill into the quality of family life. However no other path between the family or the work variables is significant. We can then reject the hypothesis that work-family relations act through a mechanism of spillover or of compensation, but rather through a process of segmentation. The work conditions do not affect the family reactions, nor do the family conditions affect the work reactions. The two worlds (work and family) act as separate. Also we see no relations between the objective work conditions and the subjective reactions to the work conditions.

3.3.2 Model of indirect path from work to the family (fig 3.3)

The model of indirect relations from the work to the family (fig 3.3) is different from the model of direct work-family in that for the indirect model it is hypothesized that the subjective reactions to the work conditions (quality of work life) will affect subjective reactions to the family conditions (quality of family life).

The fit of the model was estimated with elliptical general least squares (EGLS), the Chi-square of 51.1 for 75 degrees of freedom, and the $p=0.9$, the NNFI of 1.7, the CFI of 1.0. A CFI above 0.90 is considered a good fit for a structural model. The model of indirect relations from the work to the family relations is then seen as having a very good fit. On table 3.4 we see the standardized path coefficients that indicate the magnitude of the effect for each path.

Model of indirect work to the family relations (fig 3.3)

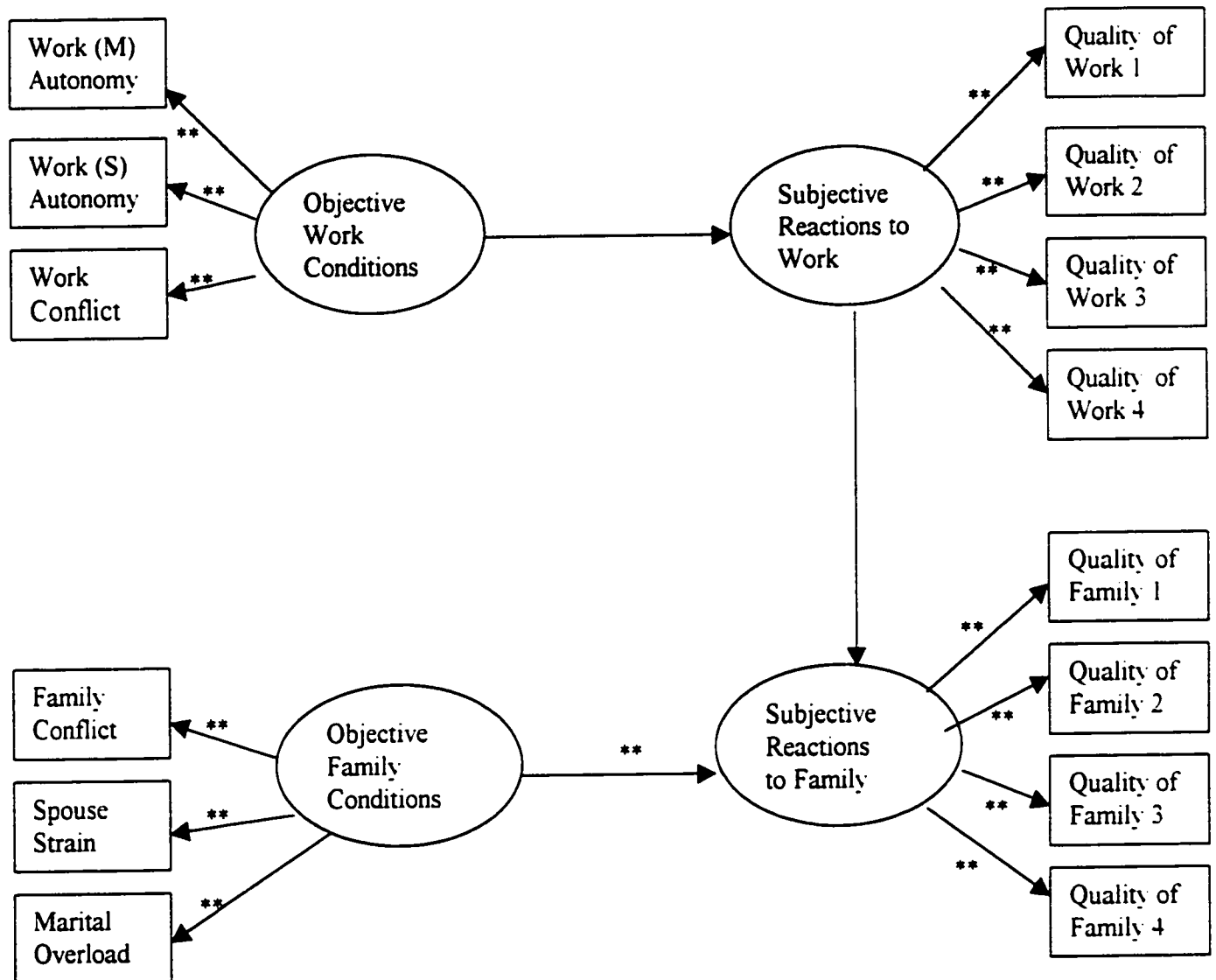


Figure 3.2: Predicted measurement model of work-family relations. For greater clarity, arrows indicating measurement errors, and disturbances are not shown.

* $p < 0.05$, ** $p < 0.01$.

The table below represents the loadings, the standardized paths between the variables and their respective factor.

Standardized solution for Model of indirect work to the family relations (Table 3.4)

| Variable | Standardized Path | Factor |
|---|-------------------|---|
| Quality of Work life 1 | 0.781 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 2 | 0.665 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 3 | 0.710 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 4 | 0.571 ** | Subjective Reactions to Work Conditions |
| | | |
| Quality of Family life 1 | 0.945 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 2 | 0.829 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 3 | 0.728 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 4 | 0.521 ** | Subjective Reactions to Family Conditions |
| | | |
| Work Autonomy Method | 0.916 ** | Objective Work Conditions |
| Work Autonomy Schedule | 0.484 ** | Objective Work Conditions |
| Work Conflict | - 0.544 ** | Objective Work Conditions |
| | | |
| Family Conflict | - 0.556 ** | Objective Family Conditions |
| Marital Role Overload | - 0.838 ** | Objective Family Conditions |
| Spousal Strain | - 0.784 ** | Objective Family Conditions |
| | | |
| Factor | Standardized Path | Factor |
| | | |
| Objective Work Conditions | 0.132 | Subjective Reactions to Work Conditions |
| | | |
| Objective Family Conditions | 0.435 ** | Subjective Reactions to Family Conditions |
| | | |
| Subjective Reactions to Work Conditions | 0.045 | Subjective Reactions to Family Conditions |
| | | |

*p<0.05, **p<0.01

In the model of indirect paths from the work to the family there is only one significant path. This path is the same as in the direct model of work-family relations. The path between the objective family conditions and the subjective reactions to the family conditions is significant at a 1% level, the objective family conditions spill into the quality of family life. However no other path between the family or the work variables is significant. The path between the subjective reactions to the work conditions and the subjective reactions to the family conditions is not significant. Since we have accepted the model as having a good fit, we cannot question this construct of indirect paths from the work to the family. We can then reject the hypothesis that the work has an indirect effect on the family. Experiencing a low quality of work life will not affect the quality of family life.

3.3.4 Model of indirect paths from the family to the work.(fig 3.4)

The model of indirect relations from the family to the work (fig 3.4) is different from the model of direct work-family in that for the indirect model it is hypothesized that the subjective reactions to the family conditions (quality of family life) will affect subjective reactions to the work conditions (quality of work life).

The fit of the model was estimated with elliptical general least squares (EGLS), the Chi-square of 51.1 for 75 degrees of freedom, and the $p=0.9$, the NNFI of 1.7, the CFI of 1.0. A CFI above 0.90 is considered a good fit for a structural model. The model of indirect relations from the work to the family relations is then seen as having a very good

fit. On table 3.4 we see the standardized path coefficients that indicate the magnitude of the effect for each path.

Model of indirect family to the work relations (fig 3.4)

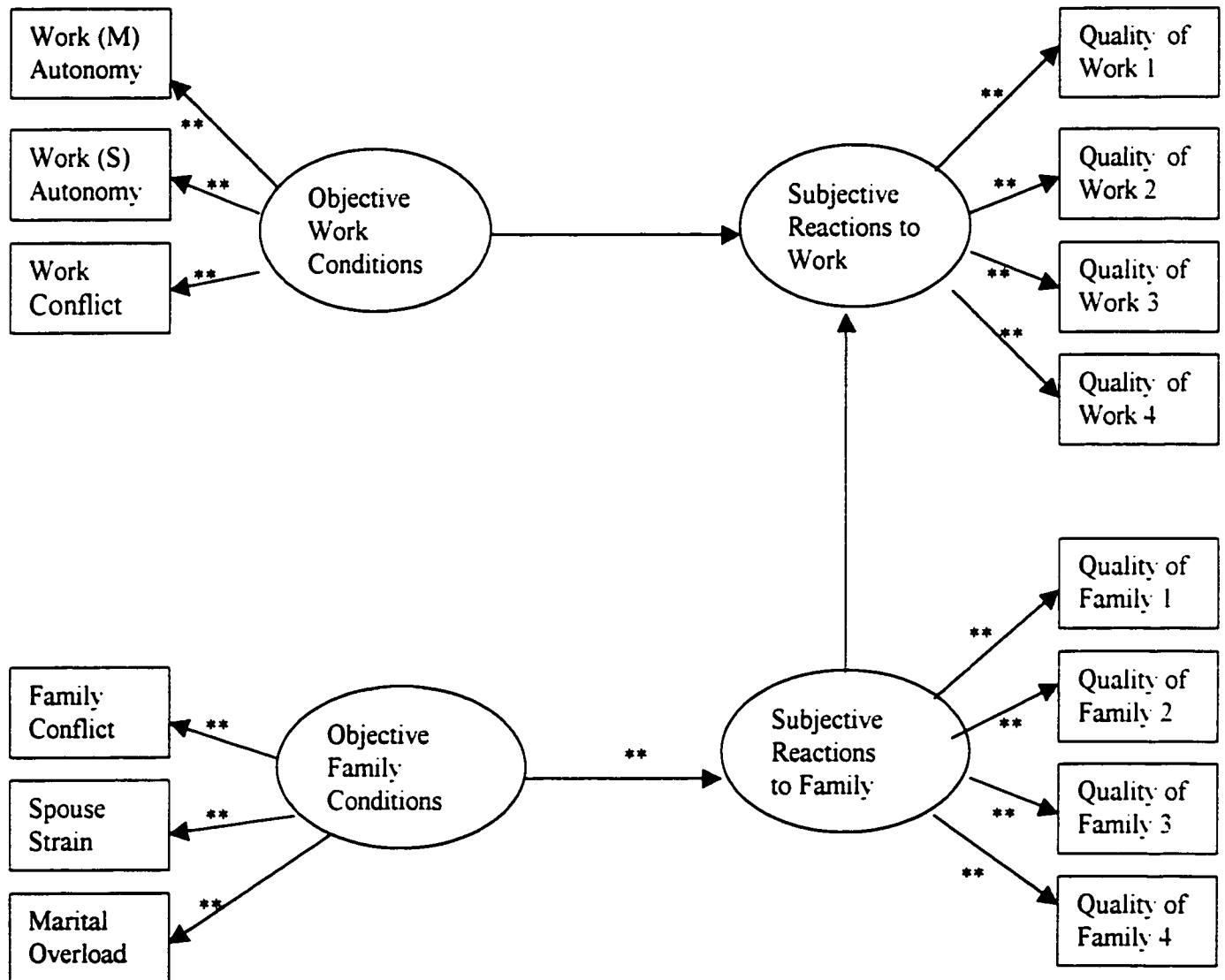


Figure 3.2: Predicted measurement model of work-family relations. For greater clarity, arrows indicating measurement errors, and disturbances are not shown.

* $p < 0.05$, ** $p < 0.01$.

The table below represents the loadings, the standardized paths between the variables and their respective factor.

Standardized solution for Model of indirect family to the work relations (Table 3.5)

| Variable | Standardized Path | Factor |
|---|--------------------------|---|
| Quality of Work life 1 | 0.788 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 2 | 0.668 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 3 | 0.711 ** | Subjective Reactions to Work Conditions |
| Quality of Work life 4 | 0.578 ** | Subjective Reactions to Work Conditions |
| | | |
| Quality of Family life 1 | 0.944 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 2 | 0.831 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 3 | 0.731 ** | Subjective Reactions to Family Conditions |
| Quality of Family life 4 | 0.525 ** | Subjective Reactions to Family Conditions |
| | | |
| Work Autonomy Method | 0.914 ** | Objective Work Conditions |
| Work Autonomy Schedule | 0.486 ** | Objective Work Conditions |
| Work Conflict | - 0.549 ** | Objective Work Conditions |
| | | |
| Family Conflict | - 0.558 ** | Objective Family Conditions |
| Marital Role Overload | - 0.839 ** | Objective Family Conditions |
| Spousal Strain | - 0.784 ** | Objective Family Conditions |
| | | |
| Factor | Standardized Path | Factor |
| | | |
| Objective Work Conditions | 0.146 | Subjective Reactions to Work Conditions |
| | | |
| Objective Family Conditions | 0.437 ** | Subjective Reactions to Family Conditions |
| | | |
| Subjective Reactions to Family Conditions | 0.074 | Subjective Reactions to Work Conditions |
| | | |

*p<0.05, **p<0.01

In the model of indirect paths from the family to the work there is only one significant path. This path is the same as in the direct model of work-family relations. The path between the subjective reactions to the family conditions and the objective family conditions is significant at a 1% level, the objective family conditions spill into the quality of family life. However the path between the subjective reactions to the work conditions and the subjective reactions to the family conditions is not significant. Since we have accepted the model as having a good fit, we cannot question this construct of indirect paths from the family to the work. We can then reject the hypothesis that the family has an indirect effect on the work. Experiencing a low quality of family life will not affect the quality of work life.

The segmentation theory between work and the family has been accepted, while both the compensation and spillover theories have been rejected. The indirect models of work family relations, although accepted did not show any indirect influence from the work to the family nor from the family to the work.

CHAPTER FOUR

DISCUSSION

4.1 The work-family models

4.1.1 Objective Family Conditions to outcomes

If we take a closer look at the links in the direct work-family relations (figure 4.1) we see that the objective family conditions were significantly related to the quality of the family life. The positive and significant link between the family environment and the family outcomes such as family satisfaction (Higgins & Duxbury, 1992) is well documented in the literature and it was expected. This positive link shows that for example a high level of marital or family conflict would diminish the family satisfaction. Or to put it another way a low level of family conflict would lead to a higher level of family satisfaction.

The fact that no paths were significant between the objective family conditions and the subjective reactions to the work conditions implies that nurses segmented their family from their work. The segmentation could be voluntary or not, for example a nurse having marital problems at home might want to keep her marital problems at home. The nurse could see that bringing her problems from the home might affect the care she gives to her

patients. Not wanting to give less attention to her patients she might not want her marital problems to spill.

This finding is not encouraging for hospitals that promote family friendly policies, such as a daycare in the work place, or more flexibility in the schedules. These programs might not have the direct effect of enhancing the quality of the work life. This view of segmentation was developed mostly for men who in 1950's separated their family from their work, in a similar fashion that their homes were separate from their work (suburbs versus city). It is possible that now women would want to keep both worlds separate, maybe as a counter to the number of times that the work intrudes in the family. With a number of nurses being on call, working at any time of day with little notice to enhance their home revenues these nurses might feel that work already disrupts their family life and in this manner they segment their family from their work. Yet we have to be careful with the idea of cancelling family friendly policies at work. It might be that minor day to day irritants do not cross the frontier from the family to the work, however major family conflicts with the work might behave differently.

The link between the objective family conditions and the subjective reactions to the work conditions, although not significant is of a positive sign. Had the link been stronger, a spillover relationship would have been represented. With this finding it is a possibility that nurses although segmenting their family from their work, might spill some of their positive or negative emotions from their home to their work.

4.1.2 Objective work Conditions to outcomes

Again by looking at the direct model of work family relations (figure 3.2) we see that the objective work conditions were not significantly related to the quality of the work life nor to the quality of the family life. The paths, although not significant, reveal interesting information.

If there is no significant link from the objective work conditions to the family satisfaction then it can be assumed that segmentation theory holds from the work to the family. It is possible that for the minor day to day problems the nurses can segment their work from their family and might not need the help from the hospital. This segmentation would imply that the hospital does need to improve the management of the nurse's schedules, or of their work environment, for the nurses to enjoy their family lives. Finding that this path between the work environment and the quality of the family life is not significant is not new to the literature (Ridley, 1969; Parasuraman et al, 1992).

This study found that the objective work conditions do not have a significant impact upon the quality of work. This finding could encourage hospitals to withdraw from programs that better the work environment, since better work conditions do not lead to a higher work satisfaction. However for major crises in the work life of the nurses, such as a burnout or harassment the hospitals would need to keep the different programs (counselling) that help the nurses.

The lack of significant link between the objective work conditions and the quality of work is surprising. One would have thought that work attributes influence the quality of work. For example finding that work conflict does not diminish the quality of work life, or that work autonomy does not enhance the quality of work life is contrary to other research in work and family .

The relationship between the objective work conditions with the quality of family life, is not significant, however it shows an interesting picture. Even if the link is not significant, the path is negative. Had this link been significant the compensation theory would have been supported. In other words a nurse might have involved herself more in her family life if she had been in a difficult situation at work.

Another way of looking at the negative link between the objective work conditions and the quality of family life, had it been significant, is the involvement hypothesis. In the involvement hypothesis a nurse might be too much involved in her work to afford herself a good quality of family life. In this case the work becomes very much important to the nurse. Such situations are positive from hospitals since it is in the interest of the hospital to have workers who invest themselves a lot in their work. They are more enthusiastic and harder working than other nurses. The only problem might stem from a lack of family life and as such, a disequilibrium between work and family if indeed it can be seen as a lack of equilibrium.

4.1.3 Indirect models

Not supporting indirect models of work family relations means that there is no interaction between the quality of work life and the quality of family life, one does not have an effect the other. In other words nurses cannot ameliorate their quality of family to improve their quality of work life or vice versa. However it also means that a nurse who is dissatisfied with her quality of family life would not let this dissatisfaction affect on her quality of work life, or vice versa. Having no indirect relationships is not unexpected. A search of the literature indicates that this has not been an area of extensive research (Lambert, 1990). Authors have usually assumed that their studies represented indirect relationships, however the support was more from logic than statistical analysis (Lambert, 1990). For example Piotrkowski (1979) argues that the autonomy a worker has spills indirectly in the family satisfaction, through the work satisfaction. However for Lambert (1990), the autonomy can directly have an effect on the family satisfaction because of better scheduling of work.

This research on nurses adds to the body of knowledge that the links in the work family relationships are direct.

4.2 Qualitative data

Opinions and comments from nurse on their work life and home life show a different picture than the quantitative section (models). Here the majority of nurses find that their work interferes with their family life. The interference is demonstrated in many ways. One nurse cites that her family life is in the verge of extinction because her work

takes so much time, another nurse that she has difficulty performing as expected, meaning very well both in her job and in her family life. In the comments by the nurses the presence of children seem to add resentment towards the job for taking the time away from the family. One very important factor seems to be hours of shift work. The shift work, being either of evening, night or rotating seems to create an enormous amount of conflict between the work and the family. One nurse feels that the time spent awake with her family members is non-existent, another that the shift work is isolating him from friends and family. The other factor that seems to emerge from the qualitative data is the impact of the restructuring of hospitals. The two hospitals in Québec went through restructuration one year before the study and the hospital in Ontario was gearing itself for major downsizing in the coming year.

4.3 Limitations

We see a different view of family relations coming from the quantitative data i.e. the models than from the qualitative data. This could be explained by the method of statistics used. The models were estimated under Structural Equation Modelling. SEM as a statistical technique has advantages and disadvantages, the advantages have been used to build a precise and reliable model of work family relations. However one disadvantage of the technique is that it needs a minimum number of subjects to estimate the models. This means that it was not possible to analyse the different groups of shift workers, night, day, evening and rotating shift workers because of a lack of subjects, and as a consequence all shift workers were agglomerated. Neither could we differentiate between

nurses with or without dependants. Because of a lack of subjects we could not use structural equation modelling to its full extent.

Shift working causes many problems for the workers family life. The interference that it creates has been documented, for example Simon (1990) cites that shift workers feel that they cannot plan their family life, their social life, their community life because of their work schedules. All these factors impact on the quality of family life. The problems of shift working with the work satisfaction is another topic that has also been well documented, Jamal (1989) found that shift working was negatively related to the work satisfaction. With an analysis of variance of the different types of shifts and of the variables we found no differences between the different types of shifts. Only two variables showed some tendency to have a different mean at a 10% significance level. These two variables are work conflict and work pressure with the night shift workers. We can see that nurses which work at night would have a tendency to have a different level of work conflict and pressure.

Not finding major differences in the types of shifts we can hypothesise that the nurses are a very homogeneous group. Since the group is very homogeneous the variability of the data is diminished, and with a diminished variability the statistical analyses do not show significant paths between the constructs (Objective work conditions, subjective reactions to family conditions and subjective reactions to work conditions). This would explain the lack of significant paths between the objective work conditions and the subjective reactions to the work conditions.

4.4 Future research

Proving segmentation between work and family as this study did, is not unusual. Staines (1980) finds that many studies prove the segmentation theory by not finding significant relationships between work variables and family variables. This study used variables that have already been used in the literature on work and family, as such it tried to regroup some work and family objective conditions under the same methodology. An extension would be to expand the variables studied in the work family relationship.

Another next step in studying work family relations would be to start looking at specifics of the work-family relations. A general model is useful as a sketch showing general outlines, but knowing if there are individual differences as to how nurses react towards work or family stressors. Studies have been done on the impact of type A personality and its impact on work family relations (Friedman & Rosenman, 1974). More types of personality could be tested to see if differences could be seen. Also the work family nexus has been too long neglected, instead of looking at the impact of one environment such as work on another environment such as the family, the reciprocal impact of both the work and the family should be studied. Finally longitudinal studies of work family relations which have been far too few (Zedeck, 1992) would give an understanding of work family relations which cross sectional studies cannot. Such research before, during and after the implementation of family friendly programs would help researchers understand the utility and the impact of these programs. Once the utility

of these programs understood it would be possible to give tools to hospitals and to the employees so they learn how to better manage their work family relations

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APPENDIX 1

DEFINITION OF WORK-FAMILY THEORIES

From Young, L; Kleiner, B in the Women in Management Review (1995)

Spillover theory: Proposes that there is no boundary between the workplace and the home. Therefore, what happens at work will also happen at home. The experiences and attitudes we have from work will influence the way we interact with our family.

Compensation theory: Suggests that work and home have a compensating effect on each other. One can usually make up for what is missing in one environment from another. If one feels unfulfilled at work, the negative experience could be compensated by a more positive experience at home.

Segmentation theory: Advocates that work and family are distinct entities, and experiences from one will not affect or influence experiences from the other.

APPENDIX 2

1.

La relation inter-collègues sont quelques fois plus difficiles a composer que le travail lui-même. Le type de directorat a aussi une importance dans le climat au travail. La famille est mon havre de paix après une semaine hardie au travail.

2.

Le travail de nuit a temps complet avec une famille n'est pas toujours facile. Essaie-le? Merci!.

3.

Quand les enfants étaient plus jeunes, je ne pouvais pas m'en occuper comme je l'aurais voulu, par manque de temps. Il me restait peu de temps pour moi. Maintenant tout est correct.

4.

Je me sens bien seule sur le plan familial. Au travail je manque beaucoup d'être motivée par mes supérieurs jamais félicitée.

5.

Je suis fatiguée le soir en revenant du travail donc moins d'entrain pour la famille.

6.

Je trouve incompatible mon travail les fins de semaine avec des enfants d'âge scolaire. (Garderie semaine et fin de semaine). Couple travaillant tous les deux 1 fin/semaine sur deux.

7.

Ma vie familiale est beaucoup en voix d'extinction a comparer à mon travail qui prend beaucoup de place.

8.

Dans les circonstances de fusion de departements dans les hôpitaux actuellement j'ai connu ça et ça a augmenté mon stress au travail et diminué mon sommeil. Changement de personnel a cause une perte d'amis au travail, temps plus difficile avec famille et plus grande fatigue.

9.

Ce qui me fait le plus de tort est le niveau de stress qui augmente d'année en année et me laisse de plus en plus fatiguée. Cela perturbe ma qualité de vie familiale.

10.

Travaille souvent trop stressant-trop fatiguant demande souvent trop d'énergie qu'il me semble que parfois je manque d'énergie pour ma famille.

11.

J'essaie de garder un équilibre entre les deux quand je travaille trop à l'hôpital je deviens moins patiente à la maison et en étant consciente de ça je dose mes journées au travail pour être bien partout.

12.

C'est bien relatif ... entre les tâches et responsabilités versus ambiance : Ajustement Constant car conditions de travail chargés depuis un certain temps; coupures et bumping..... impliquant nouveau personnel différentes expériences et compétences.

13.

J'adore ma famille, j'aime beaucoup mon travail. Je dépense souvent tellement d'énergie pour mon travail, que je suis épuisée lorsque j'arrive à la maison et j'ai l'impression de négliger mon mari et mes enfants.

14.

Vie de famille très difficile en travaillant le soir, fin de semaines et jours fériés.

15.

Je n'aime pas les traineries du soir quand je me lève le lendemain matin. Les tâches familiales ne sont pas accomplies de façon équitables.

16.

Je n'ai pas beaucoup de temps entre ma famille et mon travail.

17.

Je pense que le fait que je travaille sur le quart de soir m'isole du point de vue sociale.

18.

Je crois que j'allie les deux assez facilement et ma famille est capable d'en faire autant.

19.

Difficile de concilier les deux. Impression de ne pas donner le maximum ni dans l'un ni dans l'autre, de perdre des occasions professionnelles à cause de ma famille, de ne pas m'impliquer comme j'aimerais au travail (réunions en dehors des heures de travail, comité etc). Tout en ayant l'impression de délaisser les enfants à cause du travail, de ne pas leur donner assez de temps.

20.

37:50 au travail

Le reste à ma famille.

Peut-être plus de temps seule et en couple.

21.

Le travail de soir et une vie familiale où les enfants vont à l'école c'est très difficile, peu de contacts en éveil.

22.

Ma famille passera Toujours avant mon travail. Dans contexte actuel, au travail tu te sens pas impliqué consulté -> tu subis bien souvent.

23.

Bonheur, Partage, Responsabilité, Respect.

24.

Quand on se donne a 100% dans chacun il faut trouver du temps pour soi-même seule en dehors du milieu de travail.

25.

Mes expériences en vie familiale sont avec des adolescents à ce moment.

26.

A cause de mon travail de nuit j'ai moins de temps pour le social difficile de m'organiser un souper entre amis. Trop fatiguée.

27.

Le travail depuis 2 ans très difficile, peu satisfaisant. Peu de sentiments d'appartenance. La gestion prend trop de place et l'humain pas assez.

28.

Le fait de travailler sur des quarts de travail (J-S-N) peut interférer dans nos relations avec conjoint + enfants. La vie de couple est affectée.

29.

Je manque de temps pour passer avec ma famille.

30.

Ayant un conjoint qui est souvent en déplacement pour les besoins de son travail, je souhaiterais beaucoup pouvoir retrouver un poste de jour afin d'être plus présente avec mes enfants adolescents.

31.

Je donne beaucoup d'importance aux deux (travail + famille).

32.

J'adore mon travail et je vis pour ma famille.

33.
Depuis mon divorce, deux ans, je n'ai pas eu la visite de mes frères, et ce même si j'allais les visiter. J'ai donc décidé de mettre des distances à ma famille.

34.
Je travaille à temps plein depuis 8 ans. J'ai toujours travaillé depuis 25 ans mais à temps occasionnel (de 2 à 5 jours/semaine) Jusqu'a il y a 8 ans.

35.
Je déplore que l'horaire de mon travail (soir) me prive de la présence de mes enfants par contre nos liens n'en sont que renforcés. Je souhaite que le temps partagé entre le travail et la famille soit plus équitablement partagé.

36.
Travail accaparant moins disponible et en faire pour la famille.

37.
Le travail qui est parfois, épuisant, brulant, me reste parfois peu d'énergie après les heures de travail.

38.
I need more time with my family.

39.
I am extremely fortunate I am not absolutely required to work (financially) and therefore can work approx 1/2 time and pursue other interests still having time for me.

40.
I obtain a great deal of satisfaction to assist patients to become better. The elderly and children are my favorites.

41.
Role change one year ago; Role to be changed again this year. Some situations are not in my control. Partner diagnosed with cancer 1 year ago. Rapid changes at work - working in high stressed situations.

42.
Do something for yourself regularly. It helps your family (especially kids). Remember that you are a separate person with your own needs.

43.
Due to cutbacks, laid off full time nursing, now part time RN part time sales rep. Stressful adjustment with family life.

44.

Work commitments limit the amount of time I spend with my family, who live 40-50 minutes away from home.

45.

My family and home life come first and always will. My job second and always will.

46.

Continuous change make work both stressful and stimulating.

My children are grown up and still emotionally close to us.

I have days when I would like to escape from it all!!

47.

Nurses put pressure on their families to 'produce' as we put pressure on ourselves at work or we tend to act like martiens & do everything ourselves and don't let the family members try & maybe fail.

48.

The relationships changes ones time and with varying circumstances.

49.

Je suis écoeurée de travailler dans le milieu de la santé tel qu'il est aujourd'hui. Beaucoup de détérioration depuis 13 ans.

50.

Qualité et relations de travail à améliorer. Avec les coupures, la qualité des soins n'est plus ce qu'elle était.

51.

Mon travail draine trop d'énergie, il en reste peu à la maison.

52.

Très difficile de concilier famille et travail. Il faudrait être performante partout. Très lourd.

53.

Mon rapport famille/travail est très bien équilibré et je suis heureuse dans ce que je fais et j'accomplis.

54.

Ma famille aimerait que je mette moins d'énergie au travail. Elle me sent épuisée certains mois de l'année.

55.

Il est important d'être heureuse à la maison pour avoir un travail difficile comme le notre. Car l'harmonie on la retrouve au niveau familial et le soutien et l'encouragement également.

56.

Le travail demande tellement d'énergie qu'il n'est pas rare que lorsque j'arrive chez moi je n'ai plus beaucoup de patience.

57.

Je dois souvent faire accepter à mon conjoint les journées sur appel que j'accepte de jour, soir ou nuit car il est frustré lorsque je lui dit 'tu sais je travaille demain soir et tu devras faire le souper...'

58.

Equilibre.

59.

Malgré les compressions budgétaires, on nous demande de performer de plus en plus au travail, ce n'est pas toujours évident de concilier tout ceci avec la famille.

60.

Je viens tout juste (2 mois) de débiter une nouvelle relation après 12 ans de vie commune. J'ai répondu aux questions d'après ma nouvelle relation amoureuse.

61.

La santé mentale saine est possible par l'équilibre entre le temps consacré au travail et celui dévoué à la famille. Être capable de voir quand le travail et ses effets influence sa personnalité et son comportement.

62.

J'ai de plus en plus de difficultés à me sentir heureuse au travail - le lien avec le patient est moindre à cause de la charge de travail.

63.

Compte tenu des contraintes budgétaires, je pense le plus clair de mon temps à travailler. Conséquemment, j'ai moins de temps à passer avec la famille (enfants & conjoint). Les enfants s'en plaignent beaucoup.

64.

Je trouve difficile étant monoparentale, le chiffre (shift(Y)) de rotation. Par rapport à l'école, garderie (souvent demande que les enfants sont (soient(Y)) inscrits régulier) activités sportives ou autres. (difficulté à s'inscrire soi-même à des activités car manque des journées à cause de la rotations.

65.

J'arrive à bien coordonner mes activités at mon temps pour garder des rapports sains at satisfaisants avec ma famille.

66.

Travail de plus en plus exigeant - difficile de donner de la qualité/quantité. On nous en demande toujours plus.

APPENDIX 3

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|-----|---------|---------|--------|----------------|
| Autonomy Method | 146 | 1.00 | 7.00 | 4.5068 | 1.2705 |
| Autonomy Schedule | 146 | 1.00 | 7.00 | 4.0320 | 1.3278 |
| Family Conflict | 146 | 1.00 | 7.00 | 3.5377 | 1.2943 |
| Family Support | 146 | 2.20 | 7.00 | 5.6137 | .9252 |
| Marital Overload | 146 | 1.00 | 7.00 | 2.9418 | 1.2370 |
| Spousal Strain | 146 | 1.00 | 7.00 | 2.8527 | 1.3808 |
| Work Conflict | 146 | 1.00 | 6.13 | 3.3921 | 1.0415 |
| Work Pressure | 146 | 1.00 | 7.00 | 5.1952 | 1.7863 |
| Quality Family 1 | 146 | 1.00 | 7.00 | 6.4041 | .8516 |
| Quality Family 2 | 146 | 3.00 | 7.00 | 6.0685 | .9872 |
| Quality Family 3 | 146 | 4.00 | 7.00 | 6.3082 | .8833 |
| Quality Family 4 | 146 | 2.00 | 7.00 | 6.3425 | .9206 |
| Quality Work 1 | 146 | 2.00 | 7.00 | 5.4178 | .9949 |
| Quality Work 2 | 146 | 1.00 | 7.00 | 5.1918 | 1.3407 |
| Quality Work 3 | 146 | 1.00 | 7.00 | 5.2260 | 1.3533 |
| Quality Work 4 | 146 | 1.00 | 7.00 | 5.2877 | 1.2917 |
| Valid N (listwise) | 146 | | | | |

APPENDIX 4
CORRELATION

| | | QF1 | QF2 | QF3 | QF4 | QW 1 | QW 2 | QW 3 | QW 6 | AM | AS | FC | FS | MO | SS | WC | WP |
|--|---------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Pe ars on Co rre lati on | Q F1 | 1.00 0 | .361 (**) | .503 (**) | .368 (**) | .214(**) | .149 | .094 | .207 (*) | -.053 | .098 | -.028 | .180 (*) | -.129 | -.153 | -.028 | .038 |
| | Q F2 | .361 (**) | 1.00 0 | .245 (**) | .247 (**) | -.008 | .068 | .154 | .304 (**) | .097 | .011 | .130 | .185 (*) | -.112 | .058 | .075 | -.008 |
| | Q F3 | .503 (**) | .245 (**) | 1.00 0 | .438 (**) | .174(*) | .002 | .091 | .194 (*) | -.028 | .142 | -.107 | .199 (*) | -.128 | .121 | .057 | -.012 |
| | Q F4 | .368 (**) | .247 (**) | .438 (**) | 1.00 0 | .084 | -.031 | .043 | .125 | .112 | .029 | .130 | .231 (**) | -.126 | .120 | .012 | -.083 |
| | Q W1 | .214 (**) | -.008 | .174 (*) | .084 | 1.00 0 | .462 (**) | .344 (**) | .308 (**) | .086 | .082 | -.133 | .177 (*) | -.084 | -.044 | .246 (**) | .242(**) |
| | Q W2 | .149 | .068 | .002 | -.031 | .462(**) | 1.00 0 | .402 (**) | .366 (**) | .281 (**) | .181 (*) | -.002 | .023 | -.099 | .017 | .244 (**) | -.122 |
| | Q W3 | .094 | .154 | .091 | .043 | .344(**) | .402 (**) | 1.00 0 | .333 (**) | .250 (**) | .147 | .284 (**) | .136 | -.057 | .144 | .345 (**) | .274(**) |
| | Q W4 | .207 (*) | .304 (**) | .194 (*) | .125 | .308(**) | .366 (**) | .333 (**) | 1.00 0 | .170 (*) | .088 | -.020 | .059 | -.041 | .065 | .248 (**) | -.078 |
| | A M | -.053 | .097 | -.028 | -.112 | .086 | .281 (**) | .250 (**) | .170 (*) | 1.00 0 | .485 (**) | -.040 | -.119 | .015 | -.054 | .409 (**) | .290(**) |
| | AS | .098 | .011 | .142 | .029 | .082 | .181 (*) | .147 | .088 | .485 (**) | 1.00 0 | -.079 | -.086 | .076 | -.002 | .281 (**) | -.158 |
| | FC | -.028 | -.130 | -.107 | -.130 | -.133 | -.002 | -.284 (**) | -.020 | -.040 | -.079 | 1.00 0 | .321 (**) | .452(**) | .441 (**) | .258 (**) | .090 |
| | FS | .180 (*) | .185 (*) | .199 (*) | .231 (**) | .177(*) | -.023 | .136 | .059 | -.119 | -.086 | .321 (**) | 1.00 0 | .323(**) | .212 (*) | .019 | .033 |
| | M O | -.129 | -.112 | -.128 | -.126 | -.084 | -.099 | -.057 | -.041 | .015 | .076 | .452 (**) | .323 (**) | 1.000 | .649 (**) | .204 (*) | .020 |
| | SS | -.153 | -.058 | -.121 | -.120 | -.044 | -.017 | -.144 | -.065 | -.054 | -.002 | .441 (**) | .212 (*) | .649(**) | 1.00 0 | .147 | .110 |
| | W C | -.028 | -.075 | -.057 | .012 | .246(**) | .244 (**) | .345 (**) | .248 (**) | .409 (**) | .281 (**) | .258 (**) | -.019 | .204(*) | .147 | 1.00 0 | .421(**) |
| | W P | .038 | -.008 | -.012 | -.083 | .242(**) | -.122 | .274 (**) | -.078 | .290 (**) | .158 | .090 | .033 | .020 | .110 | .421 (**) | 1.00 0 |

APPENDIX 5

EQS, A STRUCTURAL EQUATION PROGRAM
COPYRIGHT BY P.M. BENTLER

MULTIVARIATE SOFTWARE, INC.
VERSION 5.6 (C) 1985 - 1997.

PROGRAM CONTROL INFORMATION

```

1  /TITLE
2  CFA direct links 20/11
3  /SPECIFICATIONS
4  DATA='C:\EQS\YO\YO2\NEWDATA4.ESS'; VARIABLES= 16; CASES= 146;
5  METHODS= EGLS;
6  MATRIX=RAW;
7  DEL = 128, 114, 88;
8  /LABELS
9  V1=QW4; V2=QW5; V3=QW8; V4=QW9; V5=QF1;
10 V6=QF2; V7=QF3; V8=QF6; V9=Vam; V10=Vas;
11 V11=Vwc; V12=Vwp; V13=Vfs; V14=Vfc; V15=Vmr;
12 V16=Vsc;
13 /EQUATIONS
14 V1 =      F1  + E1;
15 V2 =    *F1  + E2;
16 V3 =    *F1  + E3;
17 V4 =    *F1  + E4;
18 V5 =      F2  + E5;
19 V6 =    *F2  + E6;
20 V7 =    *F2  + E7;
21 V8 =    *F2  + E8;
22 V9 =      F3  + E9;
23 V10 =   *F3  + E10;
24 V11 =   *F3  + E11;
25
26
27 V14 =   *F4  + E14;
28 V15 =   *F4  + E15;
29 V16 =      F4  + E16;
30 F1 = *F3 + *F4 + D1;
31 F2 = *F3 + *F4 + D2;
32
33 /VARIANCES
34 D1 = *;
35 D2 = *;
36 E1 to E11 = *;
37 E14 to E16 = *;
38 F3 = 1;
39 F4 = 1;
40 /COVARIANCES
41
42 /lmtest
43 set=pee,gvf;
44
45 /END
45 RECORDS OF INPUT MODEL FILE WERE READ

```

CASE NUMBERS DELETED FROM RAW DATA ARE: 88 114 128

SAMPLE STATISTICS

UNIVARIATE STATISTICS

| VARIABLE | QW4 | QW5 | QW8 | QW9 | QF1 |
|---------------|---------|---------|---------|---------|---------|
| MEAN | 6.3846 | 6.1888 | 6.3427 | 6.3636 | 6.0979 |
| SKEWNESS (G1) | -2.4437 | -1.4261 | -1.9745 | -1.3239 | -1.2492 |
| KURTOSIS (G2) | 9.1798 | 2.2219 | 4.7036 | 1.4675 | 1.7354 |
| STANDARD DEV. | 0.9032 | 0.9783 | 0.9722 | 0.8009 | 0.9140 |

| VARIABLE | QF2 | QF3 | QF6 | VAM | VAS |
|---------------|---------|---------|---------|---------|---------|
| MEAN | 6.3357 | 6.0490 | 5.4056 | 4.5058 | 4.0187 |
| SKEWNESS (G1) | -1.8606 | -1.6432 | -0.8111 | -0.2784 | -0.1944 |
| KURTOSIS (G2) | 4.6713 | 3.1111 | 0.7352 | -0.1077 | -0.2436 |
| STANDARD DEV. | 0.9034 | 1.1465 | 1.2232 | 1.2806 | 1.3131 |

| VARIABLE | VWC | VFC | VMR | VSC |
|---------------|---------|---------|---------|---------|
| MEAN | 3.4117 | 3.5210 | 2.9639 | 2.8654 |
| SKEWNESS (G1) | -0.0481 | 0.0448 | 0.3839 | 0.5436 |
| KURTOSIS (G2) | -0.4315 | -0.5344 | -0.2679 | -0.2861 |
| STANDARD DEV. | 1.0208 | 1.2554 | 1.2387 | 1.3958 |

MULTIVARIATE KURTOSIS

MARDIA'S COEFFICIENT (G2,P) = 63.0051
 NORMALIZED ESTIMATE = 17.7981

ELLIPTICAL THEORY KURTOSIS ESTIMATES

MARDIA-BASED KAPPA = 0.2813 MEAN SCALED UNIVARIATE KURTOSIS =
 0.6180

MARDIA-BASED KAPPA IS USED IN COMPUTATION. KAPPA= 0.2813

CASE NUMBERS WITH LARGEST CONTRIBUTION TO NORMALIZED MULTIVARIATE KURTOSIS:

| CASE NUMBER | 11 | 30 | 58 | 100 | 110 |
|-------------|----------|----------|----------|----------|----------|
| ESTIMATE | 379.8787 | 843.8446 | 425.8794 | 639.0641 | 602.6056 |

COVARIANCE MATRIX TO BE ANALYZED: 14 VARIABLES (SELECTED FROM 16
VARIABLES)
BASED ON 143 CASES.

| | | | QW4 V 1 | QW5 V 2 | QW8 V 3 | QW9 V 4 | QF1 V 5 |
|-----|------|--|------------|------------|------------|------------|------------|
| QW4 | V 1 | | 0.816 | | | | |
| QW5 | V 2 | | 0.413 | 0.957 | | | |
| QW8 | V 3 | | 0.515 | 0.456 | 0.945 | | |
| QW9 | V 4 | | 0.352 | 0.290 | 0.318 | 0.641 | |
| QF1 | V 5 | | 0.004 | 0.059 | 0.044 | 0.084 | 0.835 |
| QF2 | V 6 | | 0.067 | 0.105 | 0.102 | 0.109 | 0.643 |
| QF3 | V 7 | | 0.080 | 0.181 | 0.124 | 0.144 | 0.692 |
| QF6 | V 8 | | 0.075 | 0.169 | 0.071 | 0.049 | 0.474 |
| VAM | V 9 | | -0.069 | 0.174 | -0.031 | 0.066 | -0.036 |
| VAS | V 10 | | -0.052 | 0.086 | 0.010 | 0.012 | -0.100 |
| VWC | V 11 | | -0.178 | -0.153 | -0.157 | -0.156 | -0.010 |
| VFC | V 14 | | -0.079 | -0.096 | -0.164 | -0.117 | -0.340 |
| VMR | V 15 | | -0.073 | -0.095 | -0.065 | -0.146 | -0.397 |
| VSC | V 16 | | -0.048 | 0.061 | -0.068 | -0.093 | -0.342 |

| | | | QF2 V 6 | QF3 V 7 | QF6 V 8 | VAM V 9 | VAS V 10 |
|-----|------|--|------------|------------|------------|------------|-------------|
| QF2 | V 6 | | 0.816 | | | | |
| QF3 | V 7 | | 0.617 | 1.314 | | | |
| QF6 | V 8 | | 0.461 | 0.677 | 1.496 | | |
| VAM | V 9 | | -0.183 | 0.020 | -0.181 | 1.640 | |
| VAS | V 10 | | -0.206 | -0.107 | -0.092 | 0.814 | 1.724 |
| VWC | V 11 | | -0.022 | -0.142 | -0.061 | -0.533 | -0.329 |
| VFC | V 14 | | -0.231 | -0.284 | -0.262 | -0.056 | -0.389 |
| VMP | V 15 | | -0.343 | -0.478 | -0.533 | 0.031 | 0.156 |
| VSC | V 16 | | -0.249 | -0.354 | -0.368 | -0.093 | 0.024 |

| | | | VWC V 11 | VFC V 14 | VMP V 15 | VSC V 16 |
|-----|------|--|-------------|-------------|-------------|-------------|
| VWC | V 11 | | 1.042 | | | |
| VFC | V 14 | | 0.329 | 1.576 | | |
| VMP | V 15 | | 0.234 | 0.752 | 1.534 | |
| VSC | V 16 | | 0.191 | 0.768 | 1.118 | 1.921 |

BENTLER-WEEKS STRUCTURAL REPRESENTATION:

NUMBER OF DEPENDENT VARIABLES = 16

DEPENDENT V'S : 1 2 3 4 5 6 7 8 9 10
DEPENDENT V'S : 11 14 15 16
DEPENDENT F'S : 1 2

NUMBER OF INDEPENDENT VARIABLES = 18

INDEPENDENT F'S : 3 4
INDEPENDENT E'S : 1 2 3 4 5 6 7 8 9
INDEPENDENT E'S : 11 14 15 16
INDEPENDENT D'S : 1 2

10

3RD STAGE OF COMPUTATION REQUIRED 11279 WORDS OF MEMORY.
PROGRAM ALLOCATE 1000000 WORDS

DETERMINANT OF INPUT MATRIX IS 0.61966E-01
GENERALIZED LEAST SQUARES SOLUTION (NORMAL DISTRIBUTION THEORY)

PARAMETER ESTIMATES APPEAR IN ORDER.

NO SPECIAL PROBLEMS WERE ENCOUNTERED DURING OPTIMIZATION.

RESIDUAL COVARIANCE MATRIX (S-SIGMA) :

| | | | QW4 | QW5 | QW8 | QW9 | QF1 |
|-----|------|------|--------|--------|--------|--------|--------|
| | | | V 1 | V 2 | V 3 | V 4 | V 5 |
| QW4 | V 1 | | 0.102 | | | | |
| QW5 | V 2 | | 0.018 | 0.132 | | | |
| QW8 | V 3 | | 0.083 | 0.068 | 0.102 | | |
| QW9 | V 4 | | 0.067 | 0.034 | 0.038 | 0.069 | |
| QF1 | V 5 | | 0.008 | 0.062 | 0.047 | 0.086 | 0.060 |
| QF2 | V 6 | | 0.070 | 0.108 | 0.105 | 0.111 | 0.051 |
| QF3 | V 7 | | 0.083 | 0.184 | 0.127 | 0.146 | 0.063 |
| QF6 | V 8 | | 0.078 | 0.171 | 0.074 | 0.050 | -0.011 |
| VAM | V 9 | | -0.154 | 0.098 | -0.115 | 0.011 | 0.079 |
| VAS | V 10 | | -0.106 | 0.037 | -0.043 | -0.023 | -0.027 |
| VWC | V 11 | | -0.133 | -0.112 | -0.112 | -0.127 | -0.071 |
| VFC | V 14 | | -0.067 | -0.085 | -0.153 | -0.109 | -0.124 |
| VMR | V 15 | | -0.055 | -0.080 | -0.048 | -0.135 | -0.065 |
| VSC | V 16 | | -0.030 | 0.077 | -0.050 | -0.081 | 0.007 |
| | | QF2 | | QF3 | QF6 | VAM | VAS |
| | | V 6 | | V 7 | V 8 | V 9 | V 10 |
| QF2 | V 6 | | 0.092 | | | | |
| QF3 | V 7 | | 0.076 | 0.204 | | | |
| QF6 | V 8 | | 0.045 | 0.235 | 0.277 | | |
| VAM | V 9 | | -0.084 | 0.125 | -0.100 | 0.317 | |
| VAS | V 10 | | -0.142 | -0.039 | -0.040 | 0.174 | 0.185 |
| VWC | V 11 | | -0.075 | -0.198 | -0.104 | 0.003 | 0.014 |
| VFC | V 14 | | -0.045 | -0.087 | -0.110 | -0.056 | -0.088 |
| VMR | V 15 | | -0.059 | -0.176 | -0.300 | 0.031 | 0.156 |
| VSC | V 16 | | 0.052 | -0.036 | -0.122 | -0.093 | 0.024 |
| | | VWC | | VFC | VMR | VSC | |
| | | V 11 | | V 14 | V 15 | V 16 | |
| VWC | V 11 | | 0.193 | | | | |
| VFC | V 14 | | 0.329 | 0.307 | | | |
| VMR | V 15 | | 0.234 | 0.165 | 0.283 | | |
| VSC | V 16 | | 0.191 | 0.150 | 0.170 | 0.187 | |

| | | | |
|--|-----------|---|--------|
| AVERAGE ABSOLUTE COVARIANCE | RESIDUALS | = | 0.1047 |
| AVERAGE OFF-DIAGONAL ABSOLUTE COVARIANCE | RESIDUALS | = | 0.0932 |

STANDARDIZED RESIDUAL MATRIX:

| | | | QW4 | QW5 | QW8 | QW9 | QF1 |
|-----|------|--|--------|-------|--------|--------|--------|
| | | | V 1 | V 2 | V 3 | V 4 | V 5 |
| QW4 | V 1 | | 0.126 | | | | |
| QW5 | V 2 | | 0.021 | 0.138 | | | |
| QW8 | V 3 | | 0.095 | 0.071 | 0.108 | | |
| QW9 | V 4 | | 0.093 | 0.043 | 0.048 | 0.108 | |
| QF1 | V 5 | | 0.009 | 0.069 | 0.053 | 0.118 | 0.072 |
| QF2 | V 6 | | 0.086 | 0.122 | 0.120 | 0.154 | 0.061 |
| QF3 | V 7 | | 0.080 | 0.164 | 0.114 | 0.159 | 0.060 |
| QF6 | V 8 | | 0.070 | 0.143 | 0.062 | 0.051 | -0.009 |
| VAM | V 9 | | -0.133 | 0.078 | -0.092 | 0.011 | 0.068 |
| VAS | V 10 | | -0.089 | 0.029 | -0.034 | -0.022 | -0.022 |

| | | | | | | |
|-----|------|--------|--------|--------|--------|--------|
| VWC | V 11 | -0.144 | -0.112 | -0.113 | -0.155 | -0.077 |
| VFC | V 14 | -0.059 | -0.069 | -0.125 | -0.109 | -0.108 |
| VMR | V 15 | -0.050 | -0.066 | -0.040 | -0.136 | -0.058 |
| VSC | V 16 | -0.024 | 0.057 | -0.037 | -0.073 | 0.005 |

| | | QF2 V 6 | QF3 V 7 | QF6 V 8 | VAM V 9 | VAS V 10 |
|-----|------|------------|------------|------------|------------|-------------|
| QF2 | V 6 | 0.113 | | | | |
| QF3 | V 7 | 0.074 | 0.155 | | | |
| QF6 | V 8 | 0.041 | 0.167 | 0.185 | | |
| VAM | V 9 | -0.072 | 0.085 | -0.064 | 0.193 | |
| VAS | V 10 | -0.120 | -0.026 | -0.025 | 0.103 | 0.107 |
| VWC | V 11 | -0.081 | -0.169 | -0.083 | 0.002 | 0.010 |
| VFC | V 14 | -0.040 | -0.061 | -0.072 | -0.035 | -0.054 |
| VMR | V 15 | -0.052 | -0.124 | -0.198 | 0.019 | 0.096 |
| VSC | V 16 | 0.041 | -0.022 | -0.072 | -0.053 | 0.013 |

| | | VWC V 11 | VFC V 14 | VMR V 15 | VSC V 16 |
|-----|------|-------------|-------------|-------------|-------------|
| VWC | V 11 | 0.186 | | | |
| VFC | V 14 | 0.256 | 0.195 | | |
| VMR | V 15 | 0.185 | 0.106 | 0.184 | |
| VSC | V 16 | 0.135 | 0.086 | 0.099 | 0.098 |

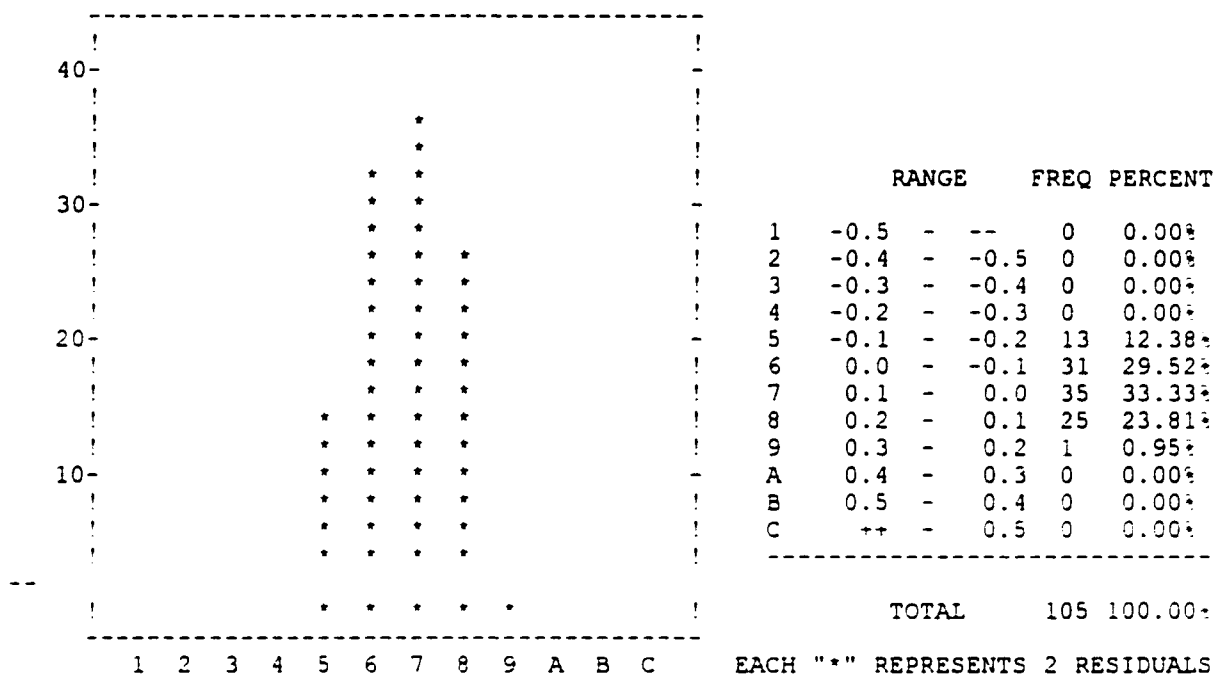
AVERAGE ABSOLUTE STANDARDIZED RESIDUALS = 0.0874
AVERAGE OFF-DIAGONAL ABSOLUTE STANDARDIZED RESIDUALS = 0.0793

LARGEST STANDARDIZED RESIDUALS:

| | | | | |
|--------------------|--------------------|--------------------|--------------------|--------------------|
| V 14,V 11 0.256 | V 15,V 8 -0.198 | V 14,V 14 0.195 | V 9,V 9 0.193 | V 11,V 11 0.186 |
| V 15,V 11 0.185 | V 8,V 8 0.185 | V 15,V 15 0.184 | V 11,V 7 -0.169 | V 8,V 7 0.167 |
| V 7,V 2 0.164 | V 7,V 4 0.159 | V 7,V 7 0.155 | V 11,V 4 -0.155 | V 6,V 4 0.154 |
| V 11,V 1 -0.144 | V 8,V 2 0.143 | V 2,V 2 0.138 | V 15,V 4 -0.136 | V 16,V 11 0.135 |

GENERALIZED LEAST SQUARES SOLUTION (NORMAL DISTRIBUTION THEORY)

DISTRIBUTION OF STANDARDIZED RESIDUALS



GOODNESS OF FIT SUMMARY

INDEPENDENCE MODEL CHI-SQUARE = 228.660 ON 91 DEGREES OF FREEDOM

INDEPENDENCE AIC = 46.65954 INDEPENDENCE CAIC = -313.95933
 MODEL AIC = -77.62110 MODEL CAIC = -374.83445

CHI-SQUARE = 72.379 BASED ON 75 DEGREES OF FREEDOM
 PROBABILITY VALUE FOR THE CHI-SQUARE STATISTIC IS 0.56432

BENTLER-BONETT NORMED FIT INDEX= 0.683
 BENTLER-BONETT NONNORMED FIT INDEX= 1.023
 COMPARATIVE FIT INDEX (CFI) = 1.000

ITERATIVE SUMMARY

| ITERATION | PARAMETER ABS CHANGE | ALPHA | FUNCTION |
|-----------|-------------------------|---------|----------|
| 1 | 0.497837 | 1.00000 | 6.92192 |
| 2 | 0.105327 | 1.00000 | 1.15296 |
| 3 | 0.068611 | 1.00000 | 0.60333 |
| 4 | 0.047004 | 1.00000 | 0.52053 |
| 5 | 0.015799 | 1.00000 | 0.51083 |
| 6 | 0.004920 | 1.00000 | 0.50985 |
| 7 | 0.001490 | 1.00000 | 0.50973 |
| 8 | 0.000589 | 1.00000 | 0.50971 |

MEASUREMENT EQUATIONS WITH STANDARD ERRORS AND TEST STATISTICS

$$QW4 = V1 = 1.000 F1 + 1.000 E1$$

$$QW5 = V2 = .899 F1 + 1.000 E2$$

$$.149$$

$$6.037$$

$$QW8 = V3 = .984 F1 + 1.000 E3$$

$$.147$$

$$6.687$$

$$QW9 = V4 = .650 F1 + 1.000 E4$$

$$.115$$

$$5.636$$

$$QF1 = V5 = 1.000 F2 + 1.000 E5$$

$$QF2 = V6 = .860 F2 + 1.000 E6$$

$$.076$$

$$11.350$$

$$QF3 = V7 = .913 F2 + 1.000 E7$$

$$.100$$

$$9.102$$

$$QF6 = V8 = .703 F2 + 1.000 E8$$

$$.121$$

$$5.832$$

$$VAM = V9 = 1.000 F3 + 1.000 E9$$

$$VAS = V10 = .640 F3 + 1.000 E10$$

$$.123$$

$$5.190$$

$$VWC = V11 = -.535 F3 + 1.000 E11$$

$$.096$$

$$-5.592$$

$$VFC = V14 = .618 F4 + 1.000 E14$$

$$.104$$

$$5.945$$

$$VMR = V15 = .949 F4 + 1.000 E15$$

$$.104$$

$$9.160$$

$$VSC = V16 = 1.000 F4 + 1.000 E16$$

CONSTRUCT EQUATIONS WITH STANDARD ERRORS AND TEST STATISTICS

$$F1 = F1 = .085 F3 + -.018 F4 + 1.000 D1$$

$$.076$$

$$.075$$

$$1.115$$

$$-.245$$

$$F2 = F2 = -.115 F3 + -.349 F4 + 1.000 D2$$

| | |
|--------|--------|
| .081 | .083 |
| -1.422 | -4.230 |

VARIANCES OF INDEPENDENT VARIABLES

| V | | F |
|-----|-----------|---------|
| --- | | --- |
| | I F3 - F3 | 1.000 I |
| | I | I |
| | I | I |
| | I | I |
| | I F4 - F4 | 1.000 I |
| | I | I |
| | I | I |
| | I | I |

VARIANCES OF INDEPENDENT VARIABLES

| E | | D |
|-----------|----------------|---------|
| --- | | --- |
| E1 - QW4 | .274*I D1 - F1 | .431*I |
| | .062 I | .098 I |
| | 4.398 I | 4.418 I |
| | I | I |
| E2 - QW5 | .471*I D2 - F2 | .554*I |
| | .078 I | .091 I |
| | 6.067 I | 6.089 I |
| | I | I |
| E3 - QW8 | .418*I | I |
| | .072 I | I |
| | 5.788 I | I |
| | I | I |
| E4 - QW9 | .387*I | I |
| | .055 I | I |
| | 7.046 I | I |
| | I | I |
| E5 - QF1 | .086*I | I |
| | .044 I | I |
| | 1.967 I | I |
| | I | I |
| E6 - QF2 | .215*I | I |
| | .042 I | I |
| | 5.132 I | I |
| | I | I |
| E7 - QF3 | .536*I | I |
| | .077 I | I |
| | 6.946 I | I |
| | I | I |
| E8 - QF6 | .879*I | I |
| | .122 I | I |
| | 7.212 I | I |
| | I | I |
| E9 - VAM | .323*I | I |
| | .145 I | I |
| | 2.232 I | I |
| | I | I |
| E10 - VAS | 1.130*I | I |
| | .158 I | I |
| | 7.128 I | I |
| | I | I |
| E11 - VWC | .562*I | I |
| | .095 I | I |

| | | | |
|-----------|-------|---|---|
| | 5.929 | I | I |
| | | I | I |
| E14 - VFC | .887* | I | I |
| | .127 | I | I |
| | 6.974 | I | I |
| | | I | |
| E15 - VMR | .352* | I | I |
| | .116 | I | I |
| | 3.043 | I | I |
| | | I | I |
| E16 - VSC | .733* | I | I |
| | .144 | I | I |
| | 5.105 | I | I |
| | | I | |

STANDARDIZED SOLUTION:

| | | | | | | | | |
|-----|------|---|--------|----|----|-------|-----|-----------|
| QW4 | =V1 | = | .784 | F1 | + | .620 | E1 | |
| QW5 | =V2 | = | .656* | F1 | + | .755 | E2 | |
| QW8 | =V3 | = | .710* | F1 | + | .704 | E3 | |
| QW9 | =V4 | = | .569* | F1 | + | .822 | E4 | |
| QF1 | =V5 | = | .943 | F2 | + | .334 | E5 | |
| QF2 | =V6 | = | .839* | F2 | + | .545 | E6 | |
| QF3 | =V7 | = | .719* | F2 | + | .695 | E7 | |
| QF6 | =V8 | = | .529* | F2 | + | .849 | E8 | |
| VAM | =V9 | = | .869 | F3 | + | .494 | E9 | |
| VAS | =V10 | = | .516* | F3 | + | .857 | E10 | |
| VWC | =V11 | = | -.581* | F3 | + | .814 | E11 | |
| VFC | =V14 | = | .549* | F4 | + | .836 | E14 | |
| VMR | =V15 | = | .848* | F4 | + | .530 | E15 | |
| VSC | =V16 | = | .760 | F4 | + | .650 | E16 | |
| F1 | =F1 | = | .129* | F3 | +- | .028* | F4 | + .991 D1 |
| F2 | =F2 | = | -.139* | F3 | +- | .421* | F4 | + .897 D2 |

END OF METHOD

GENERALIZED LEAST SQUARES SOLUTION (ELLIPTICAL DISTRIBUTION THEORY)

LINEARIZED ESTIMATION

PARAMETER ESTIMATES APPEAR IN ORDER,
NO SPECIAL PROBLEMS WERE ENCOUNTERED DURING OPTIMIZATION.

RESIDUAL COVARIANCE MATRIX (S-SIGMA) :

| | | | QW4 | QW5 | QW8 | QW9 | QF1 |
|-----|---|---|-------|-------|-------|-------|-------|
| | | | V 1 | V 2 | V 3 | V 4 | V 5 |
| QW4 | V | 1 | 0.171 | | | | |
| QW5 | V | 2 | 0.056 | 0.210 | | | |
| QW8 | V | 3 | 0.125 | 0.105 | 0.183 | | |
| QW9 | V | 4 | 0.095 | 0.058 | 0.065 | 0.124 | |
| QF1 | V | 5 | 0.007 | 0.061 | 0.046 | 0.086 | 0.132 |
| QF2 | V | 6 | 0.070 | 0.107 | 0.105 | 0.111 | 0.105 |
| QF3 | V | 7 | 0.082 | 0.183 | 0.126 | 0.146 | 0.122 |
| QF6 | V | 8 | 0.077 | 0.171 | 0.073 | 0.050 | 0.033 |

| | | | | | | |
|-----|------|--------|--------|--------|--------|--------|
| VAM | V 9 | -0.147 | 0.103 | -0.108 | 0.015 | 0.072 |
| VAS | V 10 | -0.099 | 0.043 | -0.036 | -0.019 | -0.036 |
| VWC | V 11 | -0.139 | -0.118 | -0.119 | -0.131 | -0.064 |
| VFC | V 14 | -0.069 | -0.087 | -0.154 | -0.110 | -0.139 |
| VMR | V 15 | -0.058 | -0.082 | -0.050 | -0.137 | -0.092 |
| VSC | V 16 | -0.031 | 0.076 | -0.051 | -0.082 | -0.006 |

| | | QF2 V 6 | QF3 V 7 | QF6 V 8 | VAM V 9 | VAS V 10 |
|-----|------|------------|------------|------------|------------|-------------|
| QF2 | V 6 | 0.160 | | | | |
| QF3 | V 7 | 0.127 | 0.309 | | | |
| QF6 | V 8 | 0.082 | 0.274 | 0.390 | | |
| VAM | V 9 | -0.090 | 0.118 | -0.105 | 0.411 | |
| VAS | V 10 | -0.150 | -0.047 | -0.046 | 0.212 | 0.320 |
| VWC | V 11 | -0.068 | -0.191 | -0.099 | -0.033 | -0.028 |
| VFC | V 14 | -0.058 | -0.101 | -0.120 | -0.056 | -0.088 |
| VMR | V 15 | -0.081 | -0.200 | -0.318 | 0.031 | 0.156 |
| VSC | V 16 | 0.041 | -0.047 | -0.130 | -0.093 | 0.024 |

| | | VWC V 11 | VFC V 14 | VMR V 15 | VSC V 16 |
|-----|------|-------------|-------------|-------------|-------------|
| VWC | V 11 | 0.270 | | | |
| VFC | V 14 | 0.329 | 0.415 | | |
| VMR | V 15 | 0.234 | 0.210 | 0.376 | |
| VSC | V 16 | 0.191 | 0.170 | 0.212 | 0.298 |

AVERAGE ABSOLUTE COVARIANCE RESIDUALS = 0.1244
AVERAGE OFF-DIAGONAL ABSOLUTE COVARIANCE RESIDUALS = 0.1022

STANDARDIZED RESIDUAL MATRIX:

| | | QW4 V 1 | QW5 V 2 | QW8 V 3 | QW9 V 4 | QF1 V 5 |
|-----|------|------------|------------|------------|------------|------------|
| QW4 | V 1 | 0.210 | | | | |
| QW5 | V 2 | 0.063 | 0.220 | | | |
| QW8 | V 3 | 0.142 | 0.110 | 0.194 | | |
| QW9 | V 4 | 0.131 | 0.074 | 0.083 | 0.193 | |
| QF1 | V 5 | 0.009 | 0.069 | 0.052 | 0.117 | 0.158 |
| QF2 | V 6 | 0.085 | 0.121 | 0.119 | 0.153 | 0.128 |
| QF3 | V 7 | 0.079 | 0.163 | 0.113 | 0.159 | 0.116 |
| QF6 | V 8 | 0.070 | 0.143 | 0.062 | 0.051 | 0.029 |
| VAM | V 9 | -0.128 | 0.082 | -0.087 | 0.015 | 0.061 |
| VAS | V 10 | -0.083 | 0.034 | -0.029 | -0.018 | -0.030 |
| VWC | V 11 | -0.151 | -0.118 | -0.119 | -0.160 | -0.068 |
| VFC | V 14 | -0.060 | -0.070 | -0.126 | -0.110 | -0.121 |
| VMR | V 15 | -0.052 | -0.067 | -0.042 | -0.138 | -0.081 |
| VSC | V 16 | -0.025 | 0.056 | -0.038 | -0.074 | -0.005 |

| | | QF2 V 6 | QF3 V 7 | QF6 V 8 | VAM V 9 | VAS V 10 |
|-----|------|------------|------------|------------|------------|-------------|
| QF2 | V 6 | 0.196 | | | | |
| QF3 | V 7 | 0.122 | 0.235 | | | |
| QF6 | V 8 | 0.074 | 0.196 | 0.261 | | |
| VAM | V 9 | -0.078 | 0.080 | -0.067 | 0.251 | |
| VAS | V 10 | -0.126 | -0.031 | -0.029 | 0.126 | 0.185 |
| VWC | V 11 | -0.074 | -0.163 | -0.079 | -0.025 | -0.021 |
| VFC | V 14 | -0.051 | -0.070 | -0.078 | -0.035 | -0.054 |
| VMR | V 15 | -0.073 | -0.141 | -0.210 | 0.019 | 0.096 |
| VSC | V 16 | 0.033 | -0.030 | -0.077 | -0.053 | 0.013 |

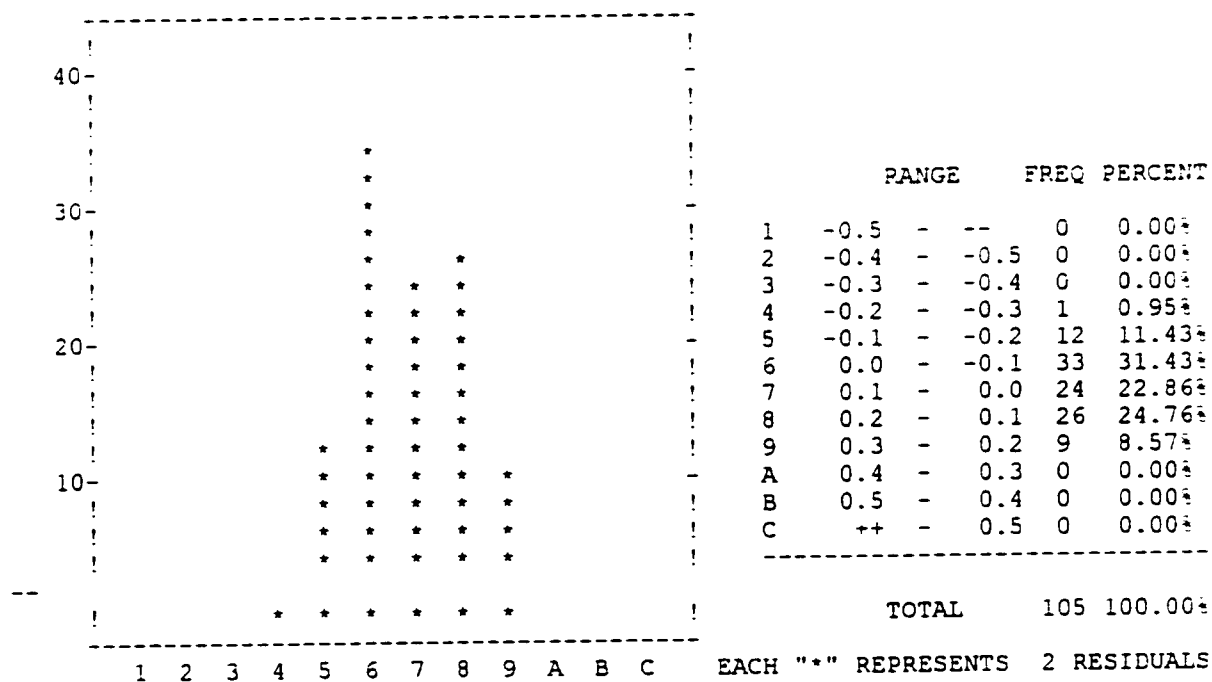
| | | | | | |
|-----|------|-------|-------|-------|-------|
| | | VWC | VFC | VMR | VSC |
| | | V 11 | V 14 | V 15 | V 16 |
| VWC | V 11 | 0.259 | | | |
| VFC | V 14 | 0.256 | 0.264 | | |
| VMR | V 15 | 0.185 | 0.135 | 0.245 | |
| VSC | V 16 | 0.135 | 0.098 | 0.124 | 0.150 |

AVERAGE ABSOLUTE STANDARDIZED RESIDUALS = 0.1044
 AVERAGE OFF-DIAGONAL ABSOLUTE STANDARDIZED RESIDUALS = 0.0873

LARGEST STANDARDIZED RESIDUALS:

| | | | | |
|-----------|---------|-----------|-----------|-----------|
| V 14,V 14 | V 8,V 8 | V 11,V 11 | V 14,V 11 | V 9,V 9 |
| 0.264 | 0.261 | 0.259 | 0.256 | 0.251 |
| V 15,V 15 | V 7,V 7 | V 2,V 2 | V 15,V 8 | V 1,V 1 |
| 0.245 | 0.235 | 0.220 | -0.210 | 0.210 |
| V 6,V 6 | V 8,V 7 | V 3,V 3 | V 4,V 4 | V 10,V 10 |
| 0.196 | 0.196 | 0.194 | 0.193 | 0.185 |
| V 15,V 11 | V 7,V 2 | V 11,V 7 | V 11,V 4 | V 7,V 4 |
| 0.185 | 0.163 | -0.163 | -0.160 | 0.159 |

DISTRIBUTION OF STANDARDIZED RESIDUALS



GOODNESS OF FIT SUMMARY

INDEPENDENCE MODEL CHI-SQUARE = 131.853 ON 91 DEGREES OF FREEDOM

INDEPENDENCE AIC = -50.14696 INDEPENDENCE CAIC = -410.76582
 MODEL AIC = -98.77078 MODEL CAIC = -395.98412

CHI-SQUARE = 51.229 BASED ON 75 DEGREES OF FREEDOM
 PROBABILITY VALUE FOR THE CHI-SQUARE STATISTIC IS 0.98378

BENTLER-BONETT NORMED FIT INDEX= 0.611
 BENTLER-BONETT NONNORMED FIT INDEX= 1.706
 COMPARATIVE FIT INDEX (CFI) = 1.000

ITERATIVE SUMMARY

| ITERATION | PARAMETER ABS CHANGE | ALPHA | FUNCTION |
|-----------|-------------------------|---------|----------|
| 1 | 0.033240 | 1.00000 | 0.36077 |

MEASUREMENT EQUATIONS WITH STANDARD ERRORS AND TEST STATISTICS

QW4 =V1 = 1.000 F1 +1.000 E1

QW5 =V2 = .901*F1 +1.000 E2
 .187
 4.821

QW8 =V3 = .985*F1 +1.000 E3
 .184
 5.342

QW9 =V4 = .650*F1 +1.000 E4
 .144
 4.504

QF1 =V5 = 1.000 F2 +1.000 E5

QF2 =V6 = .860*F2 +1.000 E6
 .094
 9.148

QF3 =V7 = .913*F2 +1.000 E7
 .125
 7.328

QF6 =V8 = .706*F2 +1.000 E8
 .150
 4.703

VAM =V9 = 1.000 F3 +1.000 E9

VAS =V10 = .602*F3 +1.000 E10
 .145
 4.158

VWC =V11 = -.499*F3 +1.000 E11
 .112
 -4.449

VFC =V14 = .598*F4 +1.000 E14
 .122
 4.900

VMR =V15 = .906*F4 +1.000 E15
 .122
 7.428

VSC =V16 = 1.000 F4 +1.000 E16

CONSTRUCT EQUATIONS WITH STANDARD ERRORS AND TEST STATISTICS

F1 =F1 = .078*F3 +- .017*F4 +1.000 D1
 .088 .087
 .895 -.192

F2 =F2 = -.108*F3 +- .337*F4 +1.000 D2
 .093 .096
 -1.155 -3.491

VARIANCES OF INDEPENDENT VARIABLES

| V | | F |
|-----------|-------|-----|
| --- | | --- |
| I F3 - F3 | 1.000 | I |
| I | | I |
| I | | I |
| I | | I |
| I F4 - F4 | 1.000 | I |
| I | | I |
| I | | I |
| I | | I |

VARIANCES OF INDEPENDENT VARIABLES

| E | | D |
|----------|----------------|---------|
| --- | | --- |
| E1 - QW4 | .248*I D1 - F1 | .390*I |
| | .071 I | .112 I |
| | 3.475 I | 3.479 I |
| | I | I |
| E2 - QW5 | .426*I D2 - F2 | .500*I |
| | .090 I | .105 I |
| | 4.731 I | 4.752 I |
| | I | I |
| E3 - QW8 | .378*I | I |
| | .084 I | I |
| | 4.524 I | I |
| | I | I |
| E4 - QW9 | .350*I | I |
| | .064 I | I |
| | 5.450 I | I |
| | I | I |
| E5 - QF1 | .078*I | I |
| | .050 I | I |
| | 1.576 I | I |
| | I | I |
| E6 - QF2 | .194*I | I |

| | | | |
|-----|-------|---------|---|
| | | .048 I | I |
| | | 4.031 I | I |
| | | I | I |
| E7 | - QF3 | .485*I | I |
| | | .090 I | I |
| | | 5.381 I | I |
| | | I | I |
| E8 | - QF6 | .795*I | I |
| | | .143 I | I |
| | | 5.567 I | I |
| | | I | I |
| E9 | - VAM | .229*I | I |
| | | .173 I | I |
| | | 1.318 I | I |
| | | I | I |
| E10 | - VAS | 1.042*I | I |
| | | .182 I | I |
| | | 5.734 I | I |
| | | I | I |
| E11 | - VWC | .523*I | I |
| | | .107 I | I |
| | | 4.901 I | I |
| | | I | I |
| E14 | - VFC | .803*I | I |
| | | .148 I | I |
| | | 5.414 I | I |
| | | I | I |
| E15 | - VMR | .337*I | I |
| | | .127 I | I |
| | | 2.664 I | I |
| | | I | I |
| E16 | - VSC | .633*I | I |
| | | .171 I | I |
| | | 3.704 I | I |
| | | I | I |

STANDARDIZED SOLUTION:

| | | | | | | |
|-----|------|---|----------|----|----------|-----------|
| QW4 | =V1 | = | .784 F1 | + | .621 E1 | |
| QW5 | =V2 | = | .656*F1 | + | .755 E2 | |
| QW8 | =V3 | = | .710*F1 | + | .704 E3 | |
| QW9 | =V4 | = | .569*F1 | + | .823 E4 | |
| QF1 | =V5 | = | .943 F2 | + | .333 E5 | |
| QF2 | =V6 | = | .839*F2 | + | .544 E6 | |
| QF3 | =V7 | = | .720*F2 | + | .694 E7 | |
| QF6 | =V8 | = | .531*F2 | + | .848 E8 | |
| VAM | =V9 | = | .902 F3 | + | .431 E9 | |
| VAS | =V10 | = | .508*F3 | + | .861 E10 | |
| VWC | =V11 | = | -.568*F3 | + | .823 E11 | |
| VFC | =V14 | = | .555*F4 | + | .832 E14 | |
| VMR | =V15 | = | .842*F4 | + | .540 E15 | |
| VSC | =V16 | = | .783 F4 | + | .623 E16 | |
| F1 | =F1 | = | .124*F3 | +- | .027*F4 | + .992 D1 |
| F2 | =F2 | = | -.136*F3 | +- | .426*F4 | + .895 D2 |

APPENDIX 6

SURVEY OF WORK AND FAMILY INTERACTIONS

The purpose of this questionnaire is to obtain information about the types of interactions between the work and the family domains. We hope the findings will help us better inform health care workers and hospitals by giving them a picture of how the work and the family domains influence each other.

The questionnaire will take under 10 minutes to complete. Your responses will be completely anonymous, they will only be viewed by the researchers involved in the survey. Moreover, none of the hospitals participating in the research will be mentioned by name in the report.

If you want a resume of the results, please contact us at the address below after April 30 1997.

Thank you very much for your help in the survey.

Yours truly

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(Aussi disponible en français)

Please check the box that describes your agreement with the following statements using the scale below.

Very strongly
disagree

Very strongly
agree

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|

A. How would these statements describe how you experience your job?

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|---|---|---|---|---|---|---|
| 1. I am allowed to decide how to go about getting my job done (the methods to use). | | | | | | | |
| 2. At work I have to do things that in my opinion should be done differently. | | | | | | | |
| 3. At work I am not able to be myself. | | | | | | | |
| 4. I am able to choose the way to go about my job (the procedures to utilise). | | | | | | | |
| 5. On the job I work under incompatible policies and guidelines. | | | | | | | |
| 6. My job offers too little opportunity to acquire new knowledge and skills. | | | | | | | |
| 7. I am able to choose the method(s) to use in carrying out my work. | | | | | | | |
| 8. I often feel that I have too heavy a workload, one that I cannot possibly finish in a normal workday. | | | | | | | |
| 9. I often feel that the amount of work I have to do interferes with how well the work I do gets done. | | | | | | | |
| 10. I have control over the scheduling of my work. | | | | | | | |
| 11. I would like to have more power and influence over other people at work. | | | | | | | |

Very strongly
disagree

Very strongly
agree

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|

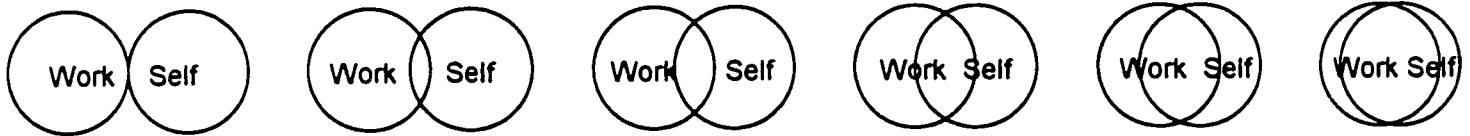
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 12. At work I receive an assignment without adequate resources to complete it properly. | | | | | | | |
| 13. At work I have to behave differently with different people. | | | | | | | |
| 14. I have some control over the sequencing of my work activities (when I do what). | | | | | | | |
| 15. I often feel overcome by pressures from this job. | | | | | | | |
| 16. My job is such that I can decide when to do particular work activities. | | | | | | | |
| 17. At work I receive incompatible requests from two or more people. | | | | | | | |

B. Describe how you see yourself at work.

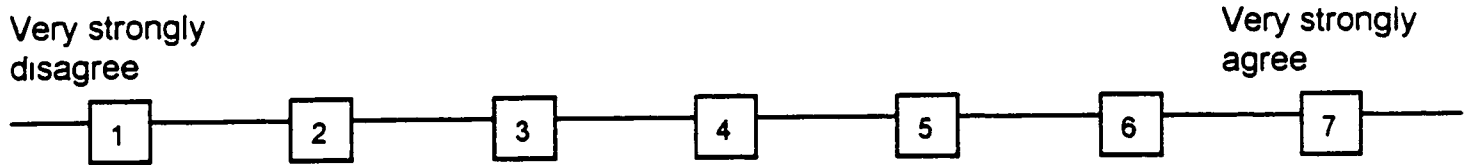
Please check the box that describes your agreement with the following statements.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|----------------------------|---|---|---|---|---|---|---|--------------------|
| 1. Not successful | | | | | | | | Successful |
| 2. Not important | | | | | | | | Important |
| 3. Sad | | | | | | | | Happy |
| 4. Not doing my best | | | | | | | | Doing my best |
| 5. Not flexible | | | | | | | | Flexible |
| 6. Not in control | | | | | | | | In control |
| 7. Cautious | | | | | | | | Risky |
| 8. Not working my hardest | | | | | | | | Working my hardest |
| 9. Do not know my job well | | | | | | | | Know my job well |

C. Please circle the picture below which best describes your relationship with work.
How much is your work a part of you?



D. How would these statements describe how you experience your family life?(e.g. parents, relatives)
Please check the box that describes your agreement with the following statements using the scale below.



| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|---|---|---|---|---|---|---|
| 1. Members of my family seek me out for companionship. | | | | | | | |
| 2. My family does not enjoy doing some of the things I like to do. | | | | | | | |
| 3. Certain members of my family come to me when they have a problem or need advice. | | | | | | | |
| 4. Because of my family situation, I have too little time to pursue my personal interests. | | | | | | | |
| 5. My family is sensitive to my personal needs. | | | | | | | |
| 6. My family responsibilities force me to do things I would rather not do. | | | | | | | |
| 7. I have a deep sharing relationship with a number of members of my family. | | | | | | | |
| 8. My family and I differ about spending time alone. | | | | | | | |
| 9. My family enjoys hearing what I think. | | | | | | | |

If not in a relationship please skip the next 10 questions, and continue at section E

| | | | | | | | |
|---|--|--|--|--|--|--|--|
| 1. I do too much for my partner. | | | | | | | |
| 2. My partner expects more than he/she gives. | | | | | | | |

- | | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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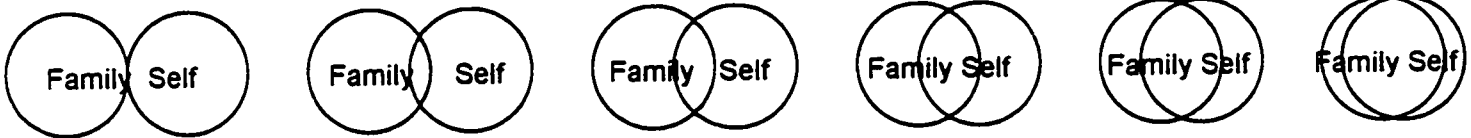
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How much is your family a part of you?



Please check the box that describes your agreement with the following statements.

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Happy

4. Not doing my best

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Doing my best

5. Not flexible

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Flexible

6. Not in control

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In control

7. Cautious

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Risky

8. Not working my hardest

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Working my hardest

9. Do not know my family well

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Know my family well

G.

1. What is your age, in years? _____

2. What is your gender? Male _____ Female _____

3. What are your living arrangements? Check as many as apply.

Alone _____ With partner _____ With children _____ With parents _____ Other family _____

Roommates _____ Other _____

4. Do you take care of any dependants? Check as many as apply.

Children _____ Elderly Parents _____ Other _____

5. Are you a:

Registered Nurse _____ Registered Practical Nurse _____ Health Care Assistant _____ Other (specify) _____

6. For how many years have you been working at your present job? _____

7. How many hours per week do you work on average? _____

8. What is your shift? Day _____ Evening _____ Night _____ Rotating _____

Are there any comments that you would like to make about your relationship with your family and your work?

Thank you very much for your help

SONDAGE SUR LES INTERACTIONS ENTRE LE TRAVAIL ET LA FAMILLE

Le présent questionnaire vise à obtenir des renseignements sur les genres d'interaction entre les milieux du travail et de la famille. Nous espérons que les résultats nous permettront de mieux informer les travailleuses et travailleurs de la santé et les hôpitaux en leur donnant une idée de la manière dont le travail et la famille s'influencent mutuellement.

Il vous faudra moins de 10 minutes pour remplir le questionnaire. Vos réponses seront entièrement anonymes; elles ne seront lues que par les chercheurs qui participent au sondage. En outre, aucun des hôpitaux qui prennent part aux recherches ne sera mentionné nommément dans le rapport.

Si vous voulez recevoir un résumé des résultats, veuillez communiquer avec nous à l'adresse ci-dessous après le 30 avril 1997.

Merci beaucoup de votre aide pour ce sondage.

Veuillez agréer l'expression de nos sentiments les meilleurs.

Yann Malara
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Tél. : (613) 730-1215
(À Ottawa)

Tél. : (514) 848-2936
Télec. : (514) 848-4292

(Also available in English)

Veuillez cocher la case qui correspond à votre degré d'approbation des énoncés suivants, compte tenu de l'échelle ci-dessous.

Fortement
en désaccord

Fortement
d'accord

| | | | | | | |
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A. Comment ces énoncés décrivent-ils la manière dont vous vivez votre travail ?

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Je peux décider de la manière dont j'accomplis mon travail (les méthodes à employer). | | | | | | | |
| 2. Au travail, je dois accomplir des tâches qui selon moi devraient être faites autrement. | | | | | | | |
| 3. Au travail, je ne peux pas être moi-même. | | | | | | | |
| 4. Je peux choisir la façon d'accomplir mon travail (les procédures à utiliser). | | | | | | | |
| 5. Au travail, je dois respecter des politiques et des directives incompatibles. | | | | | | | |
| 6. Mon travail me donne trop peu d'occasions d'acquérir de nouvelles connaissances et de nouvelles compétences. | | | | | | | |
| 7. Je peux choisir les méthodes à utiliser dans l'exercice de mes fonctions. | | | | | | | |
| 8. J'ai souvent l'impression que ma charge de travail est trop lourde, que je ne peux pas l'exécuter dans une journée normale de travail. | | | | | | | |
| 9. J'ai souvent l'impression que la quantité de travail à accomplir nuit à la qualité de mon rendement. | | | | | | | |
| 10. Je contrôle l'établissement de mon horaire de travail. | | | | | | | |
| 11. J'aimerais avoir davantage de pouvoir et d'influence sur les autres au travail. | | | | | | | |

Fortement
en désaccord

Fortement
d'accord

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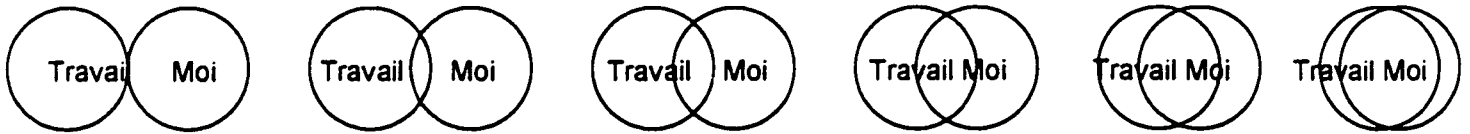
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| 12. Au travail, on m'assigne des tâches sans me donner les ressources adéquates pour les accomplir | | | | | | | |
| 13. Au travail, je dois me comporter différemment selon les gens. | | | | | | | |
| 14. J'ai un certain contrôle sur l'ordre de mes activités professionnelles (quand j'accomplis telle tâche). | | | | | | | |
| 15. Je sens que je succombe souvent aux pressions de ce poste. | | | | | | | |
| 16. Mon travail est d'une nature telle que je peux décider quand accomplir des activités professionnelles particulières. | | | | | | | |
| 17. Au travail, je reçois des demandes incompatibles de deux personnes ou plus. | | | | | | | |

B. Décrivez comment vous vous percevez au travail.

Veuillez cocher la case qui correspond à votre degré d'approbation des énoncés ci-dessous.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|-----------------------------|---|---|---|---|---|---|---|--------------------------|
| 1. Je n'ai pas de succès | | | | | | | | J'ai du succès |
| 2. Pas important(e) | | | | | | | | Important(e) |
| 3. Triste | | | | | | | | Heureux (heureuse) |
| 4. Ne fais pas de mon mieux | | | | | | | | Fais de mon mieux |
| 5. Inflexible | | | | | | | | Flexible |
| 6. Aucun contrôle | | | | | | | | Contrôle |
| 7. Je suis prudent(e) | | | | | | | | Je prends des risques |
| 8. Pas tout mon possible | | | | | | | | Tout mon possible |
| 9. Connais mal mon travail | | | | | | | | Connais bien mon travail |

C. Veuillez entourer le cercle ci-dessous qui décrit le mieux vos rapports avec le travail.
À quel point le travail est-il une partie de vous-même?



D. Comment ces énoncés décrivent-ils votre expérience de la vie familiale? (p. ex. parents, parenté, enfants)
Veuillez cocher la case qui correspond à votre degré d'approbation des énoncés suivants, compte tenu de l'échelle ci-dessous.

Fortement en désaccord

**Fortement
d'accord**

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    5 --> 6[6]
    6 --> 7[7]
    7 --> End[...]

```

1. Les membres de ma famille recherchent ma compagnie.
2. Ma famille n'aime pas accomplir certaines choses que j'aime faire.
3. Certains membres de ma famille viennent me voir quand ils ont un problème ou ont besoin de conseils.
4. À cause de ma situation familiale, j'ai trop peu de temps pour m'occuper de mes intérêts personnels.
5. Ma famille se soucie de mes besoins personnels.
6. Mes responsabilités familiales me forcent à faire de choses que je préférerais ne pas faire.
7. Avec certains membres de ma famille, mes rapports sont intenses et se caractérisent par le partage.
8. Ma famille et moi ne sommes pas d'accord sur la question de passer du temps seul(e).
9. Ma famille aime entendre mon point de vue.

[illegible]

Si vous n'avez pas de conjoint(e), sautez les 10 prochaines questions et passez à la section E

1. Je fais trop de choses pour mon conjoint (ma conjointe).
2. Mon conjoint (ma conjointe) s'attend à plus de choses qu'il/elle n'en donne.

Two empty ten-frames, each consisting of a horizontal row of 10 squares. The top ten-frame is for recording tens, and the bottom ten-frame is for recording ones.

4. Ne fais pas de mon mieux

Fais de mon mieux

5. Inflexible

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Flexible

6. Aucun contrôle

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Contrôle

7. Je suis prudent(e).

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Je prends des risques.

8. Pas tout mon possible

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Tout mon possible

9. Connais mal ma famille

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Connais bien ma famille

G.

1. Quel âge avez-vous? _____

2. Quel est votre sexe? Homme _____ Femme _____

3. Avez qui habitez-vous? Cochez toutes les cases pertinentes.

Seul(e) _____ Avec mon conjoint (ma conjointe) _____ Avec des enfants _____ Avec mes parents _____

Avec d'autres membres de la famille _____ Des colocataires _____ Autre _____

4. Avez-vous des dépendants a votre charge? Cochez toutes les cases pertinentes.

Enfants _____ Parents âgés _____ Autre _____

5. Êtes-vous en formation permanente? Oui _____ Non _____

6. Qu'êtes-vous?

Infirmier (infirmière) _____ Infirmier (infirmière) auxiliaire _____ Autre (préciser) _____

7. Depuis combien d'années occupez-vous votre poste actuel? _____

8. Combien d'heures par semaine travaillez-vous en moyenne? _____

9. Quel est votre quart? Jour _____ Soir _____ Nuit _____ Rotatif _____

Avez-vous des commentaires à formuler sur vos rapports avec votre famille et votre travail?

Merci beaucoup de votre aide