

Home-based Business Workspace:
Satisfactions of North Dakota Women Entrepreneurs

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(ABSTRACT)

This study obtained data on North Dakota women entrepreneurs engaged in home-based businesses in order to provide a profile of this population. The study also determined what demographic characteristics and workspace conditions are related to satisfaction with the workspace.

The Women's Business Institute provided the database. The survey method was an opscan format mail questionnaire, which produced a 38% response rate. Chi-Square and Phi Coefficient analysis of 116 responses provided answers to the research questions. A telephone survey of non-respondents suggested that the responses were representative of the sample.

Testing of the model showed the following major findings:

- (1) These North Dakota home-based businesses are small, part-time, developing businesses fulfilling personal as well as economic needs.
- (2) The women entrepreneurs are well educated, middle-aged, and have no children under five years of age.
- (3) Most of the businesses are not the major source of income for the household. Almost two-thirds of the entrepreneurs report that the business provides less than 20% of the total household income.
- (4) Almost three-fourths of the sample expressed satisfaction with all five workspace variables: space, privacy, security, personal safety, and accessibility. The women entrepreneurs are committed to having a business in the home, as suggested by their designation for workspace and storage, and time spent in the workspace.

This sample showed that a business can be integrated into the home without decreasing satisfaction with housing. Also, this group of entrepreneurs may be an indicator of an emerging style of home-based business, "hobbypreneurs." They seek fulfillment of personal needs as well as economic needs, and spend most of the business time in the workspace versus away from home.

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CHAPTER 1

INTRODUCTION

Home-based business is not a new phenomenon (Christensen, 1995), but continues to reflect socioeconomic changes. Although the early agricultural society presented a picture of work both in and around the home, the industrial age began to clearly define the separation of work and home. Today, home-based businesses are often depicted as a new integration of the business into the home. The number of women entrepreneurs choosing home-based business as an alternative to working outside the home continues to expand.

Researchers define the relationship of the family to its housing in terms of private space, in contrast to business or public space (Morris & Winter, 1975; Parrott, Kean, & Niemeyer, 1990). Separation of work and home, or business and family has been a strongly held societal norm influenced by tradition and gender roles (Christensen, 1988; McCray & Day, 1977; Mitchell, 1984; Montgomery, 1967, 1974a, 1974b; Sternlieb & Hughes, 1986).

Both economics and technology are contributing to changes in work and home (Braus, 1993; Kobrin, 1973; Langdon, 1989; National Association of Home Builders, 1988, 1994; Sheedy, 1994). Kean, Niemeyer, and Maupin (1994) described the impact of economics on rural households: “the restructuring of agriculturally dependent communities is forcing residents to seek alternate sources of employment and income if they choose to remain in the community ”(p. 1). In many rural communities, women are turning to home-based work for those alternate sources of income. Futurists and the popular press are increasingly promoting the idea of home-based work, often citing advantages of new technology plus benefits for home and family (Ambry, 1988; Bacon, 1989; Cross & Raizman, 1986; Langdon, 1989; Myers, 1990; Naisbitt & Aburdene, 1990; Norton & Glick, 1979; Ruddy, 1994; Toffler, 1983; Toffler & Toffler, 1995).

The home-based business (integration of the business into the home space) is one example of the major transformation in the female work role (Brown & Peckman, 1987; Naisbitt & Aburdene, 1990). Women-owned businesses are the fastest growing sector of the nation’s economy and create more new jobs than all the Fortune 500 companies together (Women’s Business Institute, 1994).

Recent demographic reports reflect the influence of numbers of women in the workplace and women in home-based businesses. A profile of home-based workers showed a significant increase in representation of women among the self-employed (Deming, 1994; Devine, 1994; Horvath, 1986). The 1988 National Work at Home Survey, conducted by Link Resources (Ambry, 1988; Naisbitt & Aburdene, 1990) reported that two-thirds of those who worked exclusively at home were women, and that 57% of the new homeworkers were women.

In North Dakota, women-owned businesses (including home-based businesses) are showing increased growth and economic impact for the state. North Dakota has 12,000 women business owners who are involved in operating more than 8,000 businesses. That represents 30% of the total businesses in North Dakota and 14% of the total revenue generated by state businesses (Darnay, 1994). A telephone survey of 425 business women in North Dakota conducted in 1994 showed that 12% of those surveyed had started their business during the past year. Of the 200 women who shared their 1993 annual sales, almost 60% reported increased profits (Women’s Business Institute, 1995).

A 1992 study of rural states involved in the USDA Cooperative Regional Research Project, NE-167, described the diversity of small businesses and provided details on home-based workers (Loker & Scannell, 1992; Rowe, Stafford, & Owen, 1992). Small business categories included professional/technical, marketing/sales, clerical, mechanical/transportation, artisans/crafts, managers, services, contractors, and agricultural. The marketing/sales category accounted for the highest proportion (25%) of home-based workers' occupations. The researchers suggested that home-based work may be a complement to outside work rather than an alternative. The study also suggested that home-based working women do not differ from other women. They maintain their role as household managers besides having a work role (Loker & Scannell, 1992).

Penny Retzer, director of the Women's Business Institute at Fargo, North Dakota, stresses the importance of providing business information access to women entrepreneurs. "It is increasingly important to provide information to women entrepreneurs that will promote their satisfaction and, in turn, continue to contribute to the economic growth of the state" (Darnay, 1994, p. 6).

Because information on the current state of women in home-based businesses is limited, specifically related to their workspace, researchers must gather data to provide a knowledge base. Information is needed on the actual conditions of the home-based business workspaces and satisfaction with those workspaces. Such data could provide a base from which to identify those conditions related to satisfaction. Previous studies on satisfaction with home-based employment, especially that of Gritzmacher (1993) and Lacy, Shepard, and Houghland (1979) reported a strong relationship between work and home. Recent business studies, such as Links Among Satisfaction, Commitment, and Turnover (Russ & McNeilly, 1995), further emphasize the importance of job satisfaction to success. Identifying which demographic and workspace conditions are related to satisfaction with the workspace could help predict business satisfaction for home-based women entrepreneurs.

Problem Statement

A home-based business (HBB) becomes part of the home, and interactions between home and business occur. These interactions may cause the entrepreneur (proprietor of the business) to be either satisfied or dissatisfied with her workspace.

Although home-based work is often viewed positively or even described as an ideal work arrangement (Beach, 1985; Gurstein, 1991; Herod, 1991; Sheedy, 1994), Furry and Lino (1992) suggested that few studies have examined its problems. By basic definition, a home-based business (HBB) challenges the norm of separation of work and home. Parrott et al. (1990) found that priority conflicts arise over the use of space.

Christensen, in her 1988 landmark study, summarized, "the reality is that the contemporary American home has not been designed to accommodate work at home, much less to see women there as a wage earner" (pp. xi, xii). Kean et al. (1994) suggested that "stresses and demands of the home environment and business occurring simultaneously in space and time need further study if we are to contribute substantially to the understanding of home-based business operations" (p. 14).

To better describe the home-based business operation, it is necessary to obtain information directly from the women entrepreneurs. Information is needed on characteristics of the workspace, including the demographics (who uses the workspace and how much time

is spent there) and workspace conditions (the type of business, how the workspace is used). That information would provide a base to compare women entrepreneurs' workspace satisfaction with those given characteristics.

Purpose and Objectives of the Study

The purpose of this study was to obtain data on women entrepreneurs engaged in home-based businesses (HBBs) in order to describe this population. The study also was designed to determine what demographic characteristics and workspace conditions relate to satisfaction with the workspace.

Specifically, this study: (1) described home-based businesses owned by women entrepreneurs in North Dakota and (2) examined the relationship between satisfaction with home-based business workspace and demographic characteristics and actual workspace conditions.

Research Questions

1. What are the women entrepreneurs' characteristics (family and personal) related to the home-based business? (How many hours are spent working for the business? How many hours are spent in the workspace? Are other household members involved in the business? How many children under five years of age live in the home?)

2. What are the workspace conditions when a business is integrated into the home space? (Is the type of business product or service? Is the space used by the business designated or scheduled space? Is there storage space for business items? How many clients and employees are in the home?)

3. Are women entrepreneurs satisfied with having their business in the home? (Are they satisfied with: workspace, privacy, security, personal safety, accessibility? Are they satisfied with their housing after integrating the business into the home?)

4. What is the relationship of the demographic characteristics (hours of employment, time spent in the workspace, other household members employed in the business, number of children under five years of age) to satisfaction with the business workspace (space, privacy, security, personal safety, accessibility)?

5. What is the relationship of the actual conditions of the workspace (type of business, designated or scheduled space, storage for business items, clients and employees in the home) to satisfaction with the business workspace (space, privacy, security, personal safety, accessibility)?

Delimitations of the Study

The sample was limited to women entrepreneurs in North Dakota who are engaged in home-based businesses, not women working out of their home for another company or business, typically called telecommuters.

The study was limited to satisfaction related to the home-based business space, not other quality of life issues.

Limitations of the Study

The population was limited to the Women's Business Institute database of North Dakota entrepreneurs in small businesses and home-based businesses.

Many respondents would have participated in Women's Business Institute seminars or training sessions and, therefore, may be a more positive or more negative group than those respondents who did not participate in such training.

Survey size and follow-up was limited due to location of the sample (North Dakota) and availability of funding and assistance from the Women's Business Institute.

Assumptions of the Study

This study assumes the following statements.

- The participants can be objective in reporting satisfaction.
- Space, privacy, security, personal safety, and accessibility are all factors or components of satisfaction that impact satisfaction.
- Workspace conditions (type of business, designated or scheduled space, storage for business items, and clients or employees in the home) are all factors to consider in planning the workspace.
- Components in the independent and dependent variable are legitimate.

Importance of the Study

Research on Women Entrepreneurs

A central issue of the 1990s is the workstyle needs of women (Ferguson & Dunphy, 1991). Although estimates suggest that about one-fourth of all new business formations are created by women, most studies have focused on male entrepreneurs (Taylor, 1988). McLaughlin (1981) and Carney (1995) suggested that there is limited research available on women entrepreneurs in home-based business. McVicar and Craig (1981) stated that there is a new class of women emerging in business as well as in other areas of society. For these women entrepreneurs, the business is the symbol of self-expression and independence.

Although home-based business has long been one type of business, changing demographics and workspace conditions warrant an update of the home-based business profile. Studies by Ahrentzen (1990), Beach (1988, 1989a) and Kraut (1988) suggest exploring such factors as number of hours worked and assistance with the home-based work due to the influence on work demands and family resources.

Christensen (1988) found that those who work at home are "not a generic group, but vary by age, income, gender, and family circumstances" (p. 205). That fact supports the need for further study to find answers to such questions as the status of home-based businesses in North Dakota and the needs of the women entrepreneurs.

In North Dakota, an increase in women-owned businesses is reported (Women's Business Institute, 1995), but little is known about the profile of the women entrepreneurs in home-based businesses. Profiling the women entrepreneurs in North Dakota could provide valuable data for education. For example, demographic information such as age group, educational level, and additional business-related courses taken could be used to identify educational needs. Some of the study findings may be generalized for women entrepreneurs similar to participants in this study (Bavelas, 1995). Thus, the study could add to the knowledge base and also increase awareness of would-be women entrepreneurs in home-based businesses and those who work with or support those women.

Economic Impact

The year-end activity report of the Women's Business Institute (WBI) (1995) shows that women-owned businesses are an important part of North Dakota's economy. The number of home-based women entrepreneurs assisted by the WBI continues to increase. However, only limited demographic information is available on those women entrepreneurs served by the WBI. A description of women entrepreneurs in North Dakota could assist the WBI with targeting program planning and development for the women entrepreneurs in home-based businesses. This study will benefit the WBI by providing the profile of women entrepreneurs to help determine program assistance.

Outcomes of the study may be of special importance to those concerned with economics. Figures from the Women's Business Institute (WBI, 1995) report economic growth for women-owned businesses in North Dakota: (1) 54% had experienced expansion during the past year; (2) 20% of the businesses reported more full-time employees than they had the previous year; and (3) based on 200 women reporting annual sales, just under 60% reported increased profits. Such data have impact on legislators, government officials, educators, and business persons. Economic growth provides revenue for the state and influences the legislation on trade, taxes, and business regulations. This study will help to describe the particular group of women entrepreneurs served by the WBI.

In addition, all those who are serviced by, or provide product or service to the business would be influenced by the success of women entrepreneurs. Some examples might include lenders, insurers, office equipment and furnishing providers and servicers, as well as related industries that supply or receive products or services from the home-based business.

Christensen (1988) suggested that government could take the lead in providing needed information to the home-based business owners. Although the U.S. Small Business Administration has been involved with the women entrepreneurs in home-based businesses through the WBI demonstration project, continued support is needed to assist the increasing number of women entrepreneurs.

Thus, in addition to adding to the research base, the proposed study could also increase knowledge of potential home-based business owners. Findings could assist educational institutes such as the Women's Business Institute, Fargo, North Dakota, in training or educating those women contemplating starting a home-based business.

Workspace Satisfaction

The sharp increase in the number of home-based businesses in recent years suggests that these businesses may have distinct advantages over out-of-home jobs (Editors of Income Opportunities magazine, 1990). A review of literature suggests there are both satisfactions and dissatisfactions with having a business within the home.

Integrating a business into the home results in different workspace conditions than a traditional business setting. An understanding of the changes that will result is important for coping with those changes (Editors..., 1990; Parrott, Bach, & Lastovica, 1995; Parrott et al., 1990). Changes in how the home is used may affect the satisfaction of women entrepreneurs in home-based businesses.

The study findings may help would-be entrepreneurs in deciding whether or not to start a home-based business. For those who choose to start a home-based business or for those who are already in a home-based business, the study may provide factors affecting satisfactions with the workspace.

Definition of Terms

Demographics

In this study, demographics refers to data on women entrepreneurs in home-based business. Demographics is a set of independent variables, measured by responses to questions on: hours of employment, time spent in the workspace, other household members in the business, and number of children under five years of age living in the home.

Designated Space

Designated space is defined in this study as the room(s) and/or area(s) of the home that are set aside for exclusive use of the business. This is in contrast to shared space, which may be used by both the family and the business.

Full-time Work

In this study, full-time work is described as 30 hours or more per week.

Home-based Business (HBB)

Local ordinances vary in their description of a home-based business or home occupation. For this study, a home-based business refers to a business that is conducted primarily from the home by a woman entrepreneur. It is usually secondary to the use of the home for residential purposes. The home-based business is contained within the main dwelling, but may involve other activities or storage away from the home.

Home-based Work

Research by Boris (1988) and Christensen (1985) defined home-based work as paid work within the home. Christensen (1988) later used both home-based work and homework to discuss paid work in or from the home. For this study, home-based work means work for pay within or from the home in support of the home-based business.

Non-rural

This is used to further define the area where the ND woman entrepreneur's business is located. Non-rural defines areas with over 1,000 people, in contrast to rural areas, with less than 1000 people.

Rural

This is used to further define the area where the ND woman entrepreneur's business is located. Rural defines rural areas or small towns with less than 1000 people.

Satisfaction

In this study, satisfaction is the dependent variable. It refers to satisfaction of women entrepreneurs with their home-based business workspace. It will be measured by individual and overall responses to satisfaction with space, privacy, security, safety, and accessibility.

Scheduled Space

This is defined as the room(s) and/or area(s) in the home that are used during specified times for the business.

Total Income

Total income in this study will mean combined household and home-based business income, the sum of whatever money comes into the household, including alimony, child support, disability, or other earnings or payments.

Women Entrepreneurs

In this study, women entrepreneurs will refer to women who are proprietors of the business, assuming both control and risk. The sample of women entrepreneurs in North Dakota will be limited to those who are engaged in home-based businesses.

Work Environment

Work environment includes the resources that are available to do the work (Weiss, 1993).

Workspace

Workspace refers to the actual physical space designated for use of the home-based business.

Workspace Conditions

Workspace conditions refer to the actual conditions of the business within the home. Workspace conditions will be independent variables in this study, measured by responses to type of business, designated space or scheduled space, storage for business items, and clients and employees in the home.

CHAPTER 2

CONCEPTUAL DEVELOPMENT

This chapter focuses on the development of a proposed conceptual model showing satisfaction of women entrepreneurs who integrate the business into household space. First, home-based business research is discussed to give the reader a general description of businesses within the home. Topics used to describe the businesses are type of business, reason for business, workspace, accessibility, and female workers. A review of advantages and disadvantages of businesses within the home provides background for studying the women entrepreneurs' satisfaction. Facts on employees, family involvement, income, and hours of employment provide additional information for the proposed model.

Research on satisfaction is presented to provide background on housing satisfaction and measurements used by previous researchers. Variables contributing to satisfaction are discussed to help develop the framework for this study. This chapter points out that most satisfaction research has been on housing that does not have a business within.

Finally, the proposed model is presented. Demographics and workspace conditions are the independent variables. The dependent variable is women entrepreneurs' satisfaction with the home-based business workspace.

Home-based Business Research

Many how-to books on entrepreneurship and the management of small businesses exist, but research-based literature available on the home-based business is limited. There is some research specific to women entrepreneurs in home-based businesses focused on socioeconomics. Popular literature highlights technology and provides general information on home businesses from an advantage-disadvantage perspective. Although the popular press highlights the positive aspects of home-based business, there are also examples of negative aspects of home-based business. Positive aspects of the home-based business include eliminating problems of child care, office politics, and commuting, and control over the work process and time (Christensen, 1988; Beach, 1989b). Some disadvantages of home-based work identified are interruptions, separation of work and family, and wear and tear on the home (Furry & Lino, 1992; Kean, Niemeyer, & Maupin, 1994). This chapter includes the studies that contributed relevant information about women entrepreneurs, and specific factors that may provide helpful insight for integrating the business into the home.

Much of the recent literature on home-based business is based on data from the nine-state Cooperative Regional Research Project, NE-167, "At-Home Income Generation: Impact on Management, Productivity, and Stability in Rural and Urban Families," partially supported by Cooperative States Research Service, U.S. Department of Agriculture, and the Experiment Stations at the University of Hawaii, Iowa State University, Lincoln University (Missouri), Michigan State University, Cornell University (New York), The Ohio State University, The Pennsylvania State University, Utah State University, and the University of Vermont. The study included 899 families with at least one member in home-based work. Note that several citations in the following review of literature used data from this project. See, for example, Furry & Lino, 1992; Gritzmacher,

1993; Heck, Rowe, & Owen, 1992; Loker & Scannell, 1992; Rowe & Bentley, 1992; Winter, Puspitawati, Heck, & Stafford, 1993.

Several studies exist on the topic of housing satisfaction and show a strong relationship between demographic and socioeconomic factors and satisfaction. However, the housing in those studies does not include a business. For that reason, this study examined satisfaction in the workspace to determine whether those strong relationships also apply in homes where a business is integrated.

The perception that work and family are separate is reflected in research. McLaughlin (1981) stated, “while a number of areas of the social sciences have examined work experiences or family dynamics, work and family have generally been treated as distinct, or even unrelated fields of study” (p. 14). The segmentation theory, as explained by Chow and Berheide (1988) and Lambert (1990) supports home and work as separate systems with rigid boundaries and lack of permeability, either due to inherent independence of those systems or workers intent to keep them separate. The spillover theory, however, recognizes that in the relationship of work and families “their effects, positive or negative, spill over from one to the other” (Rowe & Bentley, 1992, p. 281).

Many articles discuss conflict between work and family (Blau & Farber, 1986; Crosby, 1991; Kamerman & Kahn, 1981; Pleck, 1985; Snyder, 1987) but are not specific to home-based businesses. There are few studies that provide empirical data on the current trend toward work in the home and how family and work relate. Many studies, such as those by Horvath (1986), Kraut (1988), Kraut and Grambach (1987), and Pratt (1987), looked at the definition of home-based work and its occurrence as a type of business.

The most recent literature about satisfaction with workspace in the home, discussed in this chapter, includes Christensen (1995), Gritzmacher (1993), Heck (1991), Heck, Rowe, and Owen (1992), Loker and Scannell (1992), Parrott, Kean, and Neimeyer (1990), and Rowe, Stafford, and Owen (1992).

Type of Business

Historically, women entrepreneurs’ activities were concentrated in the apparel, cosmetics, and food processing fields (Taylor, 1988). Whereas McVicar and Craig (1981) listed traditional categories in their study of service-related businesses (cooking, teaching, child care, secretarial services, and sewing), Rubin (1981) listed diverse businesses, such as, “market research, landscape design, editing services, cat breeding, professional party planning, and industrial psychology” (p. 11). Although most home-based businesses are independent ventures (owner is creator and marketer of the product or service), there also are those that are dealerships or distributorships (rely on a company for the products or materials), or franchises that can be operated from a mobile unit (Editors..., 1990). According to Anthony E. Whyte, director and founder of the American Home Business Association, some of the most successful home businesses are: “computer consulting, bed and breakfast inns, home meal delivery, daycare centers, mail order, financial advice, accounting-on-wheels, home remodeling and repair, tax consulting, and diet or weight control advice” (Editors..., 1990, p. 10).

Rowe and Bentley (1992) suggested that occupations vary due to family structure, “because occupations differ in the amount of work that can be done alone as opposed to interacting with others” (p. 286). They used nine categories of occupations including professional and technical, marketing and sales, clerical, mechanical and transportation, crafts and artisans, managers, services, contractors, and agricultural products and sales (U.S. Department of Commerce, 1980). Marketing and sales was the category reported for one-third of the home-based workers in nonfamilies. Note that labels given to family groups in the Rowe and Bentley study were the same as those used by Ahrentzen (1990) in her study of 104 home-based work households. The four categories of households were: nonfamilies (household manager not married and no children in the household), single-parent families (household manager not married but living with one or more children), adult-only families (household manager married and no children present), and full-nest families (household manager married and living with one or more children).

Taylor (1988) suggested that successful entrepreneurs seek out and find “niche” opportunities. Furry and Lino (1992) found occupational differences between home-based business owners and paid workers. Also, no one category dominated home-based business owners. They also confirmed the difficulty of comparing information on occupation categories due to the classification systems used in various studies. For example, the Bureau of Labor Statistics study included professional occupations under the service category and the LINK Resources study included all people who work at home, besides those who were home-based business owners (Furry & Lino, 1992). Definitions of categories vary with studies, but studies conducted by Parrott et al. (1990) and Editors of Income Opportunities magazine (1990) group the businesses under product-based or service-based businesses.

Reasons for Business

Factors associated with the decision to become an entrepreneur, says Robert Brockhaus, Professor of Management and director of the Small Business Institute at St. Louis University, include categories of “psychological influences upon the individual, effects of previous experiences (especially previous jobs), and personal characteristics” (Taylor, 1988, p. 8). Changes in the economy have also caused change in business attitudes. Modern entrepreneurs must have a willingness to accept changes and to use new technological advances (Taylor, 1988).

Reasons for starting a home-based business differ distinctly by gender. “Women entrepreneurs tend to be more interested in self-fulfillment than in money and power” (Hisrich & Brush, 1985, p. 30). The strongest motivators for women were needs for independence, job satisfaction, stimulation, and achievement (Ferguson & Dunphy, 1991; Taylor, 1988). Beach (1989b) reported that women’s “overwhelmingly compelling reason” is family (p. 135). Rowe and Bentley (1992) concurred, and stated further that such choice “then dictates the context of the home-based work” (p. 294). Horvath (1986) and Voydanoff (1987) suggested that a home-based business is particularly effective for women as a way to balance demands of work and family, but there are few studies that specifically address how demands are met. Research by Ahrentzen (1990), Beach (1987), and Christensen (1988) confirmed that adjustments are made for both work and family demands. Beach (1989b) and Rowe and Bentley (1992) emphasized the impact of family on women’s work styles. They found that whether or not there are dependent family members can influence the location and exclusivity of workspace, work schedule, hours, and income.

Stickey (1995), who is an entrepreneur and farmwife, encouraged rural economic development efforts to support local residents. Monies should be spent to support local entrepreneurs' efforts to start or expand their businesses, rather than spending dollars to attract outside industries. Individuals who are likely to start a home-based business are grouped as (1) mothers who need income, but have small children, (2) retirees who seek additional income, (3) professionals who have experienced burnout, and (4) couples with grown children who want a challenge (Editors...1990).

Workspace

Foremost, the workspace should be separate, or at least clearly defined, and based on amount of privacy needed, and also the business schedule (Editors...1990; Holtz, 1990). The workspace should be planned carefully to create an environment that promotes timesaving strategies and comfort (Fox, 1994; Ostrom, 1993). Improving the work environment, such as the resources and tools available to do the work, has potential for improving human performance (Ostrom, 1993).

Environmental conditions, such as pollutants and noise, should be considered to prevent harmful effects and also to reduce negative impacts on the surrounding neighborhood (Aldwin, 1994; Behr & Lazar, 1981; Butler, 1988; Evans & Jacobs, 1982; Holtz, 1990). Early planning of the space should consider electrical requirements to ensure safety. Holtz (1990) reported that the average home is not wired for industrial or business uses. The International Labour Office (1981) reported that a general safety and health problem facing all workers is fatigue, but noted that the condition may be particularly severe in women due to their combined work and family responsibilities. This suggests that safety should be considered in the home workspace, where there may be more distractions than in a business located away from the home.

Important location factors to consider include being out of the mainstream of household activity and being close to an entrance (Editors...1990). The locations of the workspace reported by women in the Rowe and Bentley (1992) study included a room described as their office and the basement. Exclusive workspace was reported only for women living in nonfamily and single-parent households (Rowe & Bentley, 1992). The number of young children in the household may affect satisfaction with space and privacy. Heck, Rowe, and Owen (1992) reported that home-based working households often need and use child care.

Not all work of the home-based business takes place in the workspace. Location, type of business, use of technology, and clients served might each effect how much time is spent in the workspace. Sites outside the home were listed as a worksite or a client's home or office (Rowe & Bentley, 1992). Taylor (1988) suggested that the access to suppliers, customers, and new markets is important to entrepreneurs.

Recent studies (Ahrentzen, 1990; Beach 1988, 1989b; Parrott, Bach, & Lastovica, 1995; Parrott et al. 1990; Rowe & Bentley, 1992) showed that the location of the home-based work space is relevant to interactions. Rowe and Bentley (1992) stated that there is concern for the trend of home-based work due to "the argument that having separate settings for domestic and work activities results in harmonious and balanced relationships" (p. 290). Restated, some contend that blending work and family space enhances family and spouse interaction (Beach, 1988, 1989b), while critics of home-based business contend that a fusing of home and work settings is disruptive

(Ahrentzen, 1990; Pleck, Staines, & Lang, 1980). The observation study by Beach (1987) of work activity found that work time included interruptions by children, telephone calls, and household chores. Ahrentzen (1990) and Parrott et al. (1995) also discussed an overlap of household and business activities.

Ahrentzen (1990) suggested that establishing boundaries in the home is important to identify work roles versus home roles and reduce potential conflict. Fitzgerald and Winter (1995) studied four dimensions of intrusiveness: seeing clients at home, receiving telephone calls at home, conflicts over an automobile, and issues related to overlapping space use in the home. They found that certain types of intrusions, such as the frequency of receiving telephone calls at home and the extent to which clients, customers, and employees are seen in the home, are intrusions that relate to the nature of the business or the type of work that the home-based worker is doing.

Winter et al. (1993) recently studied time-management strategies with home-based work. They reported that when business activities are not separated from the household activities, management of time can be a problem. The strategies used to cope with such problems are identified as, "accepting less work . . . or modifying standards for household production or business production" (Winter et al., 1993, p. 70). Workers in Ahrentzen's (1990) study used the following strategies: scheduling activities, separate workspace, restricted access, and eliminating or relocating some family activities.

Accessibility

Accessibility of the workspace may be an important feature for those home-based businesses that have clients come to the home or for disabled entrepreneurs (Behr & Lazar, 1981). Butler (1988) suggested that there are advantages to working at home for the elderly and handicapped populations. For example, the ability to work at home benefits individuals who find it difficult to travel to work because of physical disabilities, age, location, or family responsibilities. Stephens and Bergman (1995) discussed the importance of providing access to consumers with disabilities for reasons of marketing and recent legislation, the Americans With Disabilities Act (ADA). Although the ADA addresses public spaces, clientele may anticipate the same accessibility for a home-based business.

Features to make the business and workspace more accessible to all clients include direct access from the outside, no outside steps or stairways, and adequate lighting. Each business needs to consider their clientele to determine design for accessibility (Bach, 1985).

Accessibility of the workspace may not be as important for those home-based businesses who do not have clients come to the home. One example is a business which does client contacting by telephone, such as service businesses (McVicar & Craig, 1981). Businesses may also use new technology such as remote phone systems and internet to access clients or providers. Another example where accessibility is not a consideration is a business that provides delivery of the product or service.

Female Workers

According to the Bureau of Labor Statistics (BLS), five million men and four million women work eight or more hours per week at home as part of their primary (nonfarm) jobs (Horvath, 1986). However, 1.9 million Americans work exclusively at home, and about two-thirds of them are women who average a twenty-seven-hour work week. (Christensen, 1988). Both Drucker (Taylor, 1988) and Rubin (Behr & Lazar, 1981) noted the contribution of entrepreneurs to the U.S. work force. Rubin referred to this growth in women workers as a “massive silent effort by women who have chosen to remain at home but are equally committed to making an economic impact upon their community” (p. 12).

The study by Fitzgerald and Winter (1995) included variables such as age, education, marital status, gender, occupation, household size, tenure (own or rent), and the proportion of household income derived from the home-based work. They found that characteristics related to the nature of the business include the number of years in business, the number of hours worked in the business, whether the home-based worker was a business owner or a wage-worker, and whether the worker was involved in a service occupation. The International Labour Office (1981) reported that a common feature of women’s employment is a marked tendency to work part-time and that the sectoral distribution of the female labor force throughout the world has been shifting from agricultural to the broadly defined service category.

Education of women entrepreneurs varies by study but typically is at least high school completion. Hisrich and Brush (1985) reported that nearly 70% of all women entrepreneurs have a college education. Furry and Lino (1992) reported that most home-based workers in their study had a high school diploma, and almost one-third had a college degree. Taylor (1988) reported that half of the entrepreneurs in his study had a high school education. Heck (1991) found that education was positively related to home-based employment. Economists, business advisors, labor specialists, and government officials suggest that education is important for women choosing home-based business (Ferguson & Dunphy, 1991). Ferguson and Dunphy concluded that there is a wide diversity of backgrounds of the successful women entrepreneurs they interviewed and that no strict generalizations could be made about the curriculum vitae of successful professional women.

Kent, Sexton, and Vesper (1982), editors of the Encyclopedia of Entrepreneurship, pointed out that little research effort has focused solely on women, although they create an estimated one-fourth of all new business formations. Specifically, they noted that there is limited information on what environmental conditions promote or discourage risk taking (p. 5). Candida Greer Brush, labeled as a woman pioneer in small business research, cited that only 10% to 15% of research papers analyze the contributions of women CEOs, thus there is more work [research] to be done (Carney, 1995). These facts suggest need for more research on women in both small businesses and home-based businesses.

Advantages of Home-based Businesses

A sharp increase in the number of home-based businesses suggests advantages over work in traditional business locations. The primary advantages, reduction in stress and gains in productivity, are due largely to the increased control over the work schedule (Editors..., 1990). Working at home can increase independence, enhance flexibility to balance the demands of work and family, provide the freedom to create new opportunities, and allow individuals to work where

they want (Christensen, 1988; McVicar & Craig, 1981; Rubin, 1981). McVicar and Craig cited monetary advantages, such as low start-up investment and fewer dollars going for rent, utilities, and furnishings, and being your own boss and paying your own salary. King (1982) reported that most people who work at home seem to have one thing in common, “they value what they call ‘the quality of life’ more than they value job status or a high salary” (p. 14).

Kraut (1988) found that isolation was an advantage for homeworkers, but working at home also meant that their workdays went beyond regular office hours. To ensure privacy, the homemaker used another individual to prevent interruptions. Anderson (1982) suggested that “there is no right way to weave a home job into your routine, whatever works for you will be correct” (p. 37).

Renewal of family life may be an incentive for many in the work-at-home movement (Christensen, 1995). For others, it may provide the opportunity to pursue a second career or a special talent or interest (Rubin, 1981). Working in the home can enable the worker to combine the work and family responsibilities (Beach, 1989a; McVicar & Craig, 1981; Rowe & Bentley, 1992). Work hours can be flexible, family obligations can be met, and family members can also share in the work (Beach, 1989a; Chow & Berheide, 1988; McVicar & Craig, 1981; Rowe & Bentley, 1992). For the disabled worker, a home-based business may provide a welcome alternative to working outside the home (Hoffman & Aldir-Hernandez, 1992).

Home-based businesses have a greater chance of success than one begun in a commercial space. According to Dun and Bradstreet, “55% of small businesses fail within five years, whereas only about 20% to 25% of home businesses fail during an equivalent time period” (McVicar & Craig, p. 11). Home-based business offers an option to women in rural communities, where other employment opportunities may not exist. The value of home-based businesses for communities is also cited in popular press articles such as those by Darnay (1994) and Greengard (1995). Service businesses are especially adapted to being home-based, since the service is often done at the client’s location, and the business office needs little more than a telephone number (McVicar & Craig, 1981). Advantages can be summed up as convenience, economy, and control (Editors..., 1990).

Disadvantages of Home-based Businesses

Although many popular press articles may lead one to believe that setting up work at home is a simple do-it-yourself project, Feldman (1992) cautions that there are legal, financial, and personal aspects to consider. For example, zoning and tax laws vary by municipality, and insurance for both personal and business coverage varies by company.

Critics suggest that home-based work also becomes a labor issue. They said that such an “invisible workforce” is easily exploited, that women are forced back into the home, which in turn prevents the development of a national policy of child care and elderly supports (Christensen, 1988). Costs that are normally paid by the employer such as group insurance, become the responsibility of the entrepreneur (Editors..., 1990). Concern of extreme isolation and confinement of home workers (Dangler, 1986; Editors..., 1990; McVicar & Craig, 1981) was also noted in Christensen’s (1988) study: “not being part of the typical office culture deprives a woman of the practical and professional benefits of having colleagues” (p. 164). The disadvantages of

isolation, such as decreased motivation (Arthur, 1992) can be overcome, however, through networking with other business persons and communication (Editors..., 1990).

Women who have previously worked outside the home may find motivation a problem, and may be distracted by the visual closeness to housework demands (McVicar & Craig, 1981). The advantage of being near the children, especially the young children, can become a disadvantage. One option is childcare, either within or outside the home, but that can also be a detriment to the business due to cost, availability, and travel (Editors..., 1990). And even if the woman entrepreneur is near the children, the demands of the work may prevent the needed or desired interactions (Editors..., 1990). Oesterle (1983) suggests three child care options for preschool children: live-in help, family day care, and institutional day care, but the decision frequently depends on economic factors (Stroufe & Ward, 1984).

Locating the business in a residential area also creates disadvantages due to zoning. In order to limit traffic to the home or to lessen impact on the neighborhood, the entrepreneur may need to offer additional services such as pickup and delivery. Such services can cut into profits and also take additional time (Greengard, 1995; McVicar & Craig, 1981). The home itself, an existing structure, forces the entrepreneur to compromise, adjust, or conform to the space available (Sheedy, 1994).

“Working at home eliminates the boundary between work and family, so that the women often find they can never leave their work” (Christensen, 1988, p. 5). Work hours may not be observed, since interruptions by both clients and family members are reported (McVicar & Craig, 1981; Parrott et al. 1990). For the person used to working regular hours, long hours may be another unavoidable disadvantage for the home-based worker (Editors..., 1990; Holtz, 1990). Holtz suggested that typical office-at-home problems include amount of space and privacy. Discipline is the suggested solution offered by Holtz to solve both psychological and practical problems of work in the home.

Professional identity may be lost in the home surroundings. Columnist Erma Bombeck suggested “the big problem . . . is that no one treats you like a professional” (McVicar & Craig, p. 92). Rowe and Bentley (1992) list disadvantages such as too close to work, family and work overlap, frequent interruptions, and lack of privacy. Interviewees in the Kean et al. (1994) study identified detriments to owning a home-based business as “interruptions, lack of separation of work and family environments and lack of credibility” (p. 14).

Employees, Family Involvement

In the Rowe and Bentley (1992) study, employees were more likely to be found in adult-only families. Holtz (1990) reported that hiring extra help may be impractical due to available workspace. He suggested that sending work out was more practical and efficient.

Family involvement in the business is an important consideration, whether or not the family members are employees of the business. Because a new business venture will affect all family members, family members need to both understand and have some say. Cooperation is stressed: those family members who work in the business should be voluntary rather than mandatory. Even

if the family is not employed by the business, the woman operator needs help with routine household chores (Editors...,1990).

Income, Hours of Employment

Heck (1991) reported that home-based workers were more likely to have a lower level of family income, and work shorter hours than other workers. Kraut (1988) and Rowe and Bentley (1992) found that income from home-based work differs based on occupation and hours worked. "The highest earners were in marketing and sales or managerial work, and the lowest earners were in services" (Rowe and Bentley, 1992, p. 289). Success was defined by women entrepreneurs in Gritzmacher's (1993) study as "making money and staying in and expanding the business" (p. 147). Findings by Gritzmacher showed that most of the households in home-based employment were satisfied with their income, "thus prospective . . . owners could be encouraged to start businesses and may become important members of the local economic base" (p. 159).

Winter et al. (1993) suggested that flexibility was an important coping strategy for both individuals and their families in the home-based business, "The pressures of home-based work require . . . flexibility in either time allocation or the allocation of sufficient income to hire additional help" (p. 90). Flexible hours are especially important to take care of children's needs (Editors...1990).

Educational Grant Programs for Women in Business

The fact that many home-based workers have a high school diploma or college degree, may give a false indication that education is adequate (Heck, 1991). However, the job may require more training or education to develop skills or gain knowledge required for the particular business venture.

Heck (1991) reported that home-based workers are more likely to have young children under age six and be self-employed. There is also an emerging group of women in business, sometimes called displaced homemakers (usually in their forties and fifties, and having experienced a change due to sudden circumstances such as divorce, the death of a spouse, or her children moving out of the household) (McVicar & Craig, 1981). Both of those groups may need educational assistance.

Although employment is often the way to an improved economic level, many women do not have the skills needed, nor the finances to receive training. Women, ranging from those who are on welfare and seeking employment, to aspiring entrepreneurs attempting to start their own business, find it difficult to go on without financial assistance (Southern Rural Development Center, 1995; Women's Business Institute, 1995).

A new type of employment assistance is available to women via grants from government and educational sectors. Such grants are designed to provide both personal and business skills through training programs that include self-esteem building and basic job preparedness. An important outcome of these grant programs is the contribution to economic development by enhancing the earning potential of the program participants.

Two examples of grant programs that provide opportunities for women entrepreneurs are the Southern Rural Development Center and the Women's Business Institute. The Southern Rural Development Center provides grants to fund special projects to enhance the earning potential of welfare recipients, build self-esteem, and enhance business skills (Southern Rural Development Center, 1995).

In contrast, the Women's Business Institute, Fargo, North Dakota, is one of 11 programs funded nationwide in 1993 by the U.S. Small Business Administration's Office of Women's Business Ownership. The mission of the Women's Business Institute is to improve the opportunities for economic and business growth for women entrepreneurs in North Dakota and the surrounding region (Women's Business Institute, 1994). Institute Director Penny Retzer has emphasized that a key part of that mission is to educate people on the current state of women in business (Darnay, 1994). The current focus of the Institute, as explained by Retzer, is "what can be done in a rural state where access to business information is not always easy in smaller communities" (Darnay, 1994, p. 16).

The Women's Business Institute initially worked collaboratively with public and private organizations throughout North Dakota to provide a broad range of services and information to women business owners (Retzer, personal communication, July 1995). In 1995, the WBI received another contract with the Watertown, South Dakota, Career Learning Center to serve South Dakota women. The WBI database currently includes over 6000 micro- (small businesses outside the home) and home-based business owners within the geographic area served by the WBI. This consists of the state of North Dakota and its surrounding region including part of Minnesota, Montana, and South Dakota. Clientele served by the WBI primarily consists of women who are either going into business or women who have already been in business for some time. Recent WBI surveys of women entrepreneurs in North Dakota reflect a positive economic impact for the state (Women's Business Institute, 1995).

Summary

The review of literature about home-based businesses identified important facts. Hours of employment for the home-based worker differ from other workers (Gritzmacher, 1993; Heck, 1991; Kraut, 1988; Rowe & Bentley, 1992). There is need for more information about how much time the worker spends in the workspace. Family involvement in the business is important for both the business and the household (Ahrentzen, 1990; Editors..., 1990; Rowe & Bentley, 1992).

Presence of children can affect the business due to time available for work and need for flexibility of scheduling (Editors..., 1990; Heck, 1991; Winter et al., 1993). Stickey (1995) noted that mothers with small children were likely individuals to start a home-based business. Heck (1991) noted the prevalence of children under age six in home-based business households. Although one of the reasons for work-at-home may be to avoid the need for child care, Heck et al. (1992) reported that child care becomes a need in households with pre-school children.

Although Rowe and Bentley (1992) found that occupations vary according to family structure, most studies reported a diversity of business types. There was no consistency in categorizing type of business. Parrott et al. (1990) grouped businesses as product or service types to study conflict of space.

Several researchers reported the importance of planning workspace. The ideal workspace is described as separate by Editors...(1990) and Holtz (1990). Several researchers also suggested that designated workspace is important for reasons such as time savings, comfort, improved performance, and reducing conflict (Ahrentzen, 1990; Beach, 1988, 1989b; Fox, 1994; Ostrom, 1993; Parrott et al., 1990). The type of business may also dictate how much time is spent in the workspace (Rowe & Bentley, 1992; Taylor, 1988).

Holtz (1990) suggested concern for safety, especially electrical safety, in the workspace. Several authors noted that environmental conditions should be considered (Aldwin, 1994; Behr & Lazar, 1981; Butler, 1988; Evans & Jacobs, 1982). Graff (1977) suggested that a function of housing was protection of people and their possessions.

Employees were not prevalent in home-based businesses, although more likely to be found in adult-only families (household manager married and no children present) (Rowe & Bentley, 1992). Number of clients varied with type of business (Kean et al., 1994; Parrott et al., 1990).

Satisfaction Research

Research on satisfaction, according to Weidemann and Anderson (1985), can serve two purposes. Satisfaction can be a criterion for evaluating the quality of the residential environment, by measuring the effect of perceptions and assessments of the objective environment upon satisfaction, or it can be a predictor of success.

Background

A model of housing satisfaction (Morris & Winter, 1978) provides background on housing satisfaction. Since that model is related to the Morris and Winter theory of housing adjustment and adaptation, a definition of terms used in that theory is important for a better understanding of the model.

Housing satisfaction is described by Morris and Winter (1978) as “a state of the level of contentment with current housing conditions” (p. 80). McCray and Day (1977) discussed satisfactions as indicators of housing needs. A reduction in housing satisfaction occurs when a discrepancy is perceived (Morris & Winter, 1975). In their model, Morris and Winter use the term deficit to denote “a deviation from a preferred state” (Morris & Winter, 1978, p. 13). “A perceived salient gap between actual housing conditions and those required by the norms produces a normative housing deficit for a family” (Morris & Winter, 1978, p. 79).

In the Morris and Winter model, the following demographic and socioeconomic characteristics are shown to influence housing satisfaction: education, occupation, family structure, stage of the family life cycle, and income. Morris and Winter’s (1993) recent research has shown only age and income to have independent influences on satisfaction. They suggest that additional studies are needed to further refine the measurements of housing satisfaction.

Variables Contributing to Satisfaction

Many researchers have been interested in the relationships of housing and well-being of people (Hayward, 1977). Several studies identified variables that contributed to housing satisfaction. Some of those variables are characteristics of the occupant, characteristics of the dwelling unit, management, and environmental and locational factors (Awatona, 1990; Graff, 1977; Michelson, 1977; Muoghalu, 1984; Onibokun, 1974; Vrbka & Combs, 1993). Studies by Campbell, Converse, and Rogers (1976) and Morris and Winter (1978) found that socioeconomic and demographic characteristics, and also features of the dwelling units were related to total measurement of housing satisfaction. Several researchers emphasized the importance of the facilities and services available in the dwelling unit in detecting the satisfaction with that unit (Francescato, Weidemann, Anderson, & Chenoweth, 1975; Onibokun, 1973, 1974, 1976).

For example, Chapin (1938) found that the availability of space for different functions was a strong determinant of satisfaction in a study of clearance and rehousing. Campbell et al. (1976) noted that in single-family homes, satisfaction with the dwelling and neighborhood is influenced by individual features rather than demographic characteristics. Rent and Rent (1978) stated that housing satisfaction is a product of both the housing unit and the neighborhood. Kaitilla (1993) suggested that residential satisfaction encompasses a household's satisfaction with the housing unit, as well as the neighborhood.

Graff (1977) suggested that housing has three major functions: unification and protection of people and their possessions, specialization and separation of facilities for specific activities, and dissemination of important information for the household. Rossi (1972) described housing as a many-purpose envelope "in which much that is the heart of human activity is carried out." (p. 121). Michelson (1977) later stated that the activities may be either congruent or incongruent with the needs and aspirations of the occupants. Parrott et al. (1990) found in a study of home-based business households that there clearly were conflicts among home, business, and family.

Environment-behavior scientists also confirmed the effect of buildings on people. The constructed world, including many structures, from highway systems to housing, generally influences people's activities and relationships with others (Proshansky, Ittelson, & Rivlin, 1976). Altman (1975) noted that situational factors, such as the general setting in which people function can influence regulation of personal space boundaries. Features of privacy were discussed in depth by Altman, who described privacy as an interpersonal boundary-control process, which paces and regulates interaction with others. Privacy was further described as an input and output process, where individuals or groups attempt to regulate contacts coming from others and outputs they make to others. King (1982) discussed factors related to working at home. Distractions noted were: television, telephone calls, the refrigerator, the garden, and the laundry.

An early study by Vars (1969) provided information on factors related to housing satisfaction. The study questioned whether a home in which a homemaker was highly satisfied would also rate high on a check list prepared by an architect. Although this was an early study, it may provide support for the model in this study. Family size and presence of children influenced satisfaction with family and housing characteristics. Homemakers with smaller families, on the average, reported more satisfaction with the type of house included in the study than did those homemakers with larger families. Those homemakers without children or with children over 18 expressed the most satisfaction with their housing. Age and education also influenced satisfaction.

Those women 40 years of age and over expressed more satisfaction with their houses than did the younger women. Higher satisfaction also was indicated by the five women who were not high school graduates than by the other homemakers.

Space was also important. Nearly 62% of the survey participants wanted some part of their house enlarged. The satisfactions found by the Vars (1969) study and the features desired by the participants may be indicators of satisfaction for this study. These include storage space, privacy, number of children in household, age and education.

Housing satisfaction continues to be identified as an area for future studies. Researchers who have used data from the nine-state regional project encouraged further research on satisfaction with home-based work. Gritzmacher (1993) suggested that satisfaction of home-based business owners is justification for home-based business starts.

Summary

Satisfaction can be a criterion for evaluating the quality of the residential environment, or it can be a predictor of success. Much of the literature reviewed suggested a strong relationship between housing characteristics and housing satisfaction. Therefore, the present study examined housing with workspace included to determine if similar relationships exist.

The well-known study by Morris and Winter (1978) showed a relationship of demographic and socioeconomic characteristics and housing satisfaction. In their recent study, Morris and Winter (1993) suggested that additional studies are needed to refine the measurements.

Many variables were identified as contributors to housing satisfaction. Specific examples of importance to this study include: characteristics of the occupant, characteristics of the dwelling unit (Awatona, 1990; Graff, 1977; Michelson 1977; Muoghalu, 1984; Onibokun, 1974; Vrbka & Combs, 1993), availability of space for different functions (Chapin, 1938), and importance of individual features (Campbell et. al., 1976). Graff (1977) described the social psychology of housing as how relationships among people are affected by their housing. For example, Michelson (1977) suggested that housing has three main functions of shelter, separation of activities, and dissemination of information concerning the household. Rossi (1972) described housing as a “many-purpose envelope.”

An early study by Vars (1969) provided information related to housing satisfaction. The homemakers most satisfied with their houses also had kitchens that rated high on the architects’ checklist. Family size and presence of children influenced reported satisfaction. Participants rated storage and space important. Michelson (1977) found that activities in the household may be either congruent or incongruent with the needs and aspirations of the occupants. In a later study of home-based businesses, Parrott et al. (1990) found that there clearly were conflicts among home, business, and family.

Environment-behavior scientists confirmed effects of buildings on people (Altman, 1975; King, 1982; Proshansky, et al., 1976). Researchers who have used data from the nine-state regional project advocate further research on satisfaction of home-based work. Such positive support from recent studies encourages studying satisfaction of the workspace.

Framework for the Study

The framework for the study was based on the review of literature. Home-based business research identified factors to be studied that might help to profile home-based workers in this study. Those factors included hours of employment, how much time the worker spends in the workspace, family involvement in the business, presence of children, business types, type of workspace, and conditions in the workspace. Satisfaction research suggested a strong relationship of housing characteristics and housing satisfaction. Space factors used as indicators in previous studies included factors such as storage space, privacy, and safety. This study was designed to test some of the factors important in both previous research on housing and research on housing that included a home-based business. The findings will add to the knowledge base and provide more information about the specific group of North Dakota women entrepreneurs.

Based on the literature review, the conceptual model showing satisfaction of women entrepreneurs who integrate the business into household space (Figure 2.1) was the model for this research. Like the Morris and Winter (1978) model, the model suggests a relationship of characteristics to satisfaction. Specifically, the proposed model suggests a relationship (1) between demographics of the women entrepreneurs and women entrepreneurs' satisfaction with the home-based business workspace, and (2) between workspace conditions and women entrepreneurs' satisfaction with the home-based business workspace. Details of the proposed model follow.

Two groups of independent variables, **DEMOGRAPHICS** and **WORKSPACE CONDITIONS**, were tested against the dependent variable **WOMEN ENTREPRENEURS' SATISFACTION WITH HOME-BASED BUSINESS WORKSPACE**. **DEMOGRAPHIC** factors include hours of employment, time spent in the workspace, other household members in the home-based business, and number of children under five years. **WORKSPACE CONDITIONS** factors include type of business, designated or scheduled space, storage for business items, clients in the home, and employees in the home. The dependent variable **SATISFACTION** factors include space, privacy, security, safety, and accessibility.

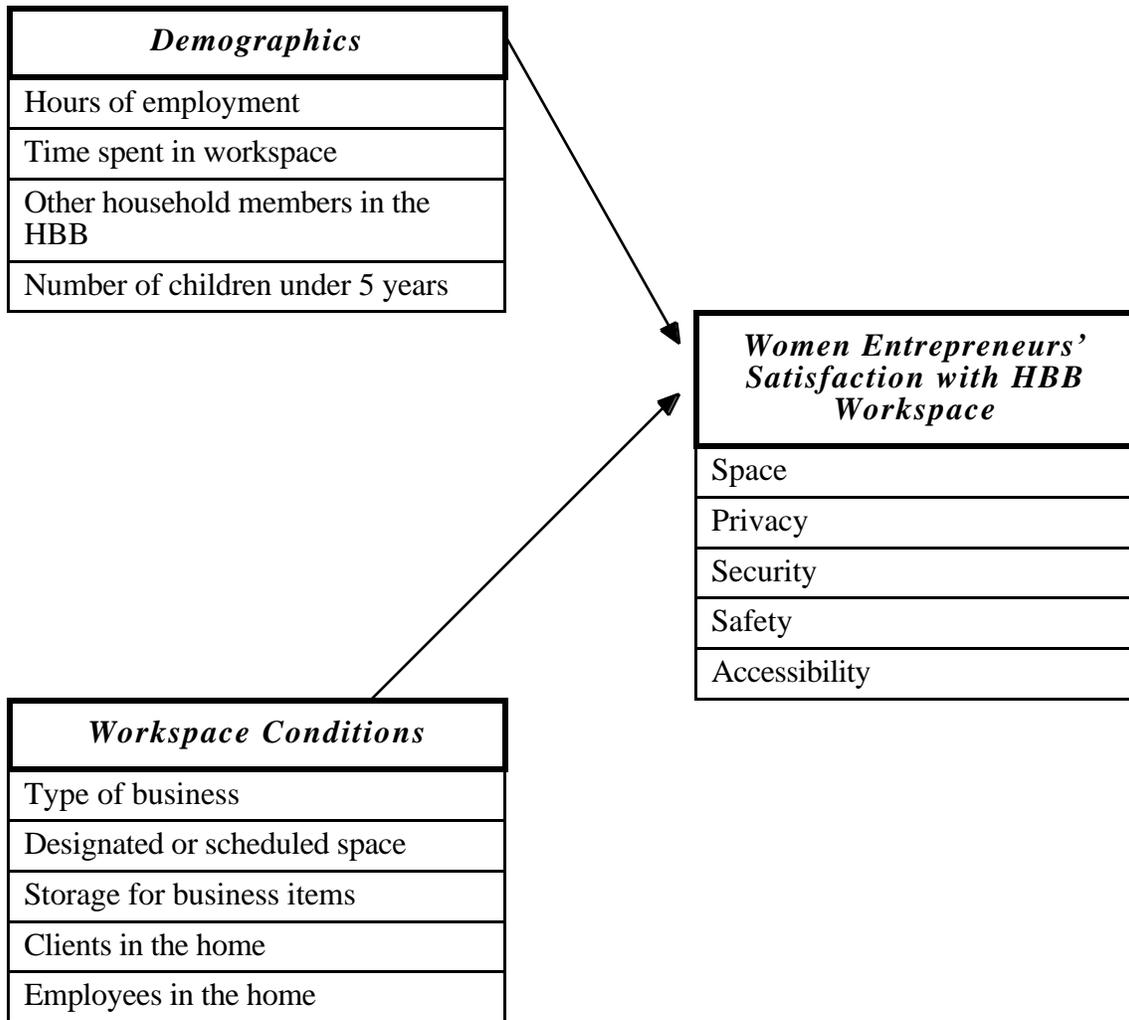


Figure 2.1 Proposed conceptual model showing satisfactions of women entrepreneurs who integrate the business into household space.

CHAPTER 3

METHODOLOGY

Chapter three introduces the methodology with a discussion of the selection and development of the instrument. The sample selection from the North Dakota population is then defined. The data collection section gives details on response to the mailed questionnaire, non-respondent telephone survey, and variables included. Measurement of variables explains the questionnaire. Finally, the null hypotheses are presented and analyses of data are described.

Variables Included In This Study

Independent variables include demographic factors and workspace conditions. The dependent variable is women entrepreneurs' satisfaction with home-based business workspace.

Measurement of Variables

Appendix A defines the variables for demographic characteristics, workspace conditions, and satisfaction with workspace. Questions asked to obtain data for those variables are listed. Also listed are questions asked to define women entrepreneurs for the survey and other questions included for further information.

Selection and Development of the Instrument

Survey research was the method selected for collecting data for the study of women entrepreneurs' satisfactions with integrating the business into the home space. Surveys are widely accepted for providing statistical data on a wide range of subjects for both research and administrative purposes (Kalton, 1983). Some advantages of this method include the ability to use a small group to generalize attributes of a population, economical design, and short return time for receipt of data for analysis (Babbie, 1990; Fink & Kosekoff, 1985; Fowler, 1988; Sudman & Bradburn, 1986).

To obtain data on satisfaction of women entrepreneurs that will be useful for would-be entrepreneurs and their information providers, data were collected from women entrepreneurs. A mailed survey was chosen to obtain data directly from women operating home-based businesses.

As suggested by Converse and Presser (1986), the survey was customized for specific objectives of the research purpose. The Women's Business Institute (WBI), Fargo, North Dakota, is a nonprofit organization interested in the support of women entrepreneurs; therefore, it also has interest in the objectives of this research project. As a cooperater for the proposed survey, the IWBI was important for assisting with cost and personnel. WBI director Penny Retzer agreed to the instrument format described, and provided support including copying of the cover letter on WBI letterhead and first mailing of the questionnaire within the WBI newsletter, mailing a postcard follow-up, mailing a second copy of the questionnaire to non-respondents, and verifying returned questionnaires and responses.

Survey questions (Appendix A) were based on previous research and written according to guidelines of survey texts. In addition, opinions were received from the doctoral committee, WBI staff, women entrepreneurs, and persons knowledgeable on the subject of home-based business. The questionnaire, “Women Entrepreneurs’ Satisfaction With Home-based Business Workspace” was the instrument used to obtain data for analysis. Questions were asked to define women entrepreneurs for the survey (part I), describe the home-based business (part II), and determine satisfaction with the home-based business workspace (space, security, privacy, personal safety, and accessibility) (part III).

Format of the Instrument

A key reference for the design of this cross-sectional survey was Dillman (1978). Although Dillman’s methods are often cited for survey design, note that this study also incorporated other methods that required some deviations from the Dillman guidelines. The instrument was a mailed questionnaire with questions typed directly on the opscan forms. This eliminated need for transfer of responses, and resultant chance for error. For readability, the questions were typed in uppercase and response choices were typed in lowercase.

Instrument Construction and Validation

Based on previous studies of home-based entrepreneurs, literature reviewed, and personal consultations with computer technicians, analysts, and statisticians, the instrument construction was closed-end questions. The questionnaire included a total of 61 questions (Appendix A). There were three sections to the questionnaire: (1) defining women entrepreneurs for the survey, (2) describing the home-based business, and (3) satisfaction with the home-based business workspace. Advantages of closed-end questions include cost, validity, and the fit of responses to the respondents (Converse & Presser, 1986). To measure the items on the instrument, responses included: yes/no (categorical scale), Likert scaling for testing satisfaction/dissatisfaction (summated rating scale, where the respondent indicates degree of intensity on a scale ranging between extremes), and multiple choice (Isaac & Michael, 1981). Questions were printed directly on an opscan sheet, with the answer column on the right. The total questionnaire was printed front-to-back on two opscan sheets.

Pretesting the Instrument

Pretesting is emphasized as one of the most important stages of questionnaire development (Bailey, 1982; Creswell, 1994). The instrument was pretested in Virginia to avoid contaminating the sample and to reduce time and travel costs. Several advantages of pretesting a questionnaire were noted (Bailey, 1982; Converse & Presser, 1986; Isaac & Michael, 1981). Pretesting allowed for redesign of the study to obtain more precise hypotheses, make needed alterations in data collecting methods, and reduce the number of treatment errors. Pretesting was also important for validity and reliability (Creswell, 1994). Converse and Presser (1986) advised that the pretest address specific purposes. Pretest of the questionnaire was designed to obtain opinions from subjects on both the format and questions asked, including task difficulty, subjects’ interest in the questions, and meaning of terms used.

Converse and Presser (1986) suggested that there is no commonly shared “tradition” about how to pretest. This pretest group was 20 women entrepreneurs in Virginia who approximated the actual survey respondents and also might be helpful in testing the mechanics. Ann Lastovica, Virginia Cooperative Extension specialist, furnished the names of 39 women who had attended Extension workshops on home-based business and were identified as having a home-based business. To randomly select 20 names for the pretest, the names were first arranged alphabetically. A coin toss determined that counting started with the first name on the list, then every other name was selected until the total sum of 20 was reached.

Before pretesting with the group, the questionnaire was distributed to researchers, faculty, lay persons, and graduate students for opinions on format, readability, clarity, and general design; then it was edited. An initial mailing, plus a one-week follow-up postcard, was mailed to the pretest group. The questionnaire was returned by 10 of the 20 participants. One questionnaire was not completed because the respondent wrote that she did not have a home-based business.

The few editorial corrections suggested by the respondents were made. No comments were made about the use of opscan forms versus use of traditional answer instruments. The pretest served its purpose of testing format, readability, clarity, and general design. Following obtaining bids for quantity orders of the survey instruments, 1000 questionnaires and 550 follow-up postcards were ordered.

Population and Sample Selection

The population sampled was limited to North Dakota due to convenience and support for the study. Population for the study was from the database of the Women’s Business Institute (WBI), 901 Page Drive, PO Box 9238, Fargo, ND 58106-9238. Database entries include any contact made with the WBI. Entries may include names of those who: already have a home-based or micro-business or those who are investigating entrepreneurship, have contacted the WBI for consulting, have attended a WBI-sponsored event, ranging from single-topic seminars to business expositions and business certification courses. The Women’s Business Institute database includes women-owned businesses in North Dakota and surrounding states. According to year-end report figures (Women’s Business Institute, 1995), the database contained 5,236 entries including both small businesses outside the home and home-based businesses. Following the addition of registrants at the Women’s Business Institute’s Fall 1995 Expo, this figure was estimated to be over 6,000 and included both women and men entrepreneurs in small businesses outside the home (also called micro-businesses by the WBI) and home-based businesses.

Facts About North Dakota

The following selected facts are provided to give the reader a better understanding of the sample and potential influences on the study. Of the states in the United States, North Dakota is ranked 19th in total area and 47th in population. Fargo, the largest city, had a population of 74,100 in 1990 (Hornor, 1995).

North Dakota is the most rural of all the states (Johnson, 1997). Approximately 35,000 farms cover more than 90% of the land. Fertile black soil, especially in the Red River Valley, is a factor in North Dakota's ranking first among the states in production of spring and durum wheat (Johnson).

Environmentally, North Dakota ranks lowest in total toxics released per capita, and also the lowest in the number of premature deaths among residents. But Kane, Podell, and Anzovia (1993) also reported that "North Dakota farmland is in jeopardy...those that remain use more pesticides per capita than do most other agricultural states" (p.395). This fact might be a determinant in the entrepreneur's decision to locate or remain in the state.

Climate is an important factor in the daily lives of North Dakotans. Records show a wide range of temperatures and moderate rainfall. The highest recorded temperature was 121 degrees and the lowest recorded temperature was - 60 degrees Fahrenheit (Kane et al., 1993). This climate has attracted immigrants from northern Europe and Canada.

North Dakota's name comes from the Dakota Indian word meaning "friends, allies." Racial/ethnic distribution, as of the 1990 census is: 94.6% White, 0.6% Black, 4.1% American Indian, and 0.7% Hispanic (Famighetti, 1996). Some cultural traditions continue in the Norwegian, Icelandic, Czech, and German communities.

Population of the state has been declining since 1980 when the population was 652,717. Between 1980 and 1990 there was a -2.1% decline (Kane, et al., 1993). Population as of 1994 was 637,988. Density is 9.2 persons per square mile (Famighetti, 1996). The population by sex shows nearly equal representation. Average household size is 2.5 persons (Hornor, 1995).

In 1990, over 18% of the North Dakota population was college-educated (Kane et al., 1993). Nationally, the figure was the same for females and 24% for males (U. S. Bureau of the Census, 1996). Women are increasingly becoming involved in public office, both at local and statewide levels. Over 170 women were mayors and municipal councilors in 1985, and 24 were in the state legislature (Hornor).

Principal industries, in addition to agriculture, are mining, tourism, manufacturing, energy (electricity production), and telecommunications (Famighetti, 1996). Employment distribution, as of 1995, was: 26% trade, 28% service, 23% government, 7.2% manufacturing. Recently, manufacturing industries have grown, especially food processing and farm equipment. Both men and women are well represented in the labor force. In 1993, of a total 305,000 employed, there were 161,000 men and 143,000 women (Hornor, 1995). Per capita personal income in 1994 was \$18,546 (Kane et al., 1993).

Sample Selection

The sample of the study was drawn from the WBI database. The database was first reviewed by WBI Director Penny Retzer to screen out entries that did not meet survey participant definition. That included entries coded as men and micro-businesses. The sampling frame was 2,300 names coded as women entrepreneurs in home-based businesses. Probability sampling was chosen to avoid selection biases.

Krejcie and Morgan (1970) suggested that the research division of the National Education Association had published a formula for determining sample size, but “regrettably a table has not been available for ready, easy reference which could have been constructed using the following formula”: (p. 607)

$$s = X^2 NP (1-P) \div d^2 (N-1) + X^2 P (1-P).$$

s = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as probability (.05).

To ensure a representative sample, sample size was determined using the Krejcie and Morgan (1970) formula (which they stated, needs no calculations) for determining sample size from a given population. The table suggests a sample of 327 for a population of 2,200 and a sample size of 331 for a population of 2,400. Using that table, 329 was the sample size (S) needed to represent the population (N) of 2,300. The number of questionnaires mailed was 550, based on an estimated 60% return (conference with J. Fortune, October 24, 1995). The sample analyzed was limited to those women entrepreneurs who were owners of the home-based business and had been operating for at least six months.

Systematic sampling procedure, which specifies using every nth (such as every tenth) name on the database, (Pedhazur & Schmelkin, 1991; Fowler, Jr., 1988) was used. A randomized start ensures a chance selection process (Fowler, Jr.). For this sample, the list was first alphabetized, then selection began with the first odd number after one on the list (as in the pretesting, a coin toss determined the starting number would be odd), followed by every third name thereafter until 550 names were selected (3, 6, 9, 12...). Freund and Wilson (1997) stated, “The overriding factor in all types of random sampling is that the actual selection of sample elements not be subject to personal or other bias, ” (p. 42).

Data Collection

Data were collected using an adaptation of the total design method suggested by Dillman (1978). The sample was surveyed through use of an opscan mail questionnaire. Advantages of the opscan sheet selected for this study were that questions were printed directly on the form, the form could be folded for mailing, and the completed form was scanned directly by computer for analysis of data. The initial mailing included the questionnaire (two opscan sheets), a cover letter dated April 16, 1996 (Appendix B), and a business return envelope. The cover letter informed the respondent of the purpose of the project and the benefit of the survey, and offered the respondent an opportunity to be included in a drawing for a U.S. Savings Bond in exchange for prompt return of the questionnaire. A one-week follow-up postcard (Appendix C) was mailed to all on the initial

mailing list to serve as a thank you to those who returned the questionnaire and a reminder to those who did not. A follow-up letter dated May 13, 1996 (Appendix D) and replacement questionnaire were mailed only to non-respondents approximately three weeks after the initial mailing. All mailings were distributed from the Women's Business Institute. The first mailing was enclosed with the WBI newsletter. The postcard and second mailing were each mailed first class.

Response to Questionnaire

One week after the first mailing, 73 questionnaires were returned. One week after the second mailing, 83 additional questionnaires were returned. By the survey cut-off date (June 7, 1996), response to the mail survey included a total of 208 returned questionnaires of 550 mailed, or a 38% response rate. The breakdown follows.

There were 116 qualified questionnaires (respondent met the survey requirements), (56% of returns). To qualify, the respondent had to be a woman and own the business, the business had to be located in North Dakota, and the business must have been operating for at least six months.

There were 92 questionnaires that did not qualify: 2 businesses were not located in North Dakota, 38 businesses were located in leased or owned commercial space rather than in the home, 8 businesses were home-based but had not operated at least six months, 30 reported "do not have a home-based business," 3 reported "have not started a business yet," 9 reported "no longer in business," and 2 returned blank survey with no reason given for not participating in the survey.

This breakdown of responses caused the researcher to question reasons for non-response. A follow-up phone survey of non-respondents was conducted for two reasons: (1) the desired response rate using the mail survey was not achieved, and (2) the fact that a high percentage of respondents did not qualify led to suspicion that the original sample also had a high percentage of people who would not qualify. It was anticipated that a telephone survey would help explain the low response rate.

Telephone Survey of Non-respondents

Background. The Telephone Survey of Non-Respondents was conducted in order to gain an understanding of the response rate of the mail survey. The Virginia Tech Center for Survey Research (CSR) was contracted to administer the survey, prepare a standard data profile, and maintain the instrument and data films. The estimated fee was based on the minimum \$2,600 which would include setup and making approximately 30 contacts. Increasing the number of contacts would have added charges of \$200, therefore the minimum contract was chosen. The following documents the CSR's administration of the survey.

Instrument and sample. The instrument was developed June 1996 in consultation with Michael Clark of CSR based on the mail survey instrument that was used for the initial survey. The instrument was designed such that administration time was less than two minutes and would determine whether respondents were eligible (qualified) for the survey.

The survey was administered via the Center's Computer Assisted Telephone Interviewing (CATI) system. A copy of the telephone survey instrument is located in Appendix E.

A sample of women entrepreneurs was selected from non-respondents to the mail survey. A goal was set to complete 30 interviews.

Survey administration. The sample originally received from the WBI contained 550 records and, for the most part, was sorted alphabetically by last name. The names of women who had returned the mail survey (208) were crossed off the list, leaving a total of 342 names (non-respondents) in the sample. The list of names was placed in random order by computer. Attempts were made to contact a total of 69 individuals (see Table 3.1). This was the number determined by the Center for Survey Research (Michael Clark) to obtain approximately 30 interviews and be cost effective for the researcher.

Telephone interviews (see Appendix E) were conducted on Thursday, June 13, 1996 and Friday, June 14, 1996. An average of three attempts was made for each record before a disposition of "unable to contact." Interviews were completed with 29 individuals. A summary of the phone survey responses is provided in Table 3.2. Table 3.3 is a comparison of responses to demographic questions by telephone and mail survey respondents.

All telephone survey data were retrieved directly into a machine readable file through the CATI system. These data were verified and tabulated using SAS-PC programming procedures. A data codebook was prepared to document the location, format, and coding schemes for all close-ended survey items.

Table 3.1

Summary of the final dispositions of 69 telephone sample members

	N	%
Non-respondent telephone sample members	40	58
Non-working, Untraceable	21	
Non-residential telephone number	2	
Deceased	1	
Unavailable during the survey's time frame	3	
Already sent back the mail survey	1	
Not a woman's business	2	
Refusals	2	
Unable to contact with three attempts	8	
Interviewed but did not qualify for survey	20	29
Eligible (qualified for mail survey) telephone sample members	9	13

Table 3.2

Responses to the telephone survey of 29 non-respondents

Question to qualify for survey	N(%)	
	yes	no
Q1. Currently operating a home business?	9 (31)	20 (69)
Q2. Operating at least six months?	9 (31)	20 (69)
Total qualified for survey = 9		

N=29

Table 3.3

Comparison of responses to demographic questions by telephone and mail survey respondents

	N(%) Phone N=9	N(%) Mail N=116
Description of business		
Product-oriented	5 (56)	60 (52)
Service-oriented	4 (44)	55 (48)
Number of children under age five	0 (0)	13 (11)

Responses. Table 3.1 shows that over half (58% ,60) of the telephone sample members would have fallen in the category of non-respondents. An additional 29% (20) were interviewed but did not qualify for the study. Only nine or 13% of the telephone sample members would have been eligible for the mail survey. These figures suggest that the mailing list was diluted and that the sampling frame was bad.

Table 3.2 shows that only nine or 13% of the non-respondents would have been eligible for the mail survey. Those eligible non-respondents are similar to the 116 who qualified in the mail survey (Table 3.3). For example, both types of business were well represented in both samples. Product-oriented businesses were represented by 52% of the mail survey respondents and 56% of the telephone survey respondents. Service-oriented businesses were represented by 48% of the mail survey respondents and 44% of the telephone phone survey respondents.

The telephone survey of non-respondents provides a better understanding of the mail survey response rate. Results of the telephone survey show that a high percentage of the original sample was unqualified and should have been eliminated prior to the initial mailing. The results also support the response rate (38%) as representative of the sample.

The Women's Business Institute provided information to help explain the response rate. Although the WBI has not performed a written survey previous to this study, they did have a telephone survey conducted during November 1994 of business women in North Dakota. In that survey, out of the 425 entrepreneurs surveyed, only 200 would share their annual sales figures (WBI correspondence, January 1996). Although this study asked respondents only what percentage of total household income was contributed by the business, that question may have been a reason for non-response to the mail survey.

Following are additional reasons contributing to lower than expected response in this study. Suggestions also are given for future studies.

The WBI database included many entrepreneurs who did not qualify for the survey. The WBI clientele data form used for database information was designed to provide summary information for WBI reports. The WBI distributes the data sheets at various WBI programs, so the resultant list can include aspiring entrepreneurs and individuals interested in a single seminar topic, as well as those entrepreneurs who have already started a home-based business. Although the database was adequate for WBI reporting purposes, it did not include all information necessary to learn whether the clientele qualified for this study. Also, the WBI was a young organization at the time of the study, with an expanding, yet small clientele database. When the WBI agreed to help with this study, additional questions were added to their clientele form that greatly helped with sorting. Future studies could better qualify participants by early participation with data gathering. The result of procedures for sampling in this study supports the need for large samples.

Date of survey mailing was postponed due to WBI funds. The initial mailing was scheduled for January, which is an optimum time in North Dakota. Since the WBI was nearing the end of a funding period, mailing expenses were cut by postponing the mailing to April. Future surveys could maintain mailing schedule if funds were available for direct mailing.

Null Hypotheses

This study tested two null hypotheses. Hypothesis one tested the relationship between the satisfaction of women entrepreneurs with home-based business workspace and demographic variables. Hypothesis two tested the relationship between the satisfaction of women entrepreneurs and workspace conditions.

H₁ There is no relationship between the satisfaction of women entrepreneurs with home-based business workspace and demographic variables:

- a. Hours of employment
- b. Time spent in workspace
- c. Other household members employed in the business
- d. Number of children under five years

H₂ There is no relationship between the satisfaction of women entrepreneurs with home-based workspace and workspace conditions:

- a. Type of business

- b. Designated or scheduled space
- c. Storage for business items
- d. Clients and employees in the home

Analysis of Data

All the relevant statistics were run as part of the statistical package (the product: MVS SAS Release 6.07, documentation: SAS companion for the MVS Environment, version 6 from SAS Institute Inc., SAS Campus Drive, Cary, NC 27513). For this study, this included Chi-Square and Phi Coefficient. Chapter 4 provides a descriptive analysis. Chapter 5 discusses testing the model by groups of Chi-Square and additional testing values where a significant relationship appears at $p < 0.05$. Key references used were Huck, Cormier, and Bounds (1974) and Touliatos and Compton (1988).

CHAPTER 4

RESULTS AND DISCUSSION: DESCRIPTIVE ANALYSIS

Response to the mail survey, *Women Entrepreneurs' Satisfaction With Home-Based Business*, included 116 completed questionnaires that were eligible for analysis. Those questionnaires provided data to describe home-based businesses operated by women entrepreneurs in North Dakota, and to examine the relationship between satisfaction with home-based business workspace and demographic characteristics and actual workspace conditions.

This chapter profiles the home-based business and entrepreneur demographics. It answers the following research questions: (1) What are the women entrepreneurs' characteristics (family and personal) related to the home-based business? (2) What are the workspace conditions when a business is integrated into the home space? and (3) Are women entrepreneurs satisfied with having their business in the home?

First, the sample is described. Then research question one is answered by describing the characteristics of women entrepreneurs including hours of employment, time spent in the workspace, others in the household involved in the business, and number of children under age five in the home. Research question two is answered by describing workspace conditions including type of business, designated or scheduled space, storage space for business items, and clients and employees in the home. A discussion follows those descriptions. Research question three is answered by describing satisfaction with the business in the home according to workspace, privacy, security, personal safety, accessibility, and satisfaction with housing.

Description of the Sample

The sample analyzed includes 116 respondents eligible for the study according to the following requirements:

- business based in North Dakota,
- business is located in the home,
- business owned by a woman entrepreneur, and
- business in operation at least six months.

Table 4.1 provides descriptive details about the sample that may also contribute to better understanding of the survey responses. These data also will be used further in the analysis of the sample.

As shown in Table 4.1, almost three-fourths (83) of the home-based businesses in this study are located in areas of 1000 or greater population. The sample is almost evenly divided by type of business, with 58% (67) starting the business primarily for personal reasons and 42% (49) for economic reasons. The business is not the primary source of household income. Almost two-thirds (71) of the businesses contribute less than 20% to the total household income. Nearly two-thirds (75) of the entrepreneurs are middle-aged (36-55

years). These women entrepreneurs are well educated. Most of the sample (84%, 98) are educated beyond high school. Nearly half (46%, 54) of the entrepreneurs have a college degree or beyond.

Table 4.1

Description of North Dakota women entrepreneurs in home-based business

Characteristics	N	%
Household size		
One person	13	11
Two person	53	46
Three or more persons	50	43
Location of the business		
Rural area or small town (< 1000 people)	33	28
Medium to large town (1000 to 25,000 people)	34	29
City (over 25,000 people)	49	42
Primary reason for starting a home-based business		
Personal	67	58
Economic	49	42
% of total household income from the business (frequency missing = 1)		
Less than 20 percent	71	62
20 to 49 percent	23	20
50 percent or more	21	18
Age of the women entrepreneurs		
Under 25 years	2	2
26 to 35 years	11	10
36 to 45 years	44	38
46 to 55 years	31	27
56 to 65 years	25	22
Over 65 years	3	3
Highest level of education achieved		
Less than high school	2	2
High school or equivalent	16	14
Some college or higher education	44	38
College degree or beyond	54	46

N = 116

Note. All percentages have been rounded to the nearest one.

Additional data provide more descriptive details about these entrepreneurs.

- Two-thirds (66%, 76) of the entrepreneurs have taken courses related to their business.
- Only 39% (45) of the businesses have scheduled hours of operation.
- Nearly one-fourth of the sample (21%, 24) use mobile communication in their business.
- Childcare services are used by 11% (13) of the sample, but not the total of those who have children under age five. The majority of those who used childcare had children under age five.
- About 17% (20) of the entrepreneurs say that children's activities interfere with the business.
- Most (92%, 104) of the entrepreneurs work alone at times.
- A majority (94%, 106) of the entrepreneurs feel safe from intruders.
- Few (8%, 9) of the entrepreneurs have special security for their business space.
- About half (49%, 57) of the businesses have direct access from outside the home.
- One-fourth (29) of the businesses are accessible to disabled persons.
- About 7% (8) of the business spaces have remodeled to make the business accessible to disabled persons.
- Household spaces shared with the business are reported in Table 4.2. Exactly one-half (58) of the 116 entrepreneurs responded that they share the office or study. Other household space most typically shared in this sample included the kitchen, shared in 35% (41) of the households, and the dining room, shared in 34% (39) of the households.

Characteristics of Women Entrepreneurs

This section addresses research question one: What are the women entrepreneurs' characteristics (family and personal) related to the business? Data that will be used to help answer this research question include: How many hours are spent working the business (hours of employment)? How many hours are spent in the workspace? Are other household members involved in the business? How many children under five years of age live in the home (preschoolers in the home)?

Hours of Employment

More than half (59%, 69) of the respondents declared that their business is part-time (less than 30 hours per week). The others (41%, 47) considered their business to be full-time, and worked 30 hours or more per week.

Table 4.2

Household spaces shared with the home-based business

Description of household space	N ^a	% ^a
Office or study^b	58	50
Kitchen^b	41	35
Dining room^b	39	34
Family room or den	31	27
Other bedroom	27	23
Unfinished basement	23	20
Garage or carport	23	20
Outside storage shed	23	20
Laundry or utility room	17	15
Workshop	17	15
Master bedroom	13	11

Note. All percentages have been rounded to the nearest one.

^aNumber (N) and percentage (%) reported are of the total sample, N=116. Respondents each indicated *all* spaces shared. ^bBold type indicates the most typical (highest %) spaces shared in this sample.

Time Spent in Workspace

Most of the business time is spent in the workspace. About 61% (71) spend half or more of their time in the workspace, while 39% (45) spend less than half their time in the workspace.

Others in Household Involved in the Business

Most of the entrepreneurs (68%, 79) do not have any other household members involved in the business. Of those 32% (37) who have other household members involved in the business, 31 of the 37 have only one other household member involved in the business.

Number of Children Under Age Five in Home (Preschoolers)

Only 11% (13) of the sample have preschoolers. Of those, 10 had only one preschooler and 3 had two or more preschoolers.

Profiling the Women Entrepreneurs

Descriptive data of the women entrepreneurs seemed to show an emerging trend. There seemed to be at least two different groups in the sample with distinct characteristics, those who were in business full-time (referred to here as entrepreneurs) and those who were

in business part-time (referred to in this study as “hobbypreneurs”). Therefore, the sample was profiled further, as shown in Table 4.3, to determine if there were similar characteristics within these groups. The women entrepreneurs were grouped by hours of employment (part-time or full-time) and primary reason for starting the business (personal or economic). This provided data for comparison on selected variables and demographics: percentage of household income provided by the business, age of the women entrepreneurs, highest level of education achieved, whether or not the business has scheduled hours, type of business, type of space, whether or not workspace has been increased, percentage of household space used by the business, and whether or not others in the household are involved in the business.

Percentage of Household Income

The business income is less than 20% of the total household income for the majority of part-time workers and for almost half (46%, 12) of those in business full-time for personal reasons. In contrast, over half (52%, 11) of the full-time workers in business for economic reasons contribute 50 percent or more to the household income. This may indicate that satisfaction for the part-timers may be personal fulfillment versus economic gain.

Age

Middle-age (36-55) describes a majority of the entrepreneurs, in all categories. This may be explained due to necessity (money needed to meet expenses) or desire for more income (for pursuing personal or family goals) at this stage in life.

Education

Only two in the sample have less than a high school degree. A majority of the sample is educated beyond high school. In both part-time and full-time groups, the greatest representation is shown in the college degree category. Also, a greater percentage of college degrees is shown by those in business for personal reasons. It is speculated that these home-based business persons are financially secure and desiring to pursue a business for self-fulfillment. This highly educated group might also reflect the targeted audience of the Women’s Business Institute.

Scheduled Hours

A majority of the part-time group does not have scheduled hours for the business, whereas a majority (86%, 18) of those full-time for economic reasons do have scheduled hours. This again might emphasize the personal reasons for the business, such as privacy to pursue a hobby or interest, and not wanting the structure of scheduled hours.

Type of Business

Product and service types are equally represented by part-time workers in business for personal reasons. But over two-thirds (68%, 19) of the part-time workers in business for economic reasons are in product type businesses. Because data gathered in this study does not include specific type of business, the reason for product versus service type of business cannot be speculated.

Table 4.3

Profile of North Dakota women entrepreneurs

Variables	Number and Percentage in Each Descriptor											
	% of Household Income						Age					
	< 20		20-49		50+		< 36		36-55		>55	
	N	%	N	%	N	%	N	%	N	%	N	%
Part-time (Work less than 30 hours per week)												
Business for personal reasons	33	83	7	17	0	0	5	12	26	64	10	24
Business for economic reasons	22	78	3	11	3	11	1	4	18	64	9	32
Full-time (Work 30 hours or more per week)												
Business for personal reasons	12	46	7	27	7	27	4	15	17	65	5	19
Business for economic reasons	4	19	6	29	11	52	3	14	14	67	4	19

Variables	Number and Percentage in Each Descriptor											
	Education						Scheduled Hours					
	< HS		HS Degree		Some College		College Degree		Yes		No	
	N	%	N	%	N	%	N	%	N	%	N	%
Part-time (Work less than 30 hours per week)												
Business for personal reasons	0	0	3	7	14	34	24	59	9	22	32	78
Business for economic reasons	1	3	7	25	8	29	12	43	5	18	23	82
Full-time (Work 30 hours or more per week)												
Business for personal reasons	0	0	3	12	11	42	12	46	13	50	13	50
Business for economic reasons	1	5	3	14	11	52	6	29	18	86	3	14

(table continues)

Table 4.3 (continued)

Variables	Number and Percentage in Each Descriptor													
	Type Business													
	Product						Service							
	(1) Manufacture		(2) Sell - home		(3) Sell - away		(4) Service - home		(5) Service - away		(6) Consult - home		(7) Consult - away	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Part-time (Work less than 30 hours per week)														
Business for personal reasons	12	30	3	7	3	7	10	25	5	13	3	7	4	10
Business for economic reasons	10	36	3	10	6	21	4	14	2	7	2	7	1	4
Full-time (Work 30 hours or more per week)														
Business for personal reasons	8	31	4	15	3	11	8	31	2	8	1	4	0	0
Business for economic reasons	2	9	4	19	2	9	8	38	4	19	0	0	1	5

Note. Complete description type of business:

- (1) manufacture, create, or assemble a product(s) in my home.
- (2) distribute or sell a product(s) obtained from another person or business, and this primarily takes place from my home.
- (3) distribute a product(s) obtained from another person or business, and this primarily takes place away from my home.
- (4) perform a service in my home.
- (5) perform a service away from my home.
- (6) consult, counsel, or conduct similar activities with clients in my home.
- (7) consult, counsel, or conduct similar activities with clients away from my home.

(table continues)

Table 4.3 (continued)

Variables	Number and Percentage in Each Descriptor									
	% Space for Business						Others Involved			
	< 20		21-40		41+		None		Some	
	N	%	N	%	N	%	N	%	N	%
Part-time (Work less than 30 hours per week)										
Business for personal reasons	29	71	12	29	0	0	30	73	11	27
Business for economic reasons	17	61	11	39	0	0	18	64	10	36
Full-time (Work 30 hours or more per week)										
Business for personal reasons	9	35	11	42	6	23	20	77	6	23
Business for economic reasons	5	24	9	43	7	33	11	52	10	48

Variables	Number and Percentage in Each Descriptor							
	Type Spaces				Workspace Increased			
	Designated		Scheduled		Yes		No	
	N	%	N	%	N	%	N	%
Part-time (Work less than 30 hours per week)								
Business for personal reasons	20	49	21	51	11	27	30	73
Business for economic reasons	20	71	8	29	15	56	12	44
Full-time (Work 30 hours or more per week)								
Business for personal reasons	20	77	6	23	10	38	16	62
Business for economic reasons	15	71	6	29	4	19	17	81

Type of Space

About half (49%, 20) of those in business part-time for personal reasons have a designated space for their business. In contrast, 71% (20) of those in business part-time for economic reasons have a designated space for their business. Those who are pursuing the business for personal reasons may desire more flexibility for their work versus the structure of a designated space. Those with economic interests likely realize the need for designated space for tax purposes.

Workspace Increased

About one-fourth (27%, 11) of those in business part-time for personal reasons have increased their workspace, whereas over half (56%, 15) of those in business part-time for economic reasons have done so. It is speculated that those in business for economic reasons also have made more profits that can be put back into the business. The increased workspace may also reflect a desire to increase profits through expansion for more production or increased service.

Percentage Space for Business

Most of the part-time businesses use 20% or less household space. That suggests the personal nature of the business and lack of need for space. Those businesses using more than 40% of the total household space tend to be full-time and may also be the type of business that requires more production, storage space, or additional employees.

Others in Household Involved in the Business

About three-fourths of those in business for personal reasons, whether part-time or full-time, have no other household members involved in the business. This suggests that the worker is pursuing self-fulfillment or special interest that does not include others.

Those in business for economic reasons tend to have other household members involved in the business. This may indicate the need for all to be involved in order to meet demands, and also make or increase profit.

Summary

The women entrepreneurs in this study fit the following profile. Over half the entrepreneurs consider their business part-time (less than 30 hours per week). More than 60% of the sample (71) spend most of their business time in the home workspace. Most do not have any other household members involved in the business. Preschoolers are present in few of the homes.

The women entrepreneurs were further profiled by hours of employment (part-time, full-time) and by reason for starting the business (personal, economic). It appears that there is a distinct profile for those who work part-time for personal reasons. This group has the highest percentage of businesses reporting less than 20% of the total household income. The majority of these entrepreneurs are in the middle-age or older category. A college degree is held by more than half of these entrepreneurs.

Few of these part-time for personal reasons entrepreneurs have scheduled hours for the business, compared with both part-time and full-time for personal reasons entrepreneurs. Fewer than half of these part-time entrepreneurs have a designated space for their businesses.

While about one-fourth of these part-time for personal reasons businesses have increased their workspace, over half of the part-time for economic reasons group has done so. None of the part-time businesses use more than 40% of the household space. About three-fourths of those in business for personal reasons have no other household members involved in the business.

These descriptive findings showed an emerging group of women entrepreneurs, the “hobbypreneurs.” The descriptive analysis of the sample depicts that these women do not closely match characteristics of the participants in the previous research reported (Chapter 2). The “hobbypreneurs” may also give insight to a fact found in Women-owned businesses in North Dakota: 1996 fact sheet (The National Foundation for Women Business Owners [NFWBO], 1996). The NFWBO stated, “North Dakota ranks 51st out of 50 states and the District of Columbia in the number of women-owned firms as of 1996, 51st in employment, and 50th in sales,” (p. 1). A brief description of the “hobbypreneurs” follows to illustrate that economics does not appear to be the motivator for these home-based businesswomen.

The “hobbypreneurs” tend to have a college education or beyond and are middle-aged with no children in the home under five years of age. WBI director Penny Retzer explained that there may be slightly more middle-aged to older women in the sample, “because they have had a chance to build expertise at what they do and they probably have economic security due to their previous work experience” (WBI correspondence, August 10, 1996).

The reason for starting the business, personal or economic, is equally represented in the sample. These businesses contribute less than 20% of the total household income. Few of the “hobbypreneurs” plan to expand their business or move the business out of the home. Almost three-fourths of the sample are located in population areas of 1000 or more (referred to as non-rural locations in this study). This relates to North Dakota Census data (WBI correspondence, August 10, 1996) that reported, “50% of businesses are rural and 50% are urban and the reason that a larger percent are from bigger cities is that in smaller communities, most businesses tend to be ‘retail’ or ‘personal service’ in nature.”

The concept of “hobbypreneurs” identified in this study suggests need for further research. Tracking of this group, including more specific variables for analysis, may also produce statistically significant findings in future studies.

Workspace Conditions

This section addresses research question two: What are the workspace conditions when a business is integrated into the home space? Data that will be used to help answer the research question include: Is the type of business product or service? Is the space used by the business designated or scheduled space? Is there storage space for business items? How many clients and employees are in the home?

Type of Business

The businesses in this sample are defined as either product type or service type. Table 4.4 reports the specific types of businesses and frequencies. Product type businesses include: manufacture/create/sell product or distribute/sell product from or away from the home. Service type businesses include: perform service in or outside home, and consult, counsel or similar activities in or away from the home. Both types are equally represented in this sample. Over half (52%, 60) of the entrepreneurs describe their business as product type and 48% (55) describe their business as service type. In this sample, most of the business activity takes place within the home (71%, 82), rather than away from the home.

Table 4.4

Type of home-based businesses operated by North Dakota women entrepreneurs

Description	N	%
Product		
Manufacture/create/sell product in home	32	28
Distribute/sell product from home	14	12
Distribute/sell product outside home	<u>14</u>	<u>12</u>
	60	52
Service		
Perform service in home	30	26
Perform service outside home	13	11
Consult, counsel or similar activities in home	6	5
Consult, counsel or similar activities outside home	<u>6</u>	<u>5</u>
	55	48

N=115

Note. All percentages have been rounded to the nearest one.

Designated or Scheduled Space

Over 64% (75) of the respondents have a separate space for their business. That means there is a designated portion of space for the business and a designated portion of space for household activities. The remainder of the sample schedules use of space by specific times for the business and specific times for the household (7%, 8) or “on-demand” to whomever needs it (28%, 33).

Storage Space for Business Items

More than three-fourths (78%, 90) of the sample have storage for business items in the home. The percentage of those entrepreneurs who have storage is represented nearly

equally by product types (54%, 49) and service types (46%, 41). Almost one-fourth (22%, 25) do not have storage for business items in the home.

Clients and Employees in the Home

Table 4.5 shows the clients and employees in the home in an average week. Neither clients nor employees from outside the home are frequent in the home. Almost three-fourths (74%, 86) of the businesses have only five or fewer clients in the home in an average week. Most of the businesses (89%, 97) have no employees from outside the home.

Table 4.5

Clients and employees in the home in average week

Persons coming to the business	N	%
Clients		
None	49	42
1 to 5	37	32
6 to 19	18	15
20 to 29	3	3
30+	9	8
Employees from outside home		
None	97	84
One	8	7
Two	3	3
Three	2	2
Four	1	1
Five or more	5	3

N=116

Note. All percentages have been rounded to the nearest one.

Summary

The data in this study show that there are two general types of businesses, product and service. The businesses are about equally divided between the two types. The business is a well-defined part of the home in most of the sample. There is a separate space in about two-thirds of the homes and there is storage for business items in over three-fourths of the homes.

Neither clients nor employees from outside the home are frequent in the home. Almost three-fourths of the businesses have only five or fewer clients in the home in an average week. Most of the businesses have no employees from outside the home. These are small, part-time developing businesses that are fulfilling personal needs as well as economic needs.

Satisfaction With Business in the Home

This section addresses research question three: Are women entrepreneurs satisfied with having their business in the home? Data that will be used to answer this research question include: Are they satisfied with aspects of their workspace? Are they satisfied with their housing after integrating the business into the home?

Five variables of satisfaction with business in the home were measured: space, privacy, security, safety, and accessibility. Table 4.6 summarizes the variables tested to determine satisfaction with the home-based business workspace. In order to analyze the data, Likert scale responses (very dissatisfied, somewhat dissatisfied; somewhat satisfied, very satisfied) were combined into two groups, satisfied and dissatisfied.

The data in Table 4.6 show that overall satisfaction with home-based business workspace variables ranges from 70% (81) to 86% (100). Overall satisfaction by variable is: space for business 70% (81), privacy in workspace 74% (86), security for workspace 78% (91), personal safety aspects of the business 86% (100), and accessibility for all persons entering the business 78% (91). Of the five workspace variables, space has the highest levels of dissatisfaction. Thirty-five percent (41) of the sample say that they are dissatisfied with both arrangement of space and storage for business items.

Table 4.6

North Dakota women entrepreneurs' satisfaction with home-based business workspace

	Satisfied		Dissatisfied	
	N	%	N	%
Space variables				
Amount of space	81	70	35	30
Arrangement of space	75	65	41	35
Storage for business items	75	65	41	35
Space for those coming to business ^(F missing = 1)	79	69	36	31
Overall space for business	81	70	35	30
Privacy variables				
Location of business within the home	90	78	26	22
Overall privacy in workspace	86	74	30	26
Security variables				
Office equipment, supplies, and products	94	81	22	19
Overall security for workspace	91	78	25	22
Personal Safety variables				
Protection from accidents within the workspace	103	89	13	11
Protection from fire within the workspace	96	83	20	17
Protection from environmental hazards	101	87	15	13
Overall personal safety aspects of the business	100	86	16	14
Accessibility variables				
Entrance location for clients, service personnel	89	77	27	23
Overall accessibility for all persons entering the business	91	78	25	22

N= 115

Note. All percentages have been rounded to the nearest one.

Table 4.7 examines differences with satisfaction based on various characteristics of the sample. Note that most of the differences are small. Table 4.7 further shows satisfaction with home-based business workspace by demographics and workspace conditions. The groups identified are those with the highest percentage of satisfied entrepreneurs for each satisfaction variable.

Workspace

Over three-fourths (78%) of those entrepreneurs who have others involved in the business are satisfied with their workspace.

Privacy

At least 80% of three groups are satisfied with the privacy. This included entrepreneurs who have others involved in the business, those without storage space, and those who have six or more clients per week.

Security

Eighty-four percent of both those who spend less than half their time in the workspace and those who have others involved in the household business are satisfied with security.

Personal Safety

Ninety-six percent of those without storage space are satisfied with safety.

Accessibility

Ninety-two percent of those without storage space are satisfied with accessibility. Ninety percent of those who have six or more clients per week are satisfied with accessibility.

Satisfaction With Housing

Data collected in addition to the model variables focuses on the entrepreneurs' satisfactions with their housing, whether or not they are satisfied with integrating the business into the home. Only 16% (18) of the sample agree with the statement that having the business in the home interferes with family activities. About 19% (22) of the sample agreed with the statement that having the business located in the home interferes with the business. Only 13% (15) of the businesses plan to move out of the home in the future.

Table 4.7

Delineation of North Dakota women entrepreneurs' satisfaction with home-based business workspace

Variables	Number and Percentage Satisfied With Workspace									
	Space		Privacy		Security		Safety		Accessibility	
	N	%	N	%	N	%	N	%	N	%
Demographic										
Hours of Employment										
69 work less than 30 hours per week	50	75	54	78	55	80	60	87	53	87
47 work 30 hours or more per week	31	66	32	68	36	77	40	85	38	81
Time Spent in Workspace										
45 spend less than half time in workspace	31	69	34	76	38	84	37	82	36	80
71 spend half or more time in workspace	50	70	52	73	53	75	63	89	55	77
Other Household Members in Business										
37 have others involved	29	78	30	81	31	84	33	89	31	84
79 have no others involved	52	66	56	71	60	76	67	85	60	76
Workspace Conditions										
Type of Business (F missing = 1)										
60 product businesses	43	72	44	73	50	83	50	83	49	82
55 service businesses	37	67	41	75	40	73	49	89	41	75
Designated or Scheduled Space										
75 have designated space	56	75	58	77	60	80	64	85	59	79
41 have scheduled space	25	61	28	68	31	76	36	88	32	78
Storage for Business Items (F missing = 1)										
90 with storage space	63	70	62	69	71	79	75	83	67	75
25 without storage space	17	68	23	92	19	76	24	96	23	92
Number of Clients in Home										
86 have five or fewer clients per week	59	69	62	72	69	80	74	86	64	74
30 have six or more clients per week	22	73	24	80	22	73	26	87	27	90

N = 116 Note: All percentages have been rounded to the nearest one.

Summary

Data show that at least two-thirds of the sample are satisfied with all five variables used to measure women entrepreneurs' satisfaction with their business workspace: overall space for business, overall privacy in the workspace, overall security for the workspace, overall personal safety aspects of the business, and overall accessibility for all persons entering the business. While the largest percentage of satisfaction is shown for overall personal safety aspects of the business, at least 70% (81) of the entrepreneurs say they are satisfied with the overall privacy, security, and accessibility of their workspace. Of the five variables, overall space for the business shows the least number of satisfied entrepreneurs. About one-third (35%, 41) of the entrepreneurs say they are dissatisfied with arrangement of space and storage for business items.

Looking at the satisfaction variables further shows which groups of entrepreneurs expressed highest percentage of satisfaction for each satisfaction variable. Those entrepreneurs with others involved in the business show the highest percentage of satisfaction for three variables: space, privacy, and security.

These entrepreneurs seem to be satisfied with their housing after integration of the business into the home. Few agree with statements that the business in the home interferes with family activities or that having the business in the home interferes with the business. And few plan to move their businesses out of the home in the future.

Discussion

Characteristics of Women Entrepreneurs

The part-time status of the business was expected for this sample. The data show that over half of the entrepreneurs started their business for personal rather than economic reasons. Further, most do not have scheduled hours of operation. Those facts suggest that these businesses do not fit the common definition and structure of business. These businesses tend to be informal and secondary to other aspects and activities of the entrepreneurs and their household. Especially those businesses started for personal reasons may adjust to the household rather than being a priority in the household. Women entrepreneurs in similar samples typically consider the home-based business as a second- or supplemental income (Ferguson & Dunphy, 1991; Hisrich & Brush, 1985; Taylor, 1988). The fact that most of the entrepreneurs in this study report that the income from their home-based business is less than 20% of the total household income reinforces previous research.

The fact that most of the business time is spent in the workspace may be partly explained by type of business. For example, secretarial services or tax preparation would require most of the time be spent in the workspace. Businesses that required selling or distributing products would require more time away from the workspace. Occupations vary due to family structure (Rowe & Bentley, 1992) and the family impacts women's work styles (Beach, 1989b; Rowe & Bentley). Few persons living in these households and few persons coming to the business within the home may contribute to the requirements of the ideal workspace, such as privacy and space (Editors..., 1990; Holtz, 1990; Levine, 1994). Further, because many of the entrepreneurs in this study are in business for personal reasons, it is speculated that they chose businesses that would provide benefits of being at home. Researchers suggest such benefits as independence, flexibility, and quality of life

(Christensen, 1988; King, 1982; McVicar & Craig, 1981; Rubin, 1981). Other factors that support more time in the workspace for this sample might be location and cost of doing business. Working at home can cut office and travel costs (McVicar & Craig, 1981). Home-based businesses provide an employment option in rural communities that might not otherwise exist (Darnay, 1994). Yet the high percentage of those who do business within their home versus away from the home strongly suggests that this sample values the advantages of being in the home, whether rural or urban.

The fact that over half of the entrepreneurs are in one- or two-person households may explain the low involvement of others in the household in the business. Since one of these persons is the woman entrepreneur, it is speculated that the other member would be a spouse or dependent child. The low percentage of income generated by the business suggests that the other householder would be the primary earner, and not have time to contribute to the home-based business. Since many of these businesses are part-time, the amount of business may not justify another employee, whether from within or outside the household. And, again, if the business was created for personal benefits, additional employees may not add to those benefits. The fact that about three-fourths of those in business for personal reasons, whether part-time or full-time, do not have other household members involved in the business may also suggest their personal reasons for the business may include the desire to work alone.

Since a majority of the entrepreneurs are middle-aged, it is speculated that children are school age or away from the home. Previous studies (Editors..., 1990) also refute the feasibility of a home-based business for the reason of staying at home with young children. With no young children in the home, these women may be more free or able to start a home-based business.

Workspace Conditions

Previous studies (Editors..., 1990; Holtz, 1990) recommended separate or clearly defined workspace. Also, a separate space is an important consideration for tax implications. Parrott et al. (1995) found that the lack of a clear division of space for business use was the primary cause of conflict issues in the homes studied. In this study, nearly two-thirds (64%, 75) of the entrepreneurs have a designated space for their business. Based on the previous research, those in this study who have a designated space should have fewer interruptions and conflict than those who must schedule the use of space.

The fact that 28% (33) of the entrepreneurs live in rural locations may account for fewer clients in the home. One entrepreneur in a rural location also explained that she frequently meets her clients in town because her home is “hard to find.”

The fact that over 80% of the businesses do not have employees from outside the home is partly explained by location. Employees would not be as available in rural areas as in urban areas, and costs and time for commuting could be a problem. Also, those entrepreneurs who have the business for personal reasons may have selected a particular type of business to avoid the need for employees. Or, business growth, and resulting need for employees, may conflict with the personal reasons for having the business. The businesses might not be able to justify employees due to product production level or demand for product or service.

This study also supports a previous study by Holtz (1990) suggesting available workspace is a limiting factor. Over half the workspaces in this study use less than one-fifth of the home.

Satisfaction With Business in the Home

The finding that about one-third of the entrepreneurs are dissatisfied with arrangement of space and storage for business items is not surprising. Previous housing studies reported that when homeowners are asked what they are dissatisfied with, it is storage space. The finding that those who have others involved in the business expressed the highest percentage of satisfaction for each satisfaction variable suggests that there may be a shared understanding and appreciation of the business. The satisfaction with the business seems to also influence the satisfaction having the business in the home. It is speculated that these entrepreneurs entered into the business with personal reasons for the business and a commitment to integrating the business into the household. Their intent to keep the business in the home further suggests a strong relationship between the business and the family.

Data presented in this chapter provide a basis to profile the entrepreneurs. Chapter five discusses the statistical analysis and significant findings.

CHAPTER 5

RESULTS AND DISCUSSION: STATISTICAL ANALYSIS

This chapter examines the relationship between satisfaction with home-based business workspace and demographic characteristics and actual workspace conditions. It answers the following research questions: (4) What is the relationship of the demographic characteristics (hours of employment, time spent in the workspace, other household members employed in the business, number of children under five years of age) to satisfaction with the business workspace (space, privacy, security, personal safety, accessibility)? and (5) What is the relationship of the actual conditions of the workspace (type of business, designated or scheduled space, storage for business items, clients and employees in the home) to satisfaction with the business workspace (space, privacy, security, personal safety)?

The chapter begins by describing the statistical testing. The reader is informed of the procedure for testing H_1 , results of Chi-Square tests of H_1 , procedures for testing H_2 and results of Chi-Square tests of H_2 . That is followed by a discussion.

Testing the Null Hypotheses

All appropriate tests for this sample were run as part of the statistical package, as described in Chapter 3. This chapter discusses testing the model by groups of Chi-Square. For those Chi-Square groups where a significant relationship appears at $p < 0.05$, the Phi coefficient testing values are also discussed. Procedures and results are given for testing: (1) the *demographic* variables (hours of employment, time spent in the workspace, other household members in the business, number of children under five years) by each specific *satisfaction with the business workspace* variable, and (2) the *workspace conditions* variables (type of business, designated or scheduled space, storage for business items, clients in the home, employees in the home) by each specific *satisfaction with the business workspace* variable. Note that the number of respondents who have children was too few to analyze. Similarly, the number of respondents who had employees in the home was too few to analyze. The frequency data that is the basis for the Chi-square testing is reported in Chapter 4.

Procedure for Testing H_1

A Chi-Square test was used to test the null hypothesis H_1 : There is no relationship between the *satisfaction of women entrepreneurs with home-based business workspace* and *demographics*. Tables 5.1, 5.2, and 5.3 show the Chi-Square testing of demographics by satisfaction with the business workspace.

Results of Chi-Square Tests of H_1

Two Chi-Square groups are significant at $p \leq 0.05$ (see bold type, Table 5.1). In other words, there is an association between two variables. Those variables are (1) demographic variable *other household members in the business* by satisfaction with workspace variable *SPACE for others coming to business*, and (2) demographic variable *other household members in the business* by satisfaction with workspace variable *PRIVACY location of the business within the home*.

There are no other significant associations at $p \leq 0.05$ between the demographic variable other household members in the business and the satisfaction with workspace variables (Table 5.1):

Table 5.1

Other household members in the business by satisfaction with workspace variables

Satisfaction with workspace variables	X^2	Probability
SPACE		
amount of space	0.882	0.348
arrangement of space	2.887	0.089
storage for business items	0.750	0.387
for others coming to business ^(frequency missing = 1)	3.891	0.049
overall space for business	1.885	0.170
PRIVACY		
location of business within home ^(frequency missing = 1)	4.206	0.040
overall privacy in workspace	1.366	0.243
SECURITY		
office equipment, supplies, products	1.051	0.305
overall security for workspace	0.915	0.339
PERSONAL SAFETY		
protection from accidents	0.524	0.469
protection from fire	0.529	0.467
protection from environmental hazards	1.122	0.289
overall personal safety aspects	0.406	0.524
ACCESSIBILITY		
location entrance for clients and service	0.578	0.447
overall accessibility for all persons	0.915	0.339

N = 116
0.05

df = 1

bold values = significance at $p \leq$

There are no significant associations at $p \leq 0.05$ between the demographic variable hours of employment and satisfaction with workspace variables (Table 5.2).

Table 5.2

Hours of employment by satisfaction with workspace variables

Satisfaction with workspace variables	X^2	Probability
SPACE		
amount of space	2.476	0.116
arrangement of space	1.797	0.180
storage for business items	0.302	0.583
for others coming to business ^(frequency missing = 1)	0.491	0.483
overall space for business	0.562	0.454
PRIVACY		
location of business within home	0.442	0.506
overall privacy in workspace	1.510	0.219
SECURITY		
office equipment, supplies, products	0.002	0.967
overall security for workspace	0.160	0.689
PERSONAL SAFETY		
protection from accidents	1.079	0.299
protection from fire	0.902	0.342
protection from environmental hazards	0.270	0.603
overall personal safety aspects	0.080	0.777
ACCESSIBILITY		
location of entrance for clients and service	0.177	0.674
overall accessibility for all persons	0.270	0.603

N = 116

df = 1

There are no significant associations at $p \leq 0.05$ between the demographic variable time spent in the workspace and satisfaction with workspace variables (Table 5.3)

Table 5.3

Time spent in workspace by satisfaction with workspace variables

Satisfaction with workspace variables	X^2	Probability
SPACE		
amount space	0.429	0.513
arrangement of space	1.341	0.247
storage for business items	0.697	0.404
for others coming to business	0.257	0.612
overall space for business	0.031	0.861
PRIVACY		
location of business within home	0.002	0.969
overall privacy in workspace	0.077	0.781
SECURITY		
office equipment, supplies, products	0.556	0.456
overall security for workspace	1.563	0.211
PERSONAL SAFETY		
protection from accidents	0.001	0.979
protection from fire	0.146	0.702
protection from environmental hazards ^(low cell count)	0.011	0.918
overall personal safety aspects	0.982	0.322
ACCESSIBILITY		
location of entrance for clients and service	0.473	0.491
overall accessibility for all persons	0.105	0.746

N = 116

df = 1

Procedure for Testing H_2

A Chi-Square test was used to test the null hypotheses H_2 : There is no relationship between the *satisfaction of women entrepreneurs with home-based business workspace* and *workspace conditions*. Tables 5.4, 5.5, 5.6 and 5.7 show the setup of the Chi-Square testing workspace conditions by satisfaction with the business workspace.

Results of Chi-Square tests of H₂

Two Chi-Square groups are significant at $p \leq 0.05$ (see bold type Tables 5.4 and 5.5). These are (1) the workspace conditions variable *designated or scheduled space* by satisfaction with workspace variable *SPACE storage for business items*, and (2) workspace conditions variable *storage for business items* by satisfaction with workspace variable *PRIVACY overall privacy in the workspace*.

Table 5.4

Designated or scheduled space by satisfaction with workspace variables

Satisfaction with workspace variables	X^2	Probability
SPACE		
amount of space	1.238	0.266
arrangement of space	1.039	0.308
storage for business items	5.009	0.025
space for others coming to business ^(frequency missing = 1)	1.766	0.184
overall space for business	2.358	0.125
PRIVACY		
location of business within home	0.711	0.399
overall privacy in workspace	1.130	0.288
SECURITY		
office equipment, supplies, products	0.148	0.701
overall security for workspace	0.302	0.583
PERSONAL SAFETY		
protection from accidents ^(low cell count)	0.964	0.326
protection from fire	0.001	0.972
protection from environmental hazards	0.031	0.861
overall personal safety aspects	0.136	0.712
ACCESSIBILITY		
location entrance for clients and service	0.044	0.834
overall accessibility for all persons	0.006	0.938

N = 116

df = 1

bold values = significance at $p \leq 0.05$

Table 5.5

Storage for business items by satisfaction with workspace variables

Satisfaction with workspace variables	X^2	Probability
SPACE		
amount of space	0.467	0.494
arrangement of space	0.383	0.536
storage for business items	0.648	0.421
for others coming to business ^(frequency missing = 1)	0.851	0.356
overall space for business	0.037	0.848
PRIVACY		
location of business within home	1.781	0.182
overall privacy in workspace	5.420	0.020
SECURITY		
office equipment, supplies, products	0.202	0.653
overall security for workspace	0.096	0.757
PERSONAL SAFETY		
protection from accidents ^(low expected cell count)	1.700	0.192
protection from fire ^(low expected cell count)	1.682	0.195
protection from environmental hazards ^(low expected cell count)	2.303	0.129
overall personal safety aspects	2.621	0.105
ACCESSIBILITY		
location of entrance for clients and service	0.215	0.643
overall accessibility for all persons	3.544	0.060

N = 115

df = 1

bold values = significance at $p \leq 0.05$

Table 5.6 shows there are no significant associations at $p \leq 0.05$ between the workspace conditions variable type of business and satisfaction with workspace variables.

Table 5.6

Type of business by satisfaction with workspace variables

Satisfaction with workspace variables	X^2	Probability
SPACE		
amount of space	1.750	0.186
arrangement of space	1.747	0.186
storage for business items	0.056	0.812
space for others coming to business ^(frequency missing = 1)	0.433	0.511
overall space for business	0.262	0.609
PRIVACY		
location of business within home	0.038	0.846
overall privacy in workspace	0.022	0.882
SECURITY		
office equipment, supplies, products	0.492	0.483
overall security for workspace	1.897	0.168
PERSONAL SAFETY		
protection from accidents	0.016	0.898
protection from fire	0.077	0.781
protection from environmental hazards	0.009	0.923
overall personal safety aspects	0.794	0.373
ACCESSIBILITY		
location of entrance for clients and service	0.229	0.632
overall accessibility for all persons	0.855	0.355

N = 115

df = 1

Table 5.7 shows that there are no significant associations at $p \leq 0.05$ between the workspace variable clients in the home and satisfaction with workspace variables.

Table 5.7

Clients in the home by satisfaction with workspace variables

Satisfaction with workspace variables	X^2	Probability
SPACE		
amount of space	0.886	0.829
arrangement of space	0.614	0.893
storage for business items	2.608	0.456
for others coming to business	2.216	0.529
overall space for business	0.743	0.863
PRIVACY		
location of business within home	1.859	0.602
overall privacy in workspace	2.606	0.456
SECURITY		
office equipment, supplies, products	0.595	0.898
overall security for workspace	1.284	0.733
PERSONAL SAFETY		
protection from accidents	1.014	0.798
protection from fire	1.778	0.620
protection from environmental hazards	0.880	0.830
overall personal safety aspects	1.541	0.673
ACCESSIBILITY		
location of entrance for clients and service	1.616	0.656
overall accessibility for all persons	5.029	0.170

N = 116

df = 1

Discussion

Significant Findings H₁

As shown in Table 5.1, there is a significant association at $p \leq 0.05$ between the demographic variable *other household members in the business* and the satisfaction with workspace variable *SPACE for others coming to the business*. Phi coefficient testing showed a value of - 0.184. This may be interpreted as a negative (inverse) association (less than 0.20).

Those 32% (37) of the sample that have other household members involved in the business includes over 80% (30) who are satisfied with space for others coming to the business. This is compared to the 68% (79) of the sample who have no other household members in the business, of which 63% (49) are satisfied with the space for others coming to the business. Therefore, it appears that although most of the entrepreneurs are satisfied with the space for others coming to the business, those who have no other household members in the business are less satisfied.

Possible reasons for this might be that in those households where there are no other household members involved in the business, there may be less space for the business, less household space for sharing, or that others in the household who are not involved in the business are taking up space. Each of these reasons could mean less space for others coming to the business. Another reason could be conflict. In those households where other household members are involved in the business, there may be more integration of the business and home. That integration may lead to more sharing.

Also shown in Table 5.1, is the significant association at $p \leq 0.05$ between the demographic variable *other household members in the business* and the satisfaction with workspace variable *PRIVACY location of the business within the home*. Phi coefficient testing showed a value of - 0.190. This may be interpreted as a negative (inverse) association (less than 0.20).

Of the 32% (37) of the entrepreneurs who have other household members in the business, 89% (33) are satisfied with the workspace variable *PRIVACY location of business within the home*. This is compared to the 68% (79) who do not have other household members in the business, of which 72% (57) are satisfied with the workspace variable *PRIVACY location of business within the home*. Therefore, it appears that although most of the entrepreneurs are satisfied with the workspace variable *PRIVACY location of business within the home*, those who have no other household members involved in the business are less satisfied.

Possible reasons for this might be that when others are involved in the business there would likely be mutual understanding of the amount of privacy needed or wanted for the business. Also, Parrott et al. (1995) suggest that there may be less conflict when others in the household are involved in the business.

Significant Findings H₂

As shown in Table 5.4, there is a significant association at $p \leq 0.05$ between the workspace conditions variable *designated or scheduled space* and the satisfaction with workspace variable *SPACE storage for business items*. Phi coefficient testing showed a value of - 0.208. This may be interpreted as a negative (inverse) association (less than 0.20).

About two-thirds of the sample (65%, 75) has designated space. Of those, 72% (54) are satisfied with space for storage of business items. In the group without designated space (35%, 41), about half (51%, 21) are satisfied with space for storage of business items. The Chi-Square also shows that 28% (21) of those with designated space are dissatisfied, while 49% (20) of those without designated space are dissatisfied.

Previous research emphasized organization of the workspace. The need for an organized, separate or clearly defined workspace is suggested by researchers such as Editors... (1990), Holtz (1990) and Levine (1994) and by the popular press. Fox (1994) and Ostrom (1993) also suggest the importance of creating a workspace environment that promotes timesaving strategies. For example, having storage for business items within the home may be timesaving because supplies could be readily accessed. This would eliminate travel time to other storage or source of supply away from the home. Ostrom further suggests that human performance might be improved with attention to details such as resources and tools available to do the work.

Table 5.5 also shows a significant association at $p \leq 0.05$ between the workspace conditions variable *SPACE storage for business items* and satisfaction with the workspace variable *PRIVACY overall privacy in the workspace*. Phi coefficient testing showed a value of 0.217. This may be interpreted as a low correlation.

Over three-fourths (78%, 90) of the entrepreneurs have storage for business items. Of that group, over two-thirds (69%, 62) are satisfied with overall privacy in the workspace. Those who do not have storage for business items within the home (22%, 25) are also satisfied with privacy in the workspace (92%, 23). This shows a significant association of higher percentage of satisfaction for those who do not have storage space for business items within the home than for those who have storage space for business items within the home. Those who do not have storage space within the home would be able to use that space for other aspects of the business. Also, not having storage space within the home may mean few disruptions for the business or for the family.

Lack of Significant Findings

Although the model for this study was based on previous research, the key reason for lack of significant findings may be due to the uniqueness of the location. Although a rural state, North Dakota is not representative of the U. S. population due to its sparse population. It is an atypical state because of its population and climatic factors such as long winters and isolation.

Another reason for lack of significant findings may be that those clientele on the WBI database had participated in at least one WBI program and anticipated future assistance. Those who responded to the survey may have completed the questionnaire and/or expressed satisfaction to please the researcher. A larger sample could seek out women entrepreneurs not involved with the WBI and possibly avoid such bias.

Also, a low response rate was not conducive to the planned analyses. In Chi-Square tests, low response rate may also result in low predicted cell size, and the program warns that test results may not be valid. Although use of the Likert scale was appropriate for use of the opscan survey instrument, a 1-4 Likert scale is too discrete for a T-test. Since a T-test assumes continuous data, this should be a consideration in design of the instrument. However, in this study with nonsignificant table results, no further extraction was necessary (conference with D. Lawrence, statistician, Virginia Tech Statistical Consulting Center, December 7, 1996). In future surveys, a larger sample and collecting continuous data could allow a variety of analyses, such as multiple regression, T-tests and Chi-square.

Model After Testing

The results of this study show that there are four significant associations at $p \leq 0.05$:

- demographic variable *other household members in the business* by satisfaction with workspace variable *SPACE for others coming to business*
- demographic variable *other household members in the business* by satisfaction with workspace variable *PRIVACY location of the business within the home*.
- workspace conditions variable *designated or scheduled space* by satisfaction with workspace variable *SPACE storage for business items*
- workspace conditions variable *storage for business items* by satisfaction with workspace variable *PRIVACY overall privacy in the workspace*.

These findings support the revised conceptual model as shown in Figure 5.1. The model shows a significant association between one demographic variable, *other household members in the business*, and two workspace variables, *SPACE for others coming to business* and *PRIVACY location of the business within the home*. This suggests that if there are other household members, the entrepreneur will be more satisfied if those members are involved in the business. Reasons for this may include a better understanding of the business needs, more space available for those coming to the business, and more integration of the business and home. The involvement of other household members in the business also tends to create more satisfaction with the location of the business within the home. This may be due to a mutual understanding of the amount of privacy needed or desired for the business.

Satisfaction with workspace conditions is greater when there is a designated space for the business. Entrepreneurs should plan to have a designated or separate space within the home for their business. This may also promote timesaving strategies and work performance.

Entrepreneurs should also carefully plan for storage of their business items. The model shows an association between *storage for business items* and satisfaction with workspace variable *PRIVACY overall privacy in the workspace*. When there is space for storage of business items within the home there may be less privacy for the entrepreneur or for the family if access to that storage is disruptive. Location of the storage and amount of storage available may determine whether there will be disruptions. Storage should be periodically evaluated to determine needs such as best location for access and amount of space needed. This will vary for such reasons as type of product or service provided by the business, the sales volume of business, and the availability of supplies.

This chapter has presented the results and discussion of the statistical analysis. The concluding discussion in Chapter 6 provides a summary, conclusion, implications, and recommendations for educational needs and future research.

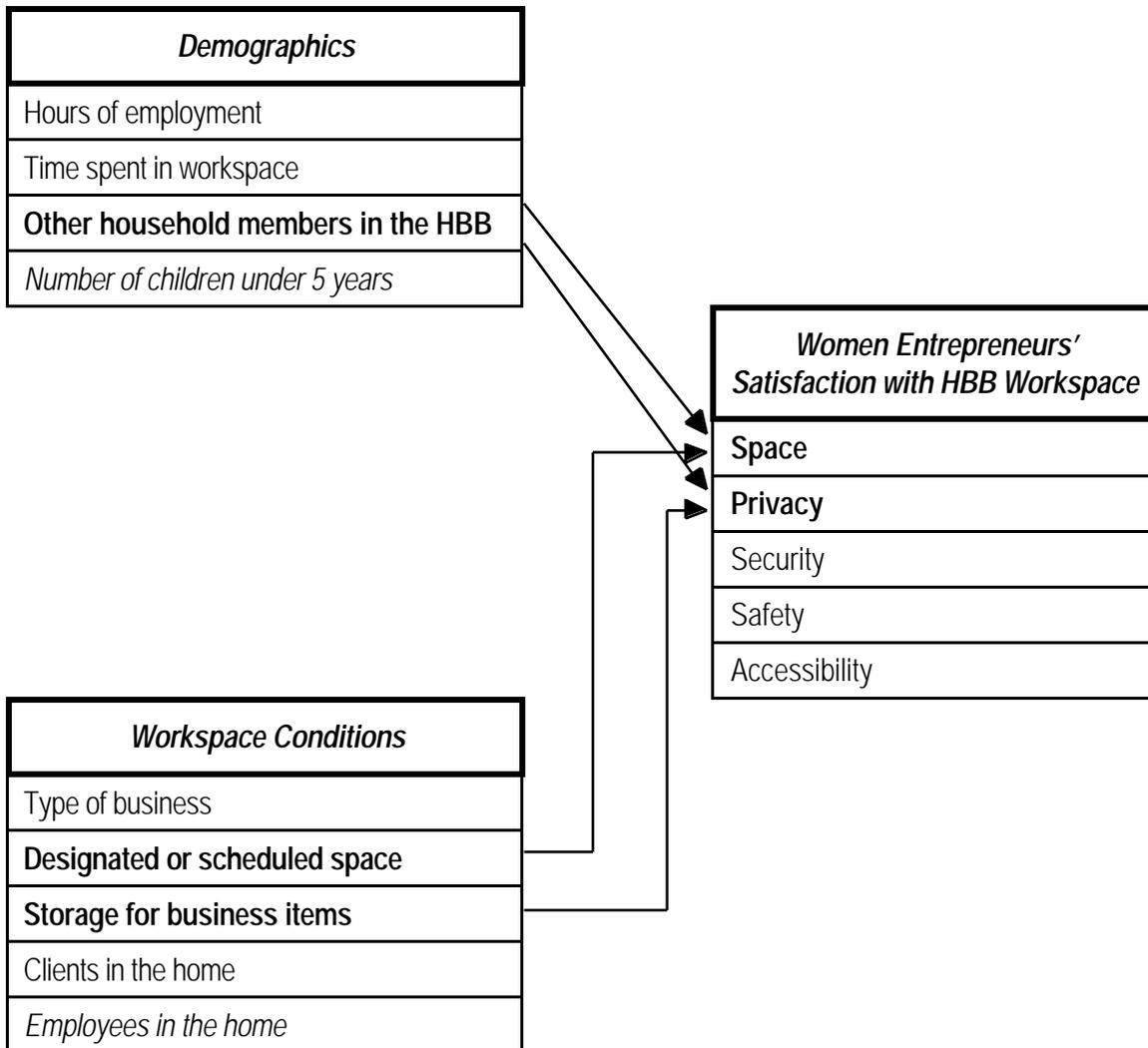


Figure 5.1 Tested model showing satisfactions of women entrepreneurs who integrate the business into household space.

Note. Bold type signifies statistical significance. Plain type signifies no statistical significance. Italic type signifies no statistics were run due to low cell size.

CHAPTER 6

CONCLUDING DISCUSSION

This final chapter includes four main sections: summary, conclusion, implications, and recommendations. First, a summary highlights the five previous chapters. The second section reports the significant findings of this study. The third section presents the implications of the findings of this study about North Dakota women entrepreneurs. The final section suggests educational needs and future research related to women entrepreneurs in home-based businesses.

Summary

Recent demographic reports indicate that women-owned businesses are the fastest growing sector of the nation's economy (Women's Business Institute, 1994). A profile of home-based workers showed a significant increase in representation of women among the self-employed (Deming, 1994; Devine, 1994, Horvath, 1986). In North Dakota, women-owned businesses, including home-based businesses, are showing increased growth and economic impact for the state (Women's Business Institute, 1995). But previous research (Parrott., Kean & Niemeyer, 1990) shows that when a business is integrated into the home, interactions between the business and home occur. These interactions may cause the entrepreneur to be either satisfied or dissatisfied with her workspace.

Because information on the current state of North Dakota women in home-based business was limited, specifically related to their workspace, research was needed to gather more data to provide a knowledge base. Information was needed on the actual conditions of the home-based business workspaces and satisfaction with those workspaces. Such data could provide a base from which to identify those conditions related to satisfaction. The study reported here was conducted to accomplish the following two objectives: (1) describe home-based businesses owned by women entrepreneurs in North Dakota, and (2) examine the relationship between satisfaction with home-based business workspace, demographic characteristics, and actual workspace conditions.

Previous research related to home-based business, especially the nine-state regional project (Gritzmacher, 1993; Heck, 1991; Heck, Rowe & Owen, 1992; Loker and Scannell, 1992; and Rowe, Stafford, & Owen, 1992) and studies on space use by Parrott et al. (1990) suggest that demographics and workspace conditions have implications for both the family and the business. Based on those studies, the variables used for this study measured demographics and workspace conditions and satisfaction with the workspace. Demographic variables measured were: hours of employment, time spent in the workspace, and other household members involved in the business. Workspace conditions measured were: type of business, designated or scheduled space, storage for business items, and clients in the household. Satisfaction with the workspace variables included: space for the business, privacy in the workspace, security for the workspace, personal safety within the workspace, and accessibility of the business.

Data from the 116 qualifying respondents of the Women Entrepreneurs' Satisfaction With Home-Based Business Workspace mail survey were analyzed. Those businesses fit the following description: based in North Dakota, located in the home, owned by a woman entrepreneur, and in operation at least six months. Over half the entrepreneurs considered

their business part-time. More than 60% (71) of the sample spent most of their business time in the workspace. Most did not have any other household members involved in the business. Preschoolers were present in few of the homes.

The study also defined the workspace conditions. Descriptions of these businesses fit into two general types of businesses, product and service, and the businesses are about equally divided between the two types. The business is a well-defined part of the home in most of the sample. There is separate space for the business in about two-thirds of the homes and there is storage for business items in over three-fourths of the homes. Neither clients nor employees from outside the home are frequent in the home. Almost three-fourths of the businesses have no employees from outside the home. These are small, part-time developing businesses that are fulfilling personal needs as well as economic needs. This sample does not completely reflect the descriptions of entrepreneurs in previous studies. The “hobbypreneurs,” in this sample may represent an emerging trend in home-based business. These middle-aged women started their part-time businesses for personal reasons versus economic, and their businesses contribute less than 20% of the total household income. They have college degrees and many have taken courses related to their business. Flexibility in their business is important, as they do not have scheduled hours of business.

A key finding of this study is related to satisfaction with the home-based business workspace. The data shows that at least two-thirds of the sample is satisfied with all five variables used to measure women entrepreneurs’ satisfaction with their business workspace: space for the business, privacy in the workspace, security for the workspace, privacy in the workspace, security for the workspace, personal safety aspects of the business, and accessibility for all persons entering the business. The largest percentage (86%, 100) of satisfaction is shown for personal safety aspects of the business. Over three-fourths of the entrepreneurs are satisfied with the privacy, security, and accessibility of their workspace. Of the five variables, more entrepreneurs are dissatisfied with space (specifically, arrangement of space and storage for business items) than any of the other variables.

Statistical analysis of this sample showed significant Chi-Square associations at $p \leq 0.05$ between:

- demographic variable *other household members in the business* and satisfaction with workspace variable *SPACE for others coming to the business*.
- demographic variable *other household members in the business* and the satisfaction with workspace variable *PRIVACY location of the business within the home*.
- workspace conditions variable *designated or scheduled space* and satisfaction with workspace variable *SPACE storage for business items*.
- workspace conditions variable *storage for business items* and satisfaction with the workspace variable *PRIVACY overall privacy in the workspace*.

Additional descriptive data shows that these entrepreneurs are satisfied with their housing after the business becomes part of the home. Few agree with statements that the business in the home interferes with family activities or that having the business in the home interferes with the business. Few plan to move their business out of the home in the future.

Conclusion

Based on the context of the literature reviewed, the design of this study was valid. In other words, the study sampled the entrepreneurs to describe demographic and workspace conditions and determine satisfaction with the workspace. These were reasonable variables based on the literature.

The WBI database used was a sample of women entrepreneurs served by the Women's Business Institute. Therefore, the study provides results that are specific to this group of women entrepreneurs. The questions asked in this study relate to the home-based business workspace and therefore findings should not be generalized to the whole house.

Results from this study are summarized in the following major findings:

- (1) These North Dakota home-based businesses are small, part-time developing businesses fulfilling personal, as well as economic, needs.
- (2) The women entrepreneurs in this sample are well educated, middle-aged, and have no children under five years of age.
- (3) Most of these businesses are not the major source of income for the household. Almost two-thirds of the entrepreneurs report that the business provides less than 20% of the total household income.
- (4) Almost three-fourths of the sample expressed satisfaction with each of the five workspace variables: space, privacy, security, safety, and accessibility. The women entrepreneurs are committed to having a business in the home, as suggested by their designation for workspace and storage, and time spent in the workspace.

In addition to the major findings, this study also provided new knowledge on satisfaction with housing after the business becomes a part of the home. The women entrepreneurs in this study did not agree with earlier studies that reported either business interference with family activities, or family interference with business activities. This sample showed that a business can be integrated into the home without decreasing satisfaction with housing.

Implications

The findings of this study provide implications both for entrepreneurs and for those who work with entrepreneurs. Key implications discussed here address the sample in this study, but may also be helpful to those who work with or assist entrepreneurs similar to those in this study. It should be noted that the questions in this study addressed the workspace, not the housing in entirety. Therefore, the following implications address the workspace, not the overall housing.

Implications from this sample will be particularly beneficial to the Women's Business Institute, persons involved with housing (such as designers, builders, planners, educators), entrepreneurs and aspiring entrepreneurs, sociologists, financiers, and public officials with housing related responsibilities. Although the following section is addressed by interest groups, the information may extend to other groups.

WBI and Other Organizations Assisting Entrepreneurs

There is a special group of home-based business entrepreneurs emerging. They seek fulfillment of personal needs as well as economic needs. They express satisfaction with having their business within the home. They do not mirror traditional business persons who go to work away from home and have a primary goal of economic growth.

These entrepreneurs might be labeled “hobbypreneurs,” with as much interest in the product and people involved as the profit. Their profit might be measured in personal development or personal satisfaction as well as financial contribution. More than half of the businesses are part-time and only 39% have scheduled hours of operation. This implies that the business is pursued like a hobby, with no set times or demands, but done for pleasure. The fact that most of the business time is spent in the workspace versus away from the home emphasizes one advantage of having the business located in the home.

This study has implications especially for aspiring women entrepreneurs and those who work with or support those women. The mission of the Women’s Business Institute is to provide a wide range of services and information to women business owners. Through educational grant programs, they also have funding and support to help aspiring entrepreneurs. Although the Women’s Business Institute may be fulfilling needs of business education for these “hobbypreneurs,” the descriptive information provided in this study may assist by targeting specific needs and helping to identify needed topics or future courses. For example, the significant findings suggest topics related to location of the business within the home, space for others coming to the business, storage of business items and privacy in the workspace. The greatest dissatisfaction expressed was with the arrangement of space and the storage of business items. Those topics should be priority for the women entrepreneurs sampled in this study.

Economists and those in community development should note that this emerging segment of business does not fit the traditional business profile, either in location or purpose. A key finding of this study is that while half of these entrepreneurs are in business for economic reasons, they are not serious business persons. That is, they equally identify personal reasons as well as economic reasons for being in business. Personal reasons, as cited in the literature review, might include balancing demands of work and family, flexibility of schedule, and allowing family members to share in the work. This implies that they are not likely to be motivated by traditional economic incentives. Awareness of the personal needs specific to this group of entrepreneurs will be important to the WBI’s program planning, and whether the WBI or others should provide any or all assistance needed by this group

Since this research points out a significant group of women entrepreneurs, specific recommendations are made. Since economic growth is of major importance to the WBI, they need to better target their audience. The database used for this study is nearly equally represented by women entrepreneurs who started their business for personal reasons and those who started their business for economic reasons. That may be interpreted that the WBI is only reaching half their goal of encouraging economic growth. Programs should be targeted to those identified as interested in economic growth and those in business full-time. Others could be served on a secondary basis as space and funds allowed. More precise tracking of the entrepreneurs served by the WBI could help to identify factors to target those entrepreneurs with economic potential.

Housing Industry

The housing industry (i.e., builders, designers, consultants) may find implications for housing design. A designated space for the business is suggested in previous research and is further supported by this study. Almost two-thirds of the entrepreneurs in this study had a separate space for their business. In planning or remodeling space for a home-based business, special attention should be given to provide separate space for the workspace and accessibility to that space. The significant relationships found in this study suggest specific areas to address.

A significant relationship was found between *designated or scheduled space* and *satisfaction with storage for business items*. This implies that having a designated space for the business would also provide a specific space for storage of business items. When planning housing with business within, the industry should plan a separate or well-defined space for the business and storage of business items.

The significant relationship between *storage for business items* and *overall privacy in the workspace* implies that having storage for business items affords privacy. This may imply that there are fewer interruptions to either business or family when there is storage provided for business items.

A significant relationship also was found between *other household members in the business* and *location of the business in the home*. If others in the household are involved, they are less apt to be a disruption to privacy because they are part of the business activity. Housing that is planned for a business within should be planned for maximum privacy. Amount of privacy will vary by type of business and number of persons involved, yet there are some basic guidelines to follow. For example, there should be a private entrance to provide direct access to the business. Where there cannot be a private entrance, consider locating the business space so that the household is not disturbed. Type of businesses will also determine special attention to wiring, sound control, and safety features as in commercial design.

Although few entrepreneurs in this sample had clients coming to the home, accessibility should be a planning consideration where there are clients and/or deliveries. Also, only a few of the respondents in this study had remodeled for accessibility. Yet, most of the entrepreneurs were satisfied with accessibility of their workspace. This might suggest that their homes meet their current needs for accessible design, and that there is need for educating them on accessibility design for convenience of the entrepreneur, clients, employees and delivery personnel. In addition to making design more user-friendly for handicapped individuals, accessible design can be the basis for sound design choices for efficiency and safety in the work environment. Guidelines for accessibility are becoming increasingly available. Those persons involved with the space planning for the home-based business can consult such references as building codes, ADA (Americans with Disabilities Act) guidelines, and universal design literature for specific guidelines that will make the workspace more convenient.

Sociologists

A significant relationship was found between *other household members in the business* and *satisfaction with space for others coming to the business*. It appears that if others

in the household are involved, there may be more respect and understanding for needs of the business. The household members then become a part of the business rather than an interruption to the business. Therefore, if there are others in the household, their involvement in the business may add to the entrepreneur's satisfaction.

WBI Director Penny Retzer provided additional insights to age of the women entrepreneurs in this study. She stated that there may be slightly more middle-aged to older women "because they have had a chance to build expertise at what they do and they probably have economic security due to their previous work experience," (personal communication, August 10, 1996).

Sociologists may find implications in this study for personal and family growth. Previous research indicated children as a factor to consider. The age of the women in this study may be the reason that young children were not represented. Because few of the respondents in this study had children under five years of age, there are no implications reported. The presence of children in a home-based business might have varied the satisfaction of the women entrepreneurs studied.

Housing Officials

Community planners should be aware of growing numbers of women in home-based business and make special efforts to include them in planning activities such as zoning. Previous studies indicate that increased traffic is a both a perceived and real problem when businesses are allowed within the home. Yet, in this study the entrepreneurs reported few employees and few clientele coming to the home. This fact may help eliminate any negative attitude toward home-based businesses for the reason of increased traffic in a neighborhood.

Home-based businesses alter the description of residential zoning, and create new needs, problems and opportunities within the locale. The emerging group identified in this study, "hobbypreneurs," illustrates that home-based business may also be a positive personal growth aspect within the community that should be nurtured.

Educators

The dissatisfaction with aspects of space suggests that these women entrepreneurs might benefit from information on the workspace, specifically arrangement of space, and storage for business items. In the initial selection of type of business, the entrepreneur should carefully consider options available and try for a best-fit match with both lifestyle and housing.

Although satisfaction with accessibility is high for this group, only half of the businesses have direct access and only one-fourth are accessible to disabled persons. This suggests that accessibility is not important to these entrepreneurs. Even though the businesses in this study had few clients and employees come to the home, accessibility issues need to be addressed by educators and others who service home-based entrepreneurs. Accessibility issues could include direct access (not having to go through private areas of the home to get to the business), ease of access (avoiding steps or poor location in the home), and ease of access to storage for deliveries or shipments. Awareness of accessibility could increase satisfaction of both potential employees and clients. Increased accessibility

to the business might also mean more customers and ultimately more profit. (Refer to housing section above for ideas).

Entrepreneurs and Their Families

Whether the business is part-time or full-time, the entrepreneur and others within the household should realize the value of the endeavor. The business should afford positive aspects to the entrepreneur's lifestyle, whether personal or economic. Therefore, the entrepreneur should consciously plan to make the workspace a valid part of the home. The home-based business should be incorporated into many aspects of the household's planning. This might be accomplished by considering factors such as commitment of time, money, other household resources, the importance of the business, and how having the business in the home will affect attitudes of both the entrepreneur and the individual members of the household. Involvement by all concerned with the business in planning stages, and periodically, should increase commitment to the business.

Recommendations

The descriptive analysis of this study will be valuable in developing educational materials and activities for these entrepreneurs and aspiring entrepreneurs in North Dakota. However, the data should not be generalized for other home-based businesses. The findings do provide some guidelines for educational needs and future research for this specific sample.

Educational Needs

The descriptive data gathered from this sample provides a useful profile for targeting educational information. Space planners and educators should know that this target group, women entrepreneurs in home-based businesses, is a mixture of entrepreneurs. The fact that this sample began their home-based businesses for personal as well as economic reasons strongly suggests that curriculum for these entrepreneurs should address a variety of topics related to the business. Besides teaching the economic fundamentals of business start-up, guidelines for planning the workspace should be taught. Because of the diversity of these businesses (i.e., type of business), educators are advised to take time to identify needs of their specific target group.

According to data from this study, the sample seems least satisfied with their arrangement of space and storage for business items. Space for others coming to the business and accessibility requirements also need to be addressed. Although there are a great variety of businesses within the sample, providing the entrepreneurs with information on general space needs for types of businesses could be valuable. Although most of this sample has designated workspace for their business, they also report sharing other rooms in the home. This implies that there may be need for information on space use regarding best use of space, and also such issues as tax implications for the business.

Since many of these entrepreneurs conduct business activities away from the home, information on new communication technologies may be helpful. The findings show that almost one-fourth of the entrepreneurs use mobile communication in their business, which may also suggest a trend for those who must be away from the business workspace.

Finally, the maintenance of demographic records on women entrepreneurs served by business institutes and educators is strongly advised. This would allow for better tracking of this emerging group of entrepreneurs and provide a base for targeting future educational needs.

Future Research

The statistical analysis of this study was limited due to the framework used and low response. Future studies with a larger sample or higher percentage of response could provide more data for statistical analysis. The grouped responses in this study, such as age groups, should be replaced with continuous responses. That would provide more specific data for statistical analysis. Because North Dakota is not representative of the U. S. population, nor even of the rural population, future research should also be conducted by other states.

Also, future research should look at new ways to review and study home-based businesses. Some respondents in this study indicated an unwillingness to fill out any survey due to already limited time. Future research might pursue new methods to obtain and update data for tracking home-based businesses. Telecommuters were not a part of this study, but might be studied in future research to determine similarities with home-based business entrepreneurs.

The framework for the study was determined to be poor (J. Fortune, personal communication, July 17, 1997). A large percentage of the Women's Business Institute database did not meet the qualifications for the study. For similar studies, preliminary work before conducting the survey should include careful scanning of the database. In anticipation of longitudinal studies, the WBI should redesign their client information form. This would allow for better screening prior to future studies and also provide basic demographic information on the entrepreneurs.

Because the sample was nearly equally divided between personal and economic reasons for starting the business, additional studies on the social aspects of home-based business are suggested. For example, questions should be asked to further clarify type of business and reasons for the business. This would also help track trends, such as the suggested emerging group labeled in this study as "hobbypreneurs."

The questions in this study addressed the workspace, rather than the total household space. Therefore, the findings are limited to satisfaction with the workspace. Future research should address both the workspace and the total household space. That would help answer questions on the impact of the workspace on overall satisfaction.

Suggested questions that should be addressed in future studies include the following, which would provide more specific information for analysis.

What are the personal time demands of the entrepreneur? Do personal time demands make a difference in satisfaction with the home-based business workspace? What are the ages of all children in the home? Which of these children are involved in the business and what are their responsibilities? Is the woman entrepreneur the primary wage earner? What is the exact age of the woman entrepreneur? Is the woman entrepreneur single, married, divorced, or widowed? If there are other adults in the household, how do they contribute to household income (outside employment, home-based business)?

Did the home-based business begin as a hobby? What is the length of time in business (exact years, months)? Is the woman entrepreneur also employed outside the home and if so, what type of employment, number of hours worked, and what percentage of the total household income does it provide? Has the profit of the business increased during the past year? What is the main source of financial assistance? What is the main source of educational assistance? Is there more than one home-based business in the household (if so, describe)?

Additional questions that should be addressed in future research include space use and identifying household dimensions. This study asked the entrepreneurs to identify how much of the total household space was used by the business. Information on total household space would be helpful for specific comparisons with amount of space needed for the type of business. Questions could include the following. How much space does the business use (actual square footage)? Is there need for product display (and if so, square footage used)? What features of the business contribute to accessibility? What changes should be made in the workspace? What changes have been made in the workspace?

Specific questions on arrangement of space and storage for business items would help clarify the reasons for the reported dissatisfaction with these variables. Although most of the entrepreneurs in this study are satisfied with the workspace variables, more specific questions might indicate whether the entrepreneurs have awareness of the needs of clientele. For example, although few of the businesses have provisions for accessibility, most of the entrepreneurs report satisfaction. Additional questions might identify areas of accessibility education needed by the entrepreneurs to help them make their business more accessible to all.

Additional regional research projects, such as replication of this study, or planning longitudinal studies could be helpful for answering questions on family aspects of the business and also provide a larger database.

A standardization of terms could be helpful in comparing studies. Whereas previous studies on home-based businesses have attempted to categorize these businesses by type, it may be more appropriate in future studies to look at the differences between those who conduct their business within the home or away from the home. The categories used in previous studies vary so much by definition that it is difficult to make comparisons or to determine appropriate categories.

North Dakota women entrepreneurs are changing the profile of home-based business in the state and the housing occupied. The WBI presently assists aspiring entrepreneurs and those already in business, but needs to continue profiling their clientele to better target WBI programs and meet clientele needs. This study identified an emerging group of entrepreneurs, the “hobbypreneurs.” Additional research is needed to track entrepreneurs served by the Institute to help determine program direction. Development of a system to profile the entrepreneurs will also provide specific information needed for the Institute to continue to obtain financial assistance through such agencies as the U. S. Small Business Administration.

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APPENDIX A

MEASUREMENT OF VARIABLES

Measurement of Variables Which Denote Demographic Characteristics

Hours of employment. This refers to the number of hours that the woman entrepreneur is employed by the home-based business. This question is asked to determine whether they are part-time (less than 30 hours per week) or full-time (30 hours or more per week).

Q: 10. How many hours per week do you work at your business? (p. 1)

A: (1) less than 30 hours (2) 30 hours or more.

Time spent in the workspace. This means the number of hours spent by the woman entrepreneur on business activities within the designated workspace.

Q: 11. How much of your business time do you spend in your workspace? (p. 1)

A: (1) less than half my time (2) half my time or more.

Other household members employed in the business. This means others who reside in the household and who are employed in the business and who would be using the business space in addition to household space.

Q: 6. How many people in your household, other than yourself, are involved in the business? (p. 1)

A: (1) none (2) one (3) two (4) three (5) four (6) five (7) six or more.

Number of children under 5 years of age. This is meant to indicate the number of children that are not in school and who will need supervision. It will be measured by the scores from the following responses:

Q: 9. How many children under 5 years of age live in the home? (p. 1)

A: (1) none (2) one child under 5 (3) two or more children under 5.

Q: 6. Do you use childcare services (either in- or out of the home)? (p. 3)

A: (1) yes; (2) no; (3) does not apply

Other questions asked about demographic characteristics:

Q: 5. How many people live in your household, including yourself? (p.1)

A: (1) one; (2) two; (3) three; (4) four; (5) five; (6) six; (7) seven or more

Q. 31. What is your present age? (p. 2)

A. (1) under 25 years; (2) 26-35 years; (3) 36-45 years; (4) 46-55 years; (5) 56-65 years;
(6) over 65 years

Q. What percent of the total household income (this includes all income, such as social security or disability payments, alimony or child support) comes from the home-based business? (p. 2)

A. (1) less than 20 percent; (2) 20 to 49 percent; (3) 50 percent or more

Measurement of Variables Which Denote Workspace Conditions

Type of business. This is meant to categorize the business as product or service, and to provide a better definition of the activity that takes place in the business space.

Q: 36. Which sentence best describes your business? (p. 2)

A: (1) I manufacture or assemble a product(s) in my home.

(2) I distribute or sell a product(s) obtained from another person or business, and this primarily takes place in my home.

(3) I distribute a product(s) obtained from another person or business, and this primarily takes place away from my home.

(4) I perform a service in my home.

(5) I perform a service, away from my home.

(6) I consult, counsel, or conduct similar activities with clients in my home.

(7) I consult, counsel, or conduct similar activities with clients away from my home.

Designated or scheduled space. This is meant to describe the business space: how the space for the business is determined, how much space is used by the business, where the space is located in the home, and how use of that space is scheduled.

Q. 1. How is the space used for your business shared with household activities? (p. 3)

A. (1) The space is separate: there is a designated portion of space for the business and a designated space for household activities, (2) The use of space is scheduled: specific times for the business, specific times for the household, (3) The space is used “on-demand.” It goes to whomever needs it.

Q. 2. How much of the total space in your home is used for activities related to your homebased business? *Please estimate.* (p. 3)

A. (1) less than 20 percent; (2) 21 to 40 percent; (3) 41 to 60 percent; (4) 61 to 80 percent; (5) 81 to 100 percent (p. 3)

Q. 5. Have you increased the amount of workspace in the past year? (p. 3)

A. (1) yes; (2) no

Q. 35. Does your business have scheduled hours of operation? (p. 2)

A. (1) yes; (2) no

Q. Does your business share space with other activities in the: (p. 2)

37. kitchen?

38. dining area?

39. office or study?

40. family room or den?

41. master bedroom?

42. other bedroom?

43. laundry or utility room?

44. workshop?

45. unfinished basement?

46. garage or carport?

47. outside storage shed?

A. (1) yes; (2) no

Storage for business items. This means the storage of office equipment, supplies, and products and security of the same. Storage away from the home may mean additional time spent in retrieving items. It is measured by the following questions:

Q. 3. Do you have a separate space for storage of business items within the home? (p.3)

A. (1) yes (2) no (3) does not apply.

Q. 4. Do you have storage space away from the home? (p. 3)

A. (1) yes (2) no (3) does not apply.

Clients and employees in the home. This means the number of persons from outside the home that frequent the business and accessibility for them. It is measured by the following questions:

Q. 7. How many employees are from outside the household? (p. 1)

A. (1) none; (2) one; (3) two; (4) three; (5) four; (6) five or more

Q. 8. How many clients come to your home in an average week? (p. 1)

A. (1) none; (2) 1 to 5; (3) 6 to 19; (4) 20 to 29; (5) 30 or more

Q. 39. Does your business have direct access from outside your home? (p. 4)

A. (1) yes; (2) no; (3) does not apply

Q. 40. Is your business accessible to disabled persons? (p. 4)

A. (1) yes; (2) no; (3) does not apply

Q. 41. Have you remodeled to make the business accessible to disabled persons? (p.4)

A. (1) yes; (2) no; (3) does not apply

Measurement of Variables Which Denote Satisfaction With the Workspace

Responses for all questions on satisfaction (space, privacy, security, personal safety, and accessibility) were selected from the following scale:

(1) very dissatisfied; (2) somewhat dissatisfied; (3) somewhat satisfied; (4) very satisfied

Space. Space refers to the home-based business space. It will be measured by scores from responses to:

Q: How satisfied or dissatisfied are you with the:

10. amount of space for your business activities? (p. 3)

11. arrangement of space for your business activities? (p. 3)

12. storage for your business items? (p. 3)

13. space for others who come to your business? (p. 3)

14. overall space for your home-based business? (p. 3)

Privacy. Privacy means no interruptions. It will be measured by scores from responses to:

Q: How satisfied or dissatisfied are you with the:

31. location of your business within the home? (p. 4)

32. the overall privacy in your business workspace? (p. 4)

Security. Security means that the home-based business properties (equipment, supplies, furnishings) are secure from theft, damage, or unapproved use. It will be measured by scores from responses to:

Q: How satisfied or dissatisfied are you with the:

16. security of office equipment, supplies, products? (p. 3)

17. overall security for your business workspace? (p. 3)

Safety. Safety means personal safety of the respondent. It will be measured by scores from responses to:

Q: How satisfied or dissatisfied are you with the:

35. protection from accidents within the workspace? (p. 4)

36. protection from fire within the workspace? (p. 4)

37. protection from environmental hazards within the workspace? (p. 4)

38. overall personal safety aspects of your business? (p. 4)

Accessibility. This means ease of access for clients and service personnel to enter the home-based business, such as separate entrance. It will be measured by scores from responses to:

Q: 42. How satisfied or dissatisfied are you with the location of the entrance for clients and/or service personnel? (p. 4)

Q: 43. How satisfied or dissatisfied are you with the overall accessibility for all persons entering the business? (p. 4)

Questions Asked to Define Women Entrepreneurs for the Survey

- Q. 1. The state where your business is located is: (p. 1)
A. (1) North Dakota; (2) other state
- Q. 2. The area where your business is located is: (p. 1)
A. (1) a rural area or small town (less than 1000 people); (2) a medium to large town (over 1000, but less than 25,000 people); (3) a city (over 25,000 people)
- Q. 3. In which type of space is your business located? (p.1)
A. (1) in your home; (2) in leased or owned commercial space
- Q. 4. Have you been operating the business at least six months? (p. 1)
A. (1) yes; (2) no

Other Questions Asked

Questions were added to the questionnaire in order to provide additional descriptive information about the women entrepreneurs. The responses will be used by the Women's Business Institute to better define and serve their clients and also for researchers to better describe the survey participants in anticipated research summaries.

Reason for home-based business. Personal reasons include family related reasons and convenience. Economic reasons include income and employment. It is measured by the following question:

- Q: 10. What was your primary reason for starting a home-based business? (p. 1)
A: (1) personal (2) economic.

Education. This refers to the level of education of the woman entrepreneur plus additional training taken for her specific business. It will be measured by scores from the responses to:

- Q: 32. What is the highest level of education you have achieved? (p. 2)
A: (1) less than high school, (2) high school or equivalent, (3) some college or higher education, (4) college degree or beyond.
- Q: 33. Have you taken special courses related to your home-based business? (p. 2)
A: (1) yes (2) no

Percent of total income from the home-based business. This means what percent (%) of the total household income comes from the home-based business. It will be measured by scores from responses to:

Q: 30. What percent of the total household income (this includes all income, such as social security or disability payments, alimony or child support) comes from the home-based business? (p. 2)

A: (1) less than 20 percent; (2) 20 to 49 percent; (3) 50 percent or more

Intent to keep the business in the home. This means whether a portion of the household space will continue to be used by the business.

Q. 9. Do you plan to move your business out of the home in the future? (p. 3)

A. (1) yes (2) no (3) does not apply.

Conflict of home and business. This means how having the business located within the home is perceived by the woman entrepreneur.

Q. 30. Do activities of children interfere with activities of the business? (p. 4)

A. (1) yes; (2) no; (3) does not apply

Q. 7. Does having the business located in the home interfere with family activities? (p.3)

A. (1) yes (2) no (3) does not apply.

Q. 8. Does having the business located in the home interfere with business? (p. 3)

A. (1) yes (2) no (3) does not apply.

APPENDIX B
COVER LETTER

[Women's Business Institute letterhead]

April 16, 1996

Dear Woman Business Owner:

Does your business space work for you? The Women's Business Institute is co-sponsoring a study to gather opinions on workspace from women who have business experience and expertise. Please participate by responding to this questionnaire, **Women Entrepreneurs' Satisfaction With Home-based Business Workspace**. Your opinions about aspects of space, security, privacy, personal safety and accessibility will help summarize what is important to business women's satisfaction and success. Study findings will be valuable to aspiring women entrepreneurs and will be available through the Women's Business Institute.

I am working with the Women's Business Institute to contact you and other women entrepreneurs who have recently participated in Institute programs and have the business expertise to provide valued opinions. Study findings need to truly represent women in home-based businesses. We need everyone to answer part one, then complete the questionnaire as instructed. It is important that each questionnaire is returned. All completed questionnaires returned within one week of receipt will qualify for the drawing of a \$50 U.S. Savings Bond.

You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only, so that I can check your number off when I receive the questionnaire. Your name will never be placed on the questionnaire. Your identification number will be used for the drawing of a \$50 U.S. Savings Bond. The winner will be notified by phone and the winning number will be announced in the Women's Business Institute Newsletter.

If you have questions, please contact me by phone (540)961-6526, or by E-mail: abach@vt.edu

Thank you for your assistance!

Sincerely,

Annette L. Bach
Professor Emeritus
NDSU Extension Service
North Dakota State University

Encl.

APPENDIX C

ONE-WEEK FOLLOW-UP POSTCARD

April 1996

Dear Woman Business Owner:

Last week a questionnaire was mailed to you, seeking your opinion about home-based business workspace. Your name was obtained from the Women's Business Institute list of women entrepreneurs.

If you have completed and returned it to us, please accept our sincere thanks. If not, please do so today. Because it was sent only to a small, but representative sample of women entrepreneurs, it is extremely important that yours be included in the study if the results are to accurately represent the opinions of North Dakota women entrepreneurs.

If you need a questionnaire, please call me right now at (701)235-6488, and I will mail another copy to you today.

Thank you for sharing your expertise and opinions!

Sincerely,

Annette L. Bach
Professor Emeritus, NDSU

\$ Have a successful business day! \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$

APPENDIX D

3-WEEK FOLLOW-UP COVER LETTER

[Women's Business Institute letterhead]

May 13, 1996

Dear Woman Business Owner:

Approximately three weeks ago I sent you a letter and questionnaire to ask your opinions about your home-based business and your satisfaction with having your business located in your home. As of today, we have not yet received your completed questionnaire.

The Women's Business Institute has pursued this study because we feel it is important that the opinions of women entrepreneurs in North Dakota are known and shared. Your responses to the questions about satisfactions with the space used for your business are needed to help us identify factors of a home-based business that are related to satisfaction, and provide guidelines for you and women aspiring to start a home-based business.

I am writing to you once again because of the importance each questionnaire has to the usefulness of this study. You are part of a limited number of women entrepreneurs with home-based businesses in North Dakota being asked to complete this questionnaire. Again, the results of this study can be representative of the opinions of women entrepreneurs in North Dakota only if each person in the sample returns the questionnaire. It is also important that the questionnaire from your household be completed by you, the woman owner of the business.

I have enclosed a replacement questionnaire for your convenience. If for some reason you do not complete the questionnaire, please return it so that we know we have reached all those who were identified for the sample and we will not contact you again.

Thank you for your cooperation. Results of the survey will be available through the Women's Business Institute.

Sincerely,

Annette L. Bach
Professor Emeritus
NDSU Extension Service
North Dakota State University

Encl.

APPENDIX E

NON-RESPONDENTS PHONE SURVEY INSTRUMENT

Hello, may I speak to _____?
My name is _____ and I'm calling for the Women's Business
Institute in Fargo. We are currently doing a survey of women entrepreneurs.

Q1. Are you currently operating a home business?

- 1 Yes
- 2 No/Don't know/Refuse [END SURVEY]

Q2. Have you been operating the business at least six months?

- 1 Yes
- 2 No/Don't know/Refuse [END SURVEY]

Q3. Would you describe your business as . . .

- 1 Product oriented, or
- 2 Service oriented
- 3 Both
- 4 Don't know/Refuse/Not applicable

Q4. How many children under five years of age live in your home?

- 1. None
- 2. One child under 5
- 3. Two or more under 5
- 4. Don't know/Refuse/Not applicable

[END] Those are all of our questions. Have a good day.

VITA

Annette L. Bach

Education

Ph.D. Virginia Polytechnic Institute and State University, Blacksburg, VA
Housing, Interior Design, and Resource Management, 1997

M.S. University of Southern California, Heidelberg, Germany
Education (counseling, administration), 1972

B.S. North Dakota State University, Fargo, ND
Home Economics, 1970

Professional Experience

1997- State Welfare Reform Plan Reviewer for Center for Welfare Reform
Assistance, Inc., Berwick, PA

March 1997- Substitute teacher Arlington County Schools, VA
May 1997 (social studies, Latin, Spanish, in-school alternative program (ISAP), special
education)

1996-1997 Long term substitute teacher Kenmore Middle School, Arlington, VA
(taught grades 6,7, and 8 Work and Family Studies, grade 6 Drama; served on
school renewal committee for communications technology)

1994-1995 Graduate teaching assistant, Virginia Polytechnic Institute and State
University(Consumer Affairs, Consumer Problems, Consumer Protection ;
housing research)

May 1994 Professor Emerita of Extension, North Dakota State University

July 31, 1993 Qualified for early retirement (20 years service USDA/Extension)

1993 Instructor, College of Human Development and Education, North Dakota
State University, Department of Child Development and Family Science
(CDFS)(taught Consumer in Society, Creative Resource Management,
Personal and Family Finance, and Women in Economic Systems; advised
CDFS majors)

1993- Sole proprietor and consultant, A B Consulting, Fargo, ND

1993 (Nov.) Consultant: member of selected speakers from the International Appliance
Technical Conference, Hangzhou, Peoples' Republic of China to consult with

- major and portable appliance manufacturers at factories and institutes in and near Beijing, People's Republic of China
- 1983-1993 Associate Professor/Extension Housing Specialist, Extension Home Economics, 4H & Youth Development, NDSU Extension Service, North Dakota State University
- 1990-1991 Administrative Assistant to Assistant Director of Extension/Assistant Dean College of Human Resources, Virginia Cooperative Extension Service
- 1991 (spg) Taught Barrier-free Design course, College of Human Resources, Virginia & 1990 (spg) Polytechnic Institute and State University
- 1990 (fall) Graduate Teaching Assistant house planning & Graduate housing research assistant, College of Human Resources, Virginia Polytechnic Institute and State University
- 1989- AmPro (American Professional Racquetball Organization) Certified racquetball teacher, nationally ranked competitor
- 1988 (Aug.) Exchange educator, Textile Educator's Exchange to Peoples' Republic of China
- 1973-1983 Assistant Professor/Extension Housing Specialist, NDSU Extension Service, North Dakota State University
- 1973 Instructor, Interior Decorator Course for Sears Roebuck and Company, Fargo, ND
- 1973 Cosmetics distributor, Fargo, ND area for Vivian Woodard, Inc., Los Angeles, CA
- 1973 GED Instructor of sociology and psychology for Fargo Public Schools Adult High School, Fargo, ND
- 1972 Instructor, US Army GED: English, math, and Black studies (Idar-Oberstein Germany), English, math, and US history (Baumholder, Germany). Employed by Big Bend Community College Preparatory School, State of Washington.
- 1971-1972 Manager's Secretary, American Express Military Banking Overseas Division, Baumholder, Germany
- 1971 Loan Retrieval Officer, Division Loan, American Express Military Banking Overseas Division, Frankfurt, Germany
- 1970 Pharmacy Assistant, Haag Drug, Indianapolis, IN

1967-1968 Drugstore Clerk, Moorhead Drug Company, Moorhead, MN

1960-1966 Drugstore Clerk, Solberg Drug Company, Hunter, ND

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Awards

1994 USDA/Extension Service Twenty - year Federal Employee Service Recognition

1989 North Dakota Epsilon Sigma Phi Scholarship

1989 American Society of Agricultural Engineers Educational Media Award for videotape Household Water Quality.

1989 American Society of Agricultural Engineers Educational Media Award for Household Water Treatment Equipment [Extension circular].

1989 Team Award for Excellence in Issues Programming (presented by the NDSU Extension Service to the Water Quality Task Force.

1986 North Dakota Child Passenger Safety Association Recognition Award

1984 Second place, North Dakota Press Women communications contest, general information brochure category for Functional Window Fashions.

1983 Third place, North Dakota Press Women communications contest, direct mail category for Advice for Consumers Newsletter on topic Adapting Housing for the Handicapped and Elderly.