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Factors affecting older worker productivity in industry and education

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FACTORS AFFECTING OLDER WORKER PRODUCTIVITY IN INDUSTRY AND EDUCATION

by

Scott T Maline

A DISSERTATION

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FACTOR AFFECTING OLDER WORKER PRODUCTIVITY IN INDUSTRY AND EDUCATION

BY

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FACTORS AFFECTING OLDER WORKER PRODUCTIVITY IN INDUSTRY AND EDUCATION

Scott Taylor Maline, Ed.D.
University of Nebraska, 1991

Advisor : Ward Sybouts

The purpose of the study was to relate older worker job satisfaction, life satisfaction, and leisure activity participation to productivity on the job. Older workers were defined as workers, of age 50 or older and younger workers were defined as workers, 26-36 years of age. The population included workers from an industry work setting and three surrounding education agencies within a 50 mile radius.

The research questions included inquiry into the satisfaction of workers while on the job, the general satisfaction in life of workers, the leisure activities of workers, and the productiveness of workers as self-perceived and perceived by the supervisors or managers of each worker.

Findings

1. Older employees were less satisfied with their jobs than younger employees.
2. Older workers were more satisfied with their lives in general than younger workers.
3. Ninety-one percent of older workers participated in some type of slow-living activity on a regular basis.
4. Older workers perceive themselves to be productive workers.

5. Managers of older workers don't perceive older employees to be as productive as older workers view their own productiveness. However, there were no significant differences when comparing older and younger work productivity. Older workers scored slightly higher productivity scores in five out of eight productivity ratings administered.

6. Older workers in education were rated more productive than workers in industry in both the self ratings and the manager ratings.

7. Job satisfaction was not highly related to older worker productivity.

8. Life satisfaction was moderately related to older worker productivity.

9. Leisure activities were found to have little if any relationship with older worker productivity.

10. Life satisfaction and work environment were found to be somewhat related to older worker productivity on the job.

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Thanks is extended to the Valmont Corporation and personnel manager, Tom Waylan, for his assistance in the project. Also included in my many thanks are the school districts of Fremont, Nebraska, Valley, Nebraska, and Elkhorn, Nebraska. Their employees, principals and managers helped make this work successful.

I would like to dedicate this work to my father and mother, who through their love and direction I have come to appreciate the fullness of life, the need to contribute, and an appreciation of educational pursuits.

Finally, my greatest admiration and appreciation is extended to my wife, Kathy, and my children, Heidi, Brett and Brook. Their support and toleration of the long hours, many nights away from home and mental anguish their husband and father encountered has been beyond the call of duty. If it weren't for Kathy's constant encouragement and help in taking over many family obligations, this project would have been difficult to complete. Thank you and I love you!

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CHAPTER 1

INTRODUCTION

As the economy of the United States continues to be driven by new technology, faster and more complete services, and improved worker productivity, the need for continued analysis of the work force is essential. In the 1990's, the baby boom generation, which has been a factor in the American economy for the last forty years, is maturing. Veteran workers have been entering the final years of their productive lives. As older workers become the "backbone" of the work force, it is important for members of the American society to examine the productivity of older employees. Myths and realities concerning the aging work force in the United States are causing major concerns. Older workers are being under-utilized and employers need to examine the nature of aging employees in creating staff development programs for veteran workers (Armstrong, 1985). An understanding of what motivates older workers needs to be developed. As the work force ages the potential for a decline in productivity is a possibility. American's must continue to seek the factors and motivators that will help to keep older employees working at peak productivity.

Who Are Older Workers?

A consensus definition of the older worker has not existed. Three definitions of older workers as defined by three labor-related sources were listed as shown in the following three definitions.

Source	Age
Federal Age Discrimination in Employment Act	40-70
U.S. Dept. of Labor	45+
Bureau of Labor Statistics	55+

Regardless of how older workers have been identified, most veteran workers would rather not be labeled as "older workers." In fact, 75% of workers who were 55 or older preferred to continue working even if they could afford to retire (Parnes, 1979). Even among retired males, 20 percent indicated an interest in returning to work. For the first time since 1947, the percentage of men 65+ in the work force increased. Population projections for the United States (U.S. Bureau of the Census, 1977) reflected a continuous increase in older age groups to the year 2000. (Table 1) In the year 2000 over 20% of the workers in America will be over the age of 55. That statistic has had little effect on the strategic planning for the "wave" of older workers which has already begun in the American work force. In fact, much of the current thinking and policies of industry leaders reflected the focus of decreasing the older workers in the work force (Armstrong, 1985).

Table 1-1

Population Projections (in millions)

Age	1978	1980	1985	1990	1995	2000
0-17	63.3	62.0	62.3	64.8	68.4	69.0
18-24	29.0	29.5	27.8	25.1	23.2	24.7
25-54	81.5	84.6	93.8	103.0	109.2	111.6
55-64	20.7	21.2	21.7	20.8	20.6	23.3
65+	23.9	24.9	27.3	29.8	31.4	31.8
Total	218.4	222.2	232.9	243.5	252.8	260.4
Median Age	29.7	30.2	31.5	32.8	34.2	35.5

Source: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 704, "Projections of the Population of the United States: 1977 to 2000." U.S. Government Printing Office. Washington, D. C., 1977; Projections 2000, U.S. Dept. of Labor, January, 1988, p.p. 93-95.

Statement of the Problem

People of all ages need motivators that help keep them healthy, productive, and self-fulfilled. When considering the older worker, employers need to examine the satisfaction levels of employees. A need exists to identify older workers who are productive and analyze the factors that made them productive. Satisfaction levels of productive and non-productive workers, if identified, may help to determine answers which could lead to higher productivity. Older worker lifestyles and leisure activities outside of the work place need to be studied to identify if those factors have a positive or negative

correlation to older worker productivity.

If people are motivated by satisfying various physical and psychological needs throughout their lifetime, then the study of the needs and satisfaction levels of older workers will be of importance. If researchers can identify a profile of factors in productive older workers, then that knowledge can be used to help all aging employees work toward high productivity and self-fulfillment.

Purpose

The purpose for conducting this study was to relate job satisfaction, life satisfaction, and leisure activity participation of the older worker in industry and education to productivity while on the job. Age, gender, and work setting were compared and evaluated in answering the following ten research questions.

Research Questions

1. Are older workers satisfied with their jobs?
2. Are older workers generally satisfied with their lives?
3. What are the leisure activities in which older workers participate?
4. Do older workers perceive themselves to be productive workers?
5. Do managers perceive older workers to be productive workers?
6. Is there a difference in older worker productivity in education when compared to industry?
7. Is there a relationship between job satisfaction and worker productivity?

8. Is there a relationship between life satisfaction and worker productivity?
9. Is there a relationship between the leisure activities of workers and job productivity?
10. What factor, job satisfaction, life satisfaction, or leisure activity participation relates most to worker productivity in industry and education?

Definitions

1. Workers in education — employees who teach, administrate, or serve as a supportive function for education in elementary and secondary institutions.
2. Workers in industry — persons who work as employees, secretaries, or managers in the Valmont Corporation located in Valley, Nebraska.
3. Older worker — male or female employee, age 50 or older, and employed in the organization at least 30 hours per week. In the text these workers will be described as workers, 50+.
4. Younger worker - male or female employee age 26-36, and employed in the organization at least 30 hours per week. In the text these workers will be described as workers, 26-36. Employees, age 37 to 49, were not used as a part of the study. The age differientation was used to help identify age related factors of productivity.

5. Job satisfaction — attitudes about factors in one's job as measured by the Job Description Index (Smith, 1969)
6. Life satisfaction — attitudes about factors in one's life as determined by the Life Satisfaction of Elderly Scale (LSES) (Conte, 1984; Trafton, 1977)
7. Leisure activities — activities in which one participates either psychologically or physically as determined by the Leisure Activity Blank (Thorson, 1977)
8. Productivity — defined as worker productivity as perceived by self and a worker's personnel manager or supervisor.
9. Workers and employees - are interchangeable terms used to describe the sample population in both work agencies.

Assumptions

1. The Productivity Questionnaire, the Job Description Index, the Life Satisfaction Index, and the Leisure Activity Blank were valid and reliable instruments.
2. The workers understanding and perception of the instruments were such that their responses would be truthful and reliable.
3. The procedures used to identify the sample in the population of industry workers and educators were representative of the total population.

Limitations

1. Conclusions reflected worker attitudes which represent

lifestyles only common to midwestern older worker traits, work ethics, and culture.

2. Conclusions reflected a racial bias of caucasian workers because of the make-up of the population in the study.

Delimitations

1. The populations in the study were workers in only one industry, the Valmont Corporation and plant, located in Valley, Nebraska, and workers in education in the Elkhorn, Valley, and Fremont school systems. The schools were located within a 50-mile radius of the Valmont facility.

Significance of the Study

The study was completed to attempt to add to the current research regarding the productivity, development, and satisfaction levels of the aging worker. The information found in this study will help Valmont, other industry leaders and educators to better understand the personal and professional needs of older workers. Through this research employers might be able to develop better personal and professional development plans as well as provide better environments in which the older workers can produce at their maximum levels. A benefit to both industry and education will be the sharing of the research data which may enhance employment practices and programs in both types of agencies. As the work force ages, a concentrated cooperative effort to develop veteran employees will be needed to produce older workers who are healthy, creative, and producing at peak efficiency levels.

Procedures

Review of the Literature

The review of literature consisted of several aspects related to older workers in the workforce. Ageing was first examined and described as workers reached the age of forty, fifty and older. An examination of the demographics of the workforce is presented and followed by myths, realities, and feelings of older workers. The second half of the review summarized theories about worker productivity, human motivation, satisfaction and leisure and how these factors may be related to worker productivity.

Design

The design of the study was comparative as well as quantitative in nature and explored questions about older and younger workers in industry and local education agencies. The data were collected and organized so that conclusions could be reached and comparisons made regarding the needs of industry and education employees of age 50 and older. Personnel managers were trained and used to help implement the survey instruments.

Sample

The sample was selected from a population of younger and older workers in the Valley, Nebraska, Valmont plant and a population of younger and older workers in the Elkhorn, Valley, and Fremont school systems. Both populations were located within a 50-mile radius of each other. Younger and older workers in both populations were asked to participate in the study. Approximately 100 Valmont workers and 100 workers in education were asked to participate in the

study taken from populations of 540 and 450 respectively. All workers, regardless of job responsibility, were asked to participate. Not all employees wished to take part in the study. However, careful planning was done so all work settings and departments were represented in the study.

An explanation and summary of the study were provided to the personnel managers in both agencies. The survey instruments were then administered to the managers for clarification purposes. When the administration procedures were clearly understood, the managers and principals administered the instruments to the employees. Proper procedures were followed in obtaining permission to use human subjects. A request for exemption status for the research was requested under research guideline, 45CFR 46:10(b) paragraph 3, from the Institutional Review Board. In carrying out the research, any inconsistencies or bias in the sample population or in the administration of the instruments was reported in the data analysis.

Instrumentation

The instruments used in this survey included questions from the Job Description Index (JDI) (Smith, 1969), the Life Satisfaction Scale (LSES) (Conte, 1984), a Productivity Questionnaire (PQ) and the Leisure Activity Blank (Thorson, 1977). These instruments were used to measure:

a) JDI - Job satisfaction

b) LSES - Attitudes and satisfaction in life

c) PQ - Productivity on the job

d) LAB - Activity participation in leisure activities.

Collection of Data

Data were collected over a two month period using personnel managers, principals, and school administrators to carry out the completion of the surveys. The respondents were given a brief description of the project and asked to volunteer to be a part of the study. All completed questionaires were used in the data analysis. Careful planning and implementation was done so that all work settings and departments were representative of the populations. (See Appendix A-E)

Data Analysis

The data analysis involved several steps. Step one involved using descriptive information to compare and relate each of the variables in the study. Another step included a correlation of the independent and dependent variables. The dependent variable was the productivity of the older worker and the independent variables were older worker satisfaction of life, satisfaction of work and older worker leisure activity participation. Age, gender, and work setting were compared for each of the dependent variables. The final step was to answer the research questions descriptively and use statistical analyses to support those conclusions. The statistical methods used included measures of central tendencies, t-tests, Pearson -product correlations and multiple regression analyses. Frequency counts, and mean percentages were used in the descriptive part of the data analysis. The Nebraska Evaluation and Research Center at the University of Nebraska, Lincoln, assisted in every aspect of the data analysis phase of the research.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Included in Chapter II is information and factors which may have affected older workers as reviewed by the author. The nature of ageing and the demographics of the ageing work force in the United States were reviewed. Myths and realities about older workers were found to indicate interesting information concerning under-utilization of older workers. Worker productivity was examined and a theoretical perspective was developed in relationship to worker satisfaction and leisure .

The Nature of the Aging Adult

In her research about older workers, Krupp (1981) concluded that persons who were in their fifties were actually entering their peak years of creativity and productivity. They maintained a unique tolerance for others. As adults reached the age of 50 they developed a mellowness to their personality. They perceived themselves as mature, were able to deal with life, and maintained high satisfaction levels. When adults reached the age of 60, they began to have a diminished self-concept. Values changed and often the world was perceived as complex and dangerous. There was a realization that they must conform to the world and could no longer reform it. The lack of control was frightening to older adults (Krupp, 1981).

When adults reached the age of forty, changes in their physical and mental health was a concern. When they reached the age of 50 those concerns became

major health problems. The presence of gray hair, loss of hair, being overweight, loss of strength and life threatening diseases such as cancer and diabetes was evident. Adults in their fifties and sixties could not do things as well as they did in their younger years. Major illness occurred that caused hardships and death to loved ones (Krupp, 1981).

Time was of the upmost importance to adults that were over 50. They attempted to capture life in a narrow time span. They viewed the future as still having options, but limited ones. Aging adults were less open to new ideas or retraining because they perceived it as a waste of valuable time. They did not have enough time to change. Adults in their sixties often maintained the theme, "accept me for what I am!" (Krupp, 1981, P. 121).

Development of the Unsatisfied Older Worker

During the age of forty to fifty, adults seek to redefine their purpose in relation to the world (Krupp, 1981). At that age, they realize that success doesn't eliminate problems, more money isn't the key to happiness and they begin to wonder if they can maintain their current successes (Jung, 1971; Levinson et al, 1978; Valiant, 1977). At this stage in adult development people often asked the question, "Is this all there is?" Adults who did not attain their dreams often asked, "Why not?" Males and females questioned the time they spent pushing their careers at the expense of their family. As neglected needs sought fulfillment, non-working mothers often returned to careers, men and career women began to spend time with families or hobbies and considered work simply a financial necessity (Gould 1978; Krupp 1980).

Because of disillusionment about themselves, their careers, and their dreams, workers became negative, lived for time after work, and began to develop bad habits at the work place. Aging and "burned-out" workers would not take promotions or get involved with special projects. They believed others viewed them as failures (Uris and Tarrant, 1983). As the perception of themselves tended to destroy their self esteem, these workers began to irritate others with disagreements and complaints and when not engaged in those activities, they displayed extreme boredom (Krupp, 1981).

Demographic Characteristics Of Older Workers in the United States

During the next thirty years, ranging from 1990 to 2020, over 20 percent of the workforce in the United States will be made up of persons of age 50 and older(Table 1-1). It is important that age related problems be addressed and solutions found in keeping older employees believing in themselves and working to make positive contributions to society (Hamilton and Associates, 1987).

Men constituted, from 1980-85, the majority of full-time workers age 45 and over, and almost three-quarters of all self-employed workers (Table 2-1). Over two-fifths of full-time workers were women; women comprised three-fourths of the part-time work force and a majority of retirees (Hamilton & Associates, 1987).

Table 2-1
Profile of Americans over 45: By Employment Status

Employment Status	Full-Time %	Part-Time %	Self-Employed %	Retired %
Sex				
Men	56	23	71	41
Women	44	77	28	56
Race				
Black	8	3	5	5
White	89	95	92	93
Age				
45-49	36	21	25	1
50-54	27	12	22	2
55-59	22	21	18	7
60-64	11	24	19	16
65+	4	22	15	73
Education				
Not High School Graduate	11	15	13	27
High School Graduate	38	41	33	33
Some College	22	22	20	20
College Graduate	17	13	17	12
Graduate Degree	12	9	17	7

Source: "Annual Survey of Americans Over 45: Employment, prepared by Hamilton, Frederick and Schneider for AARP, 1987, America's Changing Work Force, Copyright 1990, American Association of Retired Persons, 1909 K St., NW Washington, D.C..

In 1987 almost 120 million adults were in the United States labor force. Workers 45+ numbered over 33 million or 28% of the total work force (Table 2-2). Almost as many women as men worked. For every four working men,

there were three working women (Department of Labor, 1988).

Table 2-2

Employment Status of the Civilian Noninstitutional Population by Age and Sex, 1987 (in thousands)

Age and Sex	Civilian Noninstitutional Population	Employed	Unemployed	Not in Labor Force
20-44				
Men	48,451	40,443	2,637	3,371
Women	48,571	33,364	2,226	12,980
45-54				
Men	11,215	9,750	426	1,039
Women	11,968	7,737	298	3,934
55-59				
Men	5,249	4,027	158	1,064
Women	5,787	2,922	97	2,767
60-64				
Men	5,018	2,655	100	2,263
Women	5,781	1,861	57	3,863
65-69				
Men	4,411	1,108	30	3,273
Women	5,325	742	20	4,564
70+				
Men	7,221	742	19	6,460
Women	11,151	449	10	10,692

Source: Employment and Earnings, U.S. Department of Labor, Bureau of Labor Statistics, January, 1988, p. 160, America's Changing Work Force, copyright 1990 by American Association of Retired Persons, 1909 K St., NW, Washington, D.C.. 20049.

The numbers of women in the American work force have doubled from 1940 to 1980, and have been projected to continue to increase to the year 2000. (Table 2-3). The numbers of older workers in general have declined during the same time period and have been projected to continue to decline until 1995. In the mid 1990's the baby boom generation, consisting of workers aged 45 and 55, will cause major increases in older worker participation in the workforce (Department of Labor, 1988).

Table 2-3

Labor Force Participation Rates by Sex and Year 1950,1975, and 1988

Age 45-54	Males	Females
1950	95.8	38.0
1975	92.1	54.6
1988	90.7	67.1
Age 55-64		
1950	86.9	27.0
1975	75.6	40.9
1988	67.6	42.7
Age 65+		
1950	45.8	9.7
1975	21.6	8.2
1988	16.3	7.4

Source: 1980 Handbook of Labor Statistics, U.S. Department of Labor; Employment and Earnings, Department of Labor, Bureau of Labor and Statistics, January, 1988, p. 160, America's Changing Work Force !990, Copyright by American Association of Retired Persons, 1909 K St. NW Washington, D.C..

Workers 45 and older were employed in every major industry group in the United States (Table 2-4). Women either predominated or were about the same numbers as men in the white-collar industries, including services, financial, trade and administration, although the percentage of men to women in theses sectors increased with age (U. S. Department of Labor, 1988).

Women of all ages were more likely than men to work part-time (Table 2-5). Whereas only 10 percent of men age 45 and older worked part-time, the corresponding figure for women was 27 percent. For workers 65+, 46 percent of men and 59 percent of women were part-time workers (U.S. Department of Labor, 1987).

Table 2-4

Employed Persons by Major Industry Group, Age and Sex, 1987 (in thousands)

Industry	Total Number, All Ages	45-54			55-59		
		Total	Men	Women	Total	Men	Women
Services	34,527	5,511	2,051	3,459	2,126	882	1,244
Trade	23,392	2,754	1,437	1,317	1,141	589	552
Manufacturing	20,935	3,794	2,568	1,226	1,480	1,023	457
Transportation	7,880	1,377	1,076	301	532	423	108
Financial	7,763	1,178	528	650	468	236	232
Construction	7,456	1,112	1,003	109	447	411	36
Administrative	5,246	990	616	374	374	231	143
Mining	818	146	121	25	47	43	4
Industry		60-64			65+		
		Total	Men	Women	Total	Men	Women
Services		1,436	651	785	1,067	558	508
Trade		809	428	382	655	375	281
Manufacturing		896	624	272	306	211	94
Transportation		284	225	58	111	89	22
Financial		316	178	138	233	150	83
Construction		238	220	18	124	111	13
Administrative		221	120	101	122	79	43
Mining		26	23	3	211	9	2

Source: Current Population Survey, U.S. Department of Labor, Bureau of Labor Statistics, January, 1988. America's Changing Work Force 1990, Copyright by American Association of Retired Persons, 1909 K St. NW Washington, D.C..

Table 2-5

Employed and Unemployed Full- and Part-Time Workers by Sex and Age, 1987

(in thousands)

Age	Total	Full-Time Full-Time Schedules	Part-Time for economic reasons, usually work full-time	Part-Time Total	Part-Time Voluntary	Part-Time for economic reasons usually work full-time
20-44						
Men	37,852	37,156	696	2,591	1,659	932
Women	26,065	25,604	461	7,298	5,924	1,374
45-54						
Men	9,419	9,287	132	331	200	131
Women	6,099	6,002	97	1,639	1,355	284
55-64						
Men	6,114	6,026	88	568	451	117
Women	3,473	3,411	62	1,309	1,121	188
65+						
Men	996	973	23	854	806	48
Women	483	470	13	707	660	47

Source: Current Population Survey, U.S. Department of Labor, 1987 America's Changing Work Force 1990, Copyright by American Association of Retired Persons, 1909 K St. NW Washington, D.C..

Baby Boom Demographics

There were 75 million Americans in the group called the "baby boom" children. The baby boom extended from 1946-1964 with births peaking in 1957. The baby boom years were bracketed by years of fewer births. The baby

"busts" occurred during the depression years, World War II, and the late 1960's and 1970's (Armstrong 1985).

As the "baby boom" children moved through their forties, they were influenced by changing economic and social themes. In the 1990's and beyond, demographic and economic shifts will have noticeable effects on retirement planning and retirement years of leisure. People will be living longer and can expect to spend as many years in retirement as they did working. They can also expect to spend more money paying for retirement. In the 1990's many career -builders and even retirees will be subsidizing elderly parents who haven't saved enough for their own long-term health care needs. Certain characteristics of the growth sector in the year 2000 - the then 45-54 year old - can be foreseen: high incomes, a high level of consumptions, and a high savings rate. The baby boomers will make up a high productivity portion of the labor force.

Women alone were expected to account for 64 percent of the projected labor force growth. By the year 2000, it is projected that women would comprise 47 percent of the labor force, up from 39 percent in 1972 and 45 percent in 1986. Overall, the Bureau of Labor Statistics projects the labor force will become increasingly female and minority (Table 2-6).

Table 2-6

Civilian Noninstitutional Labor Force by Age, 1986, and projected 1995 and 2000 (in thousands)

Group		Labor Force 1986	1995	2000
White				
	20-34			
	Men	23,754	21,315	19,574
	Women	18,920	18,604	17,789
Total		42,674	39,919	37,363
	35-44			
	Men	13,207	16,654	17,100
	Women	10,365	14,300	15,264
Total		23,572	30,954	32,364
	45-54			
	Men	8,791	12,036	14,193
	Women	6,588	9,860	11,964
Total		15,379	21,896	26,157
	55-64			
	Men	6,259	5,672	6,391
	Women	4,323	4,167	4,848
Total		10,582	9,839	11,239
	65-74			
	Men	1,410	1,194	1,001
	Women	932	890	784
Total		2,342	2,084	1,785

Table 2-6 (continued)

Civilian Noninstitutional Labor Force by Age, 1986, and projected 1995 and 2000 (in thousands)

Group		Labor Force 1986	1995	2000
	75+			
	Men	252	250	231
	Women	137	135	116
Total		390	385	347
Black				
	20-34			
	Men	2,986	3,001	2,931
	Women	2,950	3,065	3,041
Total		5,936	6,066	5,972
	35-44			
	Men	1,359	2,025	2,225
	Women	1,437	2,185	2,409
Total		2,796	4,210	4,634
	45-54			
	Men	901	1,202	1,526
	Women	893	1,294	1,677
Total		1,794	2,496	3,203

Table 2-6 (continued)

Civilian Noninstitutional Labor Force by Age, 1986, and projected 1995 and 2000 (in thousands)

Group		Labor Force 1986	1995	2000
	55-64			
	Men	551	552	575
	Women	499	559	639
Total		1,050	1,111	1,214
	65-74			
	Men	105	94	88
	Women	90	75	64
Total		195	169	152
	75+			
	Men	12	12	13
	Women	17	19	20
Total		29	31	33

Source: Projections 2000, U.S. Department of Labor, Bureau of Labor Statistics, January 1988, pp. 93-95, America's Changing Work Force 1990, Copyright by American Association of Retired Persons, 1909 K St. NW Washington, D.C..

Trends in age composition of the work force are projected to continue through mid-1990s (Table 2-7). By 2000, the share of the labor force ages 16-34 is projected to decline, and the share of 35-54 year-olds is expected to increase. The number of 55-64 year-olds will decline through the mid-1990's, then will increase rapidly; between 1995-2000, this group will be the fastest-growing segment of the labor force (U.S. Department of Labor, 1988). The Bureau of Labor Statistics estimated that by the year 2000, 21 million new jobs will be created, mostly in the service sector and according to the Hudson Institute

study, Workforce 2000, the workers who join the workforce between 1990 and the year 2000 will not be well-matched to the jobs our economy is creating.

Table 2-7

Civilian Labor Force Participation by Age and Sex, Actual 1972, 1986 and Projected to 2000 (in thousands)

Age	1972	1986	% change	2000	% change
16-19					
Men	4,478	4,102	- 8.4	4,501	9.7
Women	3,578	3,824	6.9	4,379	14.5
Total	8,056	7,926	- 0.8	8,880	12.1
20-24					
Men	6,765	8,149	20.5	7,005	-14.0
Women	5,365	7,293	35.9	6,746	- 7.5
Total	12,130	15,442	28.2	13,751	-10.8
25-34					
Men	12,349	19,383	57.0	16,559	-14.6
Women	6,609	15,209	130.1	15,098	- 0.7
Total	18,958	34,592	93.6	34,481	- 7.7
35-44					
Men	10,372	15,029	44.9	20,133	34.0
Women	6,028	12,204	102.5	18,438	51.1
Total	16,400	27,233	73.7	38,571	42.6
45-54					
Men	10,412	9,994	- 4.0	16,332	63.4
Women	6,555	7,746	18.2	14,220	83.6
Total	16,967	17,740	11.1	30,552	73.5

Table 2-7 Continued

Civilian Labor Force Participation by Age and Sex, Actual 1972, 1986 and Projected to 2000 (in thousands)

Age	1972	1986	% change	2000	% change
55-64					
Men	7,155	6,954	- 2.8	7,238	4.1
Women	4,257	4,940	16.0	5,732	16.0
Total	11,412	11,894	6.6	12,970	10.1
65+					
Men	2,025	1,812	-10.5	1,368	-24.5
Women	1,089	1,198	10.0	1,026	-14.4
Total	3,114	3,010	- 0.3	2,394	-19.5

Source: Projections 2000, U.S. Department of Labor, Bureau of Labor Statistics, March 1988, p. 23, America's Changing Work Force 1990, Copyright by American Association of Retired Persons, 1909 K St. NW Washington, D.C..

Summary of Demographics

Employees at the U.S. Census Bureau have gathered information that points to a change in employee demographics of the United States work force. During the last 40 years, women entering the work force have been a key influencing factor in workforce demographic changes. Between 1995 and the year 2000, women will comprise 47 percent of the labor force, up from 39 percent in 1972.

Beginning in 1995, however, older workers age 55-64 will become the fastest growing segment of the work force while workers age 16-34 are projected to decline. Increasing numbers of older workers will be evident in every work setting and therefore civilian and non-civilian employers will have to be ready for needs of the aging "baby boom" worker who will comprise nearly 30 percent of the total workers in the United States.

Myths About Older Workers

Significant barriers have existed in the utilization of older workers and employers continued to believe the myths circulated about older workers. A list of myths and the related counter-statements as cited in Privately Speaking: Corporate Community Involvement is Meeting the Needs of Older Americans, (Armstrong,1985), is contained in figure 2-1.

Figure 2-1

Myths and realities about older people

Myth	Reality
Old people are all alike.	They are, in fact, an extreme diverse group spanning a 25-30 year age range. As the needs, abilities and values of a 50-year-old can be expected to differ considerably from those of a 20-year old, so should these qualities be expected to differ between a 90-year-old and a 60-year-old.
Old people do not contribute to society.	Almost 20% of people aged 65 and over are engaged in some form of volunteer work, contributing an estimated $36 billion worth of labor annually.
Older people are poor; therefore, business need not take much notice of them.	Americans age 55 and over represent more than $400 billion in annual personal income and account for one of every five dollars spent for food consumed at home.
Older people are basically renters.	Seven out of ten elderly own their homes.

Most older people live in public housing, "old folks" homes, or nursing homes.	91% percent of the elderly live in individually chosen homes, 4% live in federal housing for the elderly and in retirement communities, and 5% live in nursing homes or other institutions.
Those who are too old to drive can just take public transportation.	In most locales, public transit is generally directed toward the central business district and provides the maximum service during rush hours. Thus, public transit often does not meet the needs of older persons.
Older people are sick and unable to care for themselves.	Older people have more chronic ailments than younger people, but in most cases the ailments are not terribly limiting. Only 10% of those over 65 are confined in any way.
Older people are senile, and there is no hope for improvement.	Senility is not an inevitable consequence of growing old. What is diagnosed as "senility" may actually be the by-product of anemia, malnutrition, or infection. Such conditions may be fully reversible.
Older people are poor learners, "set in their ways", resistant to change.	Learning ability does not decline significantly with Vocabulary and conceptual skills often grow after age 60.
Older people are less capable workers than younger people.	Older workers have less absenteeism than younger workers, have fewer on-the-job accidents, and are more satisfied with their jobs.
Of all the age groups, crime against the elderly is the most common.	Of all the age groups, crime against the elderly is the least common.*

*Source: Adapted from Myths and Facts About Aging, prepared by the U.S. Conference of Mayors and the University of Maryland Center on Aging. (1983), Issues and Trends, paper presented by Laura Armstrong, summer,1985, (ED 256 965) Atwood Lake, Ohio.

Older workers maintained that harmful decisions were being made based on myths. "Only limited efforts are made to maintain the professional capabilities of the older workers. Older professionals are overlooked for the kinds of assignments that lead to growth and professional development" (Shapiro, 1985).

Myths about older workers caused several key biases in people who worked with them. In a survey of corporate managers contained in Harvard

Business Review, results were reported which revealed the depth and strength of stereotypes about older workers (Rosen and Jerdee, 1977).

The managers:

1. saw more difficulty in changing behavior of older employees,
2. suggested that items be routed around the older employees rather than dealing with them directly,
3. did not attribute positive motives to older workers desiring retraining,
4. favored career development for younger workers but not for older workers, and
5. saw older workers as less likely to be promoted than younger workers.

Older workers, as a group, had less education, less vocational training and were more reluctant to relocate (Parnes 1979). In general, they were less likely to be held in esteem and viewed as valuable by management and other workers. These attributes and the self-perception of the older worker were barriers to career development (Parnes 1979). The value of retraining was not always obvious to older employees. Pacaud (1965) concluded that retraining, especially outside the work day, was resisted by older workers' families. Older workers were reluctant to volunteer for retraining because they often had feelings of inadequacy about their ability to successfully complete the training program. They experienced many years of little or no inservice since their previous formal training (Peterson, 1983).

Beginning in 1995 older workers 45 and older will be entering the work force at a growth rate of 19 percent while the overall population will be growing at a rate of 4.2 percent. In regard to expanding the older workforce, employers must begin to address such concerns as:

1. the best way to identify employees who need training and help with career development,
2. how to motivate older employees,
3. the flexibility and capacity of employees to learn new skills,
4. how to accommodate employees with special needs, and
5. the cost effectiveness of training and older worker development.

Tomorrow's training will need to be aimed at developing, preserving, and renewing the skills and talents of older employees.

Under-Utilization of Older Workers

If employers are going to make major investments to train aging employees, then the question, "Are older workers more or less productive than younger workers?" needs to be answered. In a study completed in a high tech company in the U.S., an internal task force was formed to determine whether the aging of the work force was responsible for lowered productivity. The study (Donchin, 1983) included over 4,000 employees who were randomly sampled to state opinions and offer solutions to the following attitudes about aging. The study included questions about employee performance/productivity, creativity and utilization of workers, technical knowledge, growth and development, pre-retirement and retirement, and health. Responses from workers who were 40 years of age and older included:

1. sixty-seven percent felt that management did not provide adequate opportunities to stay up-to-date,

2. forty-seven percent believed that older employees were seldom given the opportunities to develop themselves in their occupation/profession,

3. forty-five percent concluded that management did not seem to be open to new ideas, and

4. forty-seven percent felt that management did not care about its employees.

Comments about utilization were among the most angry and bitter in the entire study. There were deep frustrations arising from intellectual under-utilization and were expressed as follows:

1. there was no apparent emphasis or interest in utilizing the older worker,

2. older workers spent their time working on older never-ending projects and did not have the time to start new projects,

3. older workers performance was often poor because they were shunted to "back-water" jobs,

4. the creativity of older workers was not utilized, asked for, or recognized, and

5. older workers did not go to seminars that younger workers attended.

Although other researchers (Krupp, 1981; Pacaud, 1965) indicated that older workers resisted change while on the job, Donchin (1983) concluded older workers were not resistant to change.

Retirees Back to Work

More than 1.9 million early retirees were willing and able to return to work based on the findings of a 1989 national survey ("Tap older workers," 1989). The survey questioned men, ages 55-64, and women, ages 50-59.

Seventy-one percent of the retirees stated they wanted to do something useful while forty-five percent concluded they needed extra income in stating reasons for wanting to return to work. Retirees were physically able to do key tasks such as driving, using typewriters and calculators. They were willing to take the most difficult jobs under the most difficult conditions. A national survey showed what types of jobs retired Americans preferred (Table 2-8).

Table 2-8

Jobs Retired Americans Prefer

Store Sales	53%	Secretary or Administrative Assistant	30%
Driving car, van, truck	49%	Nurse's Aide	30%
Serving older people at home	47%	Preschool Teacher	27%
Office Management	45%	Teacher	27%
Working in Nursing Home	45%	Word Processing, Computer	26%
Stock Clerk	44%	Bookkeeper, Accountant	25%
Cashier	42%	In-Home Day-Care	23%
Teacher's Aide	41%	Fast Food Restaurant	22%
Day-Care Center Worker	38%	Waiter, Waitress	18%
Travel Agent	37%	Foster Care at Home	15%
Clerical Office Job	36%	Nurse	14%
Janitor	34%		

Source: Omaha World Herald, Reports Tell Firms: Tap Older Workers, Friday, January 13, 1989, copyright Omaha World Herald, Omaha, Nebraska.

Worker Productivity

If the American workforce has aged and retirees have been reentering the workforce it is important for business, institutions, and employers to examine what factors have motivated older workers. Since the beginning of recorded history people have been looking for ways to increase worker productivity. However, finding out how to increase productivity and what motivates people to produce at high levels has been the subject of many inconclusive research studies according to Macarov (1982).

Defining productivity has been the subject of many debates. Macarov (1982) insisted that increased productivity produced increased production and could be defined as "per person output."

Regardless of the definition, finding ways to increase worker productivity has been topics of several studies (Macarov,1982). Some of the conflicting productivity themes have included the following statements.

> People work in order to satisfy instinctual and biological needs and drives, and are unhappy to the point of sickness if they are denied such opportunity-
>
> People are inherently lazy; no one wants to work or does so unless he or she has to; and efforts to avoid work are the basis for all social and mechanical progress.
>
> People work basically to achieve material ends, and any other supported motivations are rationalizations which would not support work motivations if material needs were provided by other means-
>
> People work even when their material needs are satisfied, because of personal needs and social pressures.
>
> Only people whose sustenance needs are unmet are motivated by the need to work; other people must be stimulated by advertising, social pressure, and other devices, or else they would be satisfied-
>
> People's needs are insatiable, and therefore people will always work to achieve more material items.

People work because of the satisfaction inherent in working: the sense of creativity, fulfillment, productivity, and performing an expected and useful social role-

Most people find their work boring, unsatisfying, and uncreative, and constantly seek to reduce the hours they must spend at it.

People work because in their work groups they find primary group relationships, companionship, enjoyment, status, and recognition-

The major focus of people's lives is outside their work places; major interests center on nonwork activities; and most satisfying personal relationships are not found with fellow workers.

People work because of the social identity that work offers them, the regulation of daily life activity it entails, and the way it defines them to the rest of society-

People define themselves and are defined according to their leisure time activities, their interests and expertise, and their familiar and ethnic backgrounds. (Macavov, 1982, p. 59-60).

Other Productivity Views

Other recent studies about worker productivity had conflicting results about the worker satisfaction/productivity theories.

Employees of US Steel were trained to believe that five basic fundamentals needed to be satisfied in order for people to be productive (Guzzo,1983). The needs included the following items.

1. Wages. To enable a person to enjoy a standard of living that he/she believes is equitable, based on his/her station in life

2. Security. To know that a job will exist for a long as he/she wants to work and as long as he/she is performing properly

3. Recognition. To know that he/she is important and needed as a vital part of the company team

4. Confidence. To believe in what he/she is doing and in the company

5. Pride. To be proud of his/her work, the company, and our great nation

US Steel managers believed that no two people were exactly alike and it was impossible to develop a single standard people-oriented motivation program that would address the total needs of all employees. Improved morale was

achieved only when basic needs were fulfilled.

In increasing productivity and profitability, research and observers have told us there were eight important motivators that needed to be taken into account if organizations were to create changes that were necessary to increase productivity and profitability (Guzzo, 1983). These included:

1. work that is challenging, creative, and interesting,
2. participation in decision making,
3. compensation tied to performance and to sharing of productivity gains,
4. communication and authority channels that are simplified and easy to understand,
5. supervision that is competent,
6. recognition of achievement,
7. opportunity for stewardship, care and attention to the needs to customer and co-worker needs, and
8. organizational styles that are more flexible.

Myths and theories about worker productivity were often contradictory. Many workers productivity theories were related to worker satisfaction. Other productivity theories tied worker productivity to product output. In a study completed about worker productivity from 1971 to 1975 several interesting conclusions were made about aspects of worker productiveness (Katzell, 1977). A few of the research conclusions contradict each other and add to the confusion about what motivates workers to be productive.

1. Conclusion: A program of flexible work hours resulted in decreased absenteeism (total days absent) and in more favorable attitudes toward work, but did not affect turnover.* (Golembiewski, 1974)

2. Conclusion: Following the redesign of jobs, productivity improved.* (Glaser, 1974)

3. Conclusion: The specification of clear and difficult (but attainable) production goals may lead to improved productivity.* (Latham, 1975)

4. Conclusion: Improvements in subordinate-rated supervisory behavior may occur when supervisors are told how they were rated earlier by their subordinates.* (Hegarty, 1974)

5. Conclusion: For blue-collar workers in five companies, changing from hourly pay to weekly salaries increased average absenteeism.* (Hulme, 1975)

6. Conclusion: Job enrichment improved quantity and quality of performance, as well as job attitudes. (Janson, 1971)

7. Conclusion: Changing to team-centered production improved numerous indices of productivity.* (Ketchum, 1972)

8. Conclusion: An intensive training program in human relations appears to have induced managers to have more positive attitudes toward the human dimensions of their jobs, and to have resulted in their receiving higher performance-ratings from supervisors.* (Hand, 1972)

9. Conclusion: Numerous factors internal and external to a job-enrichment program can act to limit its effects and can lead to insignificant productivity results.* (Frank, 1975)

10. Conclusion: Increasing the levels of participation may improve workers' job satisfaction, while productivity and absenteeism remain unchanged or actually deteriorate.* (Powell, 1971)

11. Conclusion: Positive verbal reinforcement of specific production-related behaviors may result in productivity improvements and in cost savings.* (Emery, 1973)

12. Conclusion: Executives' rate of advancement can be expedited by training in achievement motivation.* (Aronoff, 1971)

13. Conclusion: Job enlargement may have adverse effects of quantity and quality of productivity. Job satisfaction and status of adjacent workers whose jobs remain unchanged may decline, although their productivity may not suffer.* (Bishop, 1971)

14. Conclusion: After introduction of participative decision making in a small department, absenteeism decreased and productivity increased. The result was a reduction in costs. (Bragg, 1973)

15. Conclusion: In influencing productivity, the type of job change introduced may not be as important as the type of expectation held by personnel, although neither may influence absenteeism.* (King, 1974)

16. Conclusion: Reorganization of worker and supervisory jobs, with increased worker participation and feedback, may result in increased efficiency and quality and decreased costs and grievances. These consequences do not occur in all instances, however.* (Dowling, 1975)

17. Conclusion: The formation of teams consisting of workers from different functions may improve productivity.* (Likert, 1975)

18. Conclusion: Changing an authority structure from one of close supervision to one providing employees with more participation as well as with training appeared to improve organizational performance.* (Luke, 1973)

Many theories have been completed about worker productivity and many have contradicted each other. One example of two productivity theories that were in conflict were the Ketchum study (1972) and the Powell study (1971). Ketchum indicated that by increasing worker participation in decision-making workers would be more productive and satisfied. Powell concluded that although workers were more satisfied with their work when given the chance to participate more in the decision-making process, no productivity gains were evident and even declined in the productivity area of attendance. Because of numerous conflicting theories about worker productivity several studies have been completed to determine what causes workers to produce at maximum levels. Most studies included the needs and satisfaction theories of Abraham Maslow and Fredrich Herzberg.

Human Motivation — A Theoretical Perspective

Self-fulfillment and self-actualization have been interests to both employees and employers. Motivating workers to be productive and helping them to use their talents to the best of their ability has been a goal many personnel

managers have sought to achieve.

The theoretical perspective developed by Abraham Maslow, in the late 1950's, has been a key theoretical argument for studies concerning worker productivity. Maslow developed a "Hierarchy of Needs Theory," which he believed to be a systematic theory of human motivation. The theory stated:

(a) every individual is goal-seeking from the beginning of life to his end,

(b) any action a person takes to reach a goal is a drive and the acting out of a drive is seen as evidence of motivation to reach a goal,

(c) goals can be converted to a set of needs which a person strives to reach, and

(d) the human needs can be categorized and ranked into a continual hierarchy, beginning with the most primitive and urgent human needs and ranging upward to the highest need — self actualization. (Maslow, 1954) (Messenberg, 1985)

Maslow identified the primary breakdown of human needs from lowest order to highest.

1. Physiological — food, warmth, shelter, water, sleep, sexual fulfillment, and other bodily needs. [lowest need]
2. Safety — physical safety, feeling of being safe from injury, both physically and emotionally.
3. Love and belonging — the need to feel a part of a group. The need to give and receive love, to and from others.

4. Self-esteem — the need for a feeling of personal worth, adequacy, competency, respect from others, recognition from others, status in the eyes of others.

5. Self-actualization — the need for one to realize the real self and to become what one is capable of becoming. [highest need]

Maslow believed that each need is satisfied in order, from lowest to highest. As lower order needs became satisfied, then they were no longer motivational needs. Throughout a lifetime, a person experienced a repeated pattern of needs depending on the experiences he or she had encountered

Maslow's motivation theory was expanded into the work place through Herzberg's research about on-the-job attitudes. His motivational theory, often called the Two-Factor theory, identified which job-related factors satisfied employees. The theory became prominent in helping personnel managers create suitable staff development programs. (Herzberg and Associates,1959). Herzberg classified the job content factors that were satisfying as:

* recognition
* Work itself
* responsibility
* advancement
* growth

Herzberg categorized factors that cause dissatisfaction to include:

* company and policy administration
* supervision
* Work conditions

* interpersonal relations with superiors and peers
* salary
* job security
* personal life

In establishing his "Two-Factor Theory" often called motivation-hygiene theory, Herzberg used the needs theory developed by Maslow. He concluded that the intrinsic factors in work---personal growth, personal worth, and recognition caused workers to be motivated and satisfied. These factors were indeed related to Maslow's self-esteem and self-actualization needs (Messenburg, 1985). Kilgore (1985), in a study completed in Nebraska reflected similar conclusions about intrinsic rewards. In surveying educators, high morale was evident among teachers who found intrinsic rewards in their work. Low morale centered on salary issues and working conditions.

Are Satisfied Workers More Productive?

One flaw in Herzberg's studies resulted in his failure to relate worker satisfaction to actual worker productivity. Herzberg was able to identify the aspects of one's job which produced worker satisfaction and dissatisfaction but was not able to relate those attributes to actual worker productivity. In fact, much of the work completed on worker satisfaction and worker productivity made the same "inconclusive" arguments that insisted satisfied workers were more productive workers.

An interesting study about worker satisfaction and worker productivity was completed in Israel using an Israeli Kibbutz as the population center. The Israeli Kibbutz used in the study contained 255 adult members. The Kibbutz

provided work and services to the children of members, aged, retired parents of members, and youth groups from other parts of Israel. The Kibbutz and its members engaged in mixed farming. The members of the Kibbutz managed and maintained a factory, hothouse for export of flowers, and raised livestock. In that study, worker satisfaction and dissatisfaction were identified using the Herzberg methodology. Results are reported in Table 2-9.

Table 2-9

Satisfaction of Workers in Israeli Kibbutz

	Dissatisfactions (% of Workers)	Satisfactions (% of Workers)
Work Itself	14.8	41.9
Achievement	17.0	33.0
Interpersonal Relations	20.5	28.0
Responsibilities	2.8	21.4
Working Conditions	28.4	18.1

Source: Worker Productivity: Myths and Realities, Sage Publications,1982, Beverly Hills, California, Vol. 137, p. 86 .

The satisfiers found in the work place included the work itself, achievement, interpersonal relations, and responsibility while the one dissatisfier was working conditions. The study reflected and supported much of the work completed in the Herzberg type studies. One unique aspect of the study included the exploration of satisfaction of one's life while living in the Israeli Kibbutz. Because the work place and living existence were one in the same in the

Kibbutz the discussion of work matters carried over into communal meals, evening socializing, and other settings. Family matters, social matters, leisure plans and activities were discussed throughout the work place. Thus questions about satisfaction of work included answers about satisfaction of one's life while living in the Kibbutz.

The most significant aspect of the Kibbutz study found that there was little correlation (.029) between worker satisfaction and worker productivity. In other words, whether a person indicated satisfaction or dissatisfaction with his or her work and living situation had almost no relationship to his or her reputation as a worker and there was little evidence found that being satisfied at work was in any way related to working hard (Macarov, 1975).

The entire relationship between workers satisfaction and productivity has remained cloudy at best. More studies should be conducted that relate different types of worker satisfiers or dissatisfiers to actual productivity. Too many researchers have assumed that productivity would flow from satisfaction when that theory alone has been inconclusive as proven in the Israeli Kibbutz study (Macarov 1975).

Leisure and Work

The Kibbutz study raised questions about one's leisure activities and their effect on one's satisfaction and productivity. The researchers who conducted the Kibbutz study concluded that leisure was indeed related to the work of the Kibbutz members. Other researchers have also agreed that work and leisure were related.

The area of leisure, by definition, has been closely related to the world

of work. Leisure has often been related to work because leisure activities of personnel have involved groups of individuals from the work setting (Cheek, 1971). One who has been a member of a close work group would seek leisure time experiences within groups. Company bowling teams, softball teams, and company group vacations have all been examples of work related leisure experiences.

Often, the quality of experiences at work have been considered to spill over and affect the quality of experiences away from work. In effect, one who had been accustomed to doing precise time consuming tasks at work, for example, would seek the same kind of activities in his or her leisure time (Champzux, 1980). In contrast, employees often sought to find leisure activities that were not related to work (Berg, 1971). Employees were found to enjoy leisure activities that required skills not found in the work place. A surgeon enjoyed working in the garden and exerting physical exercise and a professional football player enjoyed playing the piano.

Regardless of both theories on the need for leisure, reduced work time has produced more leisure time. Leisure has been defined and categorized into constructive leisure, cultural pursuits, family centered leisure, and pure relaxation (Argyle, 1972). Leisure activities have increased to the extent that expenditures for leisure activities in 1972 in the United States were $100 billion more than the total cost of the United States national defense budget (Levy, 1978).

"Leisure in any form, must be satisfying" (Macarov,1982, p. 36). It must be a kind of goal "equivalent of work." Leisure above all other segments of

life has become related to the industrial work place in the United States. Too much work or too much leisure have caused imbalance and problems in people and the places in which they work. Leisure and work must both serve each other if a society is to maintain healthy people and healthy environments within it.

Summary

In the year 2,000 thirty percent of the workforce in the United States will be made up of workers over fifty years of age. Older worker productivity, satisfaction, and leisure activities are issues that need to be examined. Are the issues related? Do they indeed affect the lives of older adults? The researcher attempted to examine those questions in Chapters three, four, and five.

CHAPTER III

DESIGN AND INSTRUMENTATION

Introduction

The design of this study was comparative as well as descriptive in nature and intended to explore questions about older workers in industry and local education agencies. The data were collected and organized so that conclusions could be reached and comparison made regarding the needs of industry and education employees of age 50 and older. Personnel managers were trained and used to help implement the survey instruments.

Sampling Techniques

All full-time employees in the two age categories from selected industry and school districts were included in the population from which the sample was drawn. Selection of the sample was done randomly within two specified strata. Males and females, age 50 and older, were included in half of the sample population. Males and females age 26-36 were included in the other half of the sample population.

The sampling procedure was completed through the assistance of personnel managers. A list of employees was generated by dividing each population into two sub-groups, employees age 26-36 and employees age 50+.The total population included 547 industry employees age 26-36, 192 industry employees age 50 and older, 207 school district employees age 26-36 and 217 school district employees age 50+. The identified employees in the population included teachers, custodians, cafeteria workers, bus drivers,

managers and secretaries from the education work environments, and manufacturing employees, secretaries, managers, custodians and supervisors from all divisions of the Valmont plant. All employees who participated in the study were identified and selected by the use of random sampling. Two hundred and one employees were identified and asked to take part in the study.

Data Collection

After the sample population was identified the researcher contacted the workers' immediate supervisors in soliciting help in carrying out the research. Each supervisor was given packets which included questionaires and research instruments. Supervisors were given the responsibility to insure the instruments were filled out and returned to the office secretary. Every effort was made to assure that each worker was given complete anonymity. Sealed packets containing the questionaires were returned to the office personnel secretary who secured the surveys for the researcher. Two hundred and one questionaires were distributed and 180 questionaires were completed and returned to the researcher. (See Appendix A-F) Eighty-nine percent of the surveys were returned and completed with less than one percent error in completion. The sample size was determined by randomly selecting younger and older workers from each work setting. After the samples were drawn, 80 workers from industry, 100 workers from education, 96 younger workers , and 84 older workers were asked to participate in the study. By using 180 randomly selected participants, adequate conclusions could be made. All supervisors completed the productivity questionaire designed to evaluate employee productivity. The sampling and research were completed over a 38 day period,

from December 1, 1989 to January 7, 1990. The sample population is described in Table 3-1. Listed in Table 3-2 is a summary of the populations from the four agencies used.

Table 3-1

Sample Population of Workers in Industry and Education

	Males(101)	Females(79)	Total Workers
26-36	49	47	96
50+	52	32	84
Industry	68	12	80
Education	33	67	100

Table 3-2

Sample Population of Employees

	Industry N=80	Education N=100
Younger N=96	42	54
Older N=84	38	46

Instrumentation

The following information includes a description of the instruments and how they were used in the study. They have been described in the sequence they were administered in the study.

Job Descriptive Index (JDI)and

Jobs in General Index (JID)

The Job Descriptive Index (Smith, 1969) and Job-in-General (Appendix C) were designed to measure satisfaction of workers while on the job. The JDI consisted of five subscales, work, pay, promotion, supervision, and co-workers.

The JDI was revised in 1985 and the norms were established for males and females. Norm scores were used to group employee satisfaction levels. Each area of job satisfaction was measured for all employees and correlations of all the sub-scales were identified. (Appendix G) The reliability of the JDI for each job satisfaction heading is stated in Table 3-3.

The Job-in-General (JIG) was an 18-item sub-scale developed to supplement the Job Descriptive Index (JDI). The JIG was used to support the findings of the JDI because there is a strong correlation between the two instruments. The response format was the same as the JDI and was easily included in the administration of the JDI.

The JIG was developed on several different and diverse samples. A final report describing the steps of development and the psychometric properties of the JIG has also been prepared. The initial analyses of the JIG indicated both high internal consistency reliability and good validity. The Coefficient Alpha reliability was .93 for a sample of 670 employees in clerical, technical, engineering, and administration positions, and .96 for a sample of 132 county employees. The JIG and four different measures of overall job satisfaction were administered to a sample of 227 county employees. Both the JDI and the JIG have been used in several hundred studies in order to successfully measure job satisfaction (Smith, 1969).

Table 3-3

Reliability of the JDI

Scale	Coefficient Alpha
Work on Present Job	.7880
Present Pay	.8575
Opportunities for Promotion	.8575
Supervision	.8873
Coworkers	.9092

N=180

Life Satisfaction in Elderly Scale

The Life Satisfaction in Elderly Scale (Appendix D) was used to measure satisfaction in life. This instrument was developed by Solomon and Conte (1984) to measure satisfaction of eight different aspects of daily living. The eight sub-scales included daily activities, meaning, goals, mood, self-concept, health, finance, and social contacts. The reliability of the LSES was .93 with the sub-scales showing reliability coefficients that range from .60 to .79. Multivariant techniques were used as a means to measure validity of the LSES and the Institute of Mental Measurements found this instrument to be valid.

In constructing the Life Satisfaction in the Elderly Scale (LSES), the authors took into account some of the variables which have surfaced in the existing literature on life satisfaction in older adults,(George, 1979, Neugarten Havighurst, and Tobin, 1961). The key variables included perceived financial

security, perceived physical health, and social contacts. A significant positive Relationships was found by Spreitzer and Snyder (1974) between perceived financial adequacy and amount of reported life satisfaction among the elderly. Lain and Fairchild (1979) investigated economic well-being from the perspective of relative deprivation theory and further reinforced the findings of a positive relationship between life satisfaction and satisfaction with personal finances. The authors of the instrument stressed the importance of considering the subjective self-assessments for the elderly based on the subject's previous economic circumstances, rather than using more objective measures of their present socio-economic circumstances.

Riley and Foner (1968) reported that social participation, defined by the number of social interactions experienced within a particular time frame, was a factor which correlated positively with life satisfaction. These authors noted, however, that degree of participation also correlated with socio-economic status, as well as overall perceived health. Spreitzer and Snyder (1974) concluded that perceived health and financial adequacy were the key factors in the prediction of life satisfaction. They also pointed out the potential of social participation was an important factor which had not as yet received adequate attention.

In a cross-culture study of health and aging, a positive relationship between self-evaluation of health and other subjective psychological attitudes such as loneliness and alienation was found. Toseland and Sykes (1977) also reported the presence of health problems and respondants self-health ratings as important predictors of life satisfaction.

The life satisfaction measures created by Neugarten et al. (1961) stand out as the most significant attempt to assess the conduct as it appears in aging populations. Two scales, The Life Satisfaction Index A (LSIA) and Life Satisfaction Index B (LSIB), were devised to measure "successful aging" in a large sample of older adults in Kansas City. These scales appeared to be the most frequently employed in the existing literature. In addition, they offered the greatest empirical integrity of all the life satisfaction measures constructed to date. The original research leading up to the construction of the LSIA and the LSIB considered a variety of socio-economic categories. Much to his credit, the work of Neugarten et al. (1961) clearly defined the life satisfaction construct in terms of several aspects which were supported by clinical observation and interviews (Adams, 1971; Savage, 1975). These were:

1. taking pleasure in daily activities,
2. regarding life as meaningful,
3. goodness of fit between desired and achieved goals
4. positive mood, and
5. positive self-concept.

Unfortunately, the heuristic value of this work has been limited by the lack of information regarding the psychometric properties of the LSI scales (i.e., no reliability data and little in the way of validation). The Neugarten studies have left these measurement issues unanswered. These studies left a theoretical void by not completely defining the life satisfaction construct. There is reason to believe that the domain of life satisfaction encompasses a larger number of issues than the five cited above (Conte & Salamon, 1982; Salamon & Conte, 1981).

The validity of Life Satisfaction has demonstrated its clinical and theoretical utility to gerontological professionals (Carp, 1975; Toseland & Sykes, 1977). However, no single instrument of life satisfaction in the aged has been universally accepted. The LSES was designed to reliably measure life satisfaction among the aged in a variety of settings. It also incorporated the largest domain of items which have been empirically proven to make up the construct.

Eight categories were included in the LSES:

1. daily Activities (taking pleasure in daily activities)- satisfaction with the numerous, unspecified daily activities which are of an individual's daily routine,
2. meaning (regarding life as meaningful) - positive attitude toward one's present life situation, feeling useful, and having a sense of purpose,
3. goals (goodness of fit between desired and achieved goals) - relative satisfaction with one's present stage of development in comparison to previous life stages,
4. mood (positive mood tone) - general positive affect, happiness or optimism, not necessarily linked with any activity or specific aspect of one's living situation, environment, or social milieu,
5. self-concept (positive self-concept) - high degree of personal self-regard and favorable self-appraisal,
6. health (perceived health) - self-assessment of overall physical well-being,

7. finances (financial security) - satisfaction with one's financial situation in the present, and recent past,
8. social contacts - perceived satisfaction with the number and quality of the social contacts which are characteristic of the respondent's usual routine.

The Leisure Activity Blank (LAB)

The Leisure Activity Blank (Appendix E) was used to identify the leisure activities of older adults. It was used in a dissertation related to this study. (Thorson 1977) The instrument is made up of 120 different items. Because of the nature of the instrument, there was high face validity, and the reliability of the questionnaire was within acceptable ranges (Thorson, 1977). The LAB validity was high when correlating the instrument with eleven validated surveys and instruments of similiar nature (McKechnie,1975). Stability coefficients for the LAB are generally high. Reliabilities over a three week test-retest period range from .71 to .92 for the LAB past scale, FP and FF, were .67 and .78 respectively. The LAB scale reliabilities are located in Table 3-4.

Table 3-4

Lab Scale Reliabilities

	Split Half	Test - Retest				
	r	r	M	M	SD	SD
LAB Past						
Mechanics	.93	.89	43.5	43.5	10.2	9.9
Crafts	.87	.92	30.9	31.1	7.9	7.7
Intellectual	.84	.77	35.4	35.8	5.9	5.7
Slow Living	.85	.71	59.6	60.7	7.0	6.8
Sports	.81	.80	29.6	30.0	5.1	4.6
Glamour Sports	.85	.82	29.6	30.5	5.5	5.9
Frequent Past	*	.67	54.8	54.6	3.1	3.2

Sample A, N = 288; Sample B, N = 93; * Unavailable

The Leisure Activities Blank was a psychological assessment created to collect in a standardized form, a wide base of information from individuals or groups of persons on their past leisure and recreation behaviors. It was also used to provide normative data on the organization of activity patterns. The information found by the instrument could be used to examine the implications of self-reported involvement in the various recreation clusters.

Productivity Questionaire

The productivity questionaire was designed to measure the productivity of employees in the areas of attendance, attitude, time on task, job performance, and rapport with fellow employees. The rating scale used ranged from a score of "10," which was the highest score to a low score of "1." The instrument was given to both the employee and their supervisor.

The data were collected and analyzed by using mean scores for each productivity area. Supervisor and self ratings of employee productivity were tabulated. A t-test was used to determine significant differences between productivity and age, productivity and gender and productivity and work environment.

Data Analysis

The data analysis involved several steps. Step one used the JDI, LSES, LAB, and PQ to answer the first five research questions using descriptive information and measures of central tendencies. Research questions six through nine were answered using statistical information to examine any relationships that existed between the dependent and independent variables. Measures of central tendencies, t-tests, Pearson-product correlation coefficients, and multiple regression analyses were used to summarize the data.

The JDI was used to measure satisfaction on the job. The results were analyzed by comparing worker sub-group satisfaction scores in six different work satisfaction areas. A national norm was used to help compare how workers in the study compared to national norms of worker satisfaction. Workers were placed into low to high quartiles based on their JDI scores. Each worker sub-

group was then compared and reported in percentages. A t-test was completed to measure significant differences in worker satisfaction when comparing workers of different ages, workers of different gender, and workers from different work environments. Mean scores for ten different worker sub-groups were determined in each of the six work areas to add to the concluding worker satisfaction results.

The LSES was used to determined satisfaction in life of employees. Six different worker sub-groups were compared in seven different life satisfaction areas. Four levels of satisfaction were used to compare workers and satisfaction ratings were dependent on worker's LSES scores. A t-test was used to determine significant life satisfaction differences of employees of different ages, of different work environments, and of different gender. Mean life satisfaction scores were compared for ten different worker sub-groups for each question of the survey to help conclude and report results.

The LAB was used to identify the types of leisure activities of which workers participated. The instrument helped to identify high and low participation rates in six basic areas of leisure participation. A t-test was used to determined significant differences in employees of different ages, employees of different gender, and employees of different work environments. Six different work sub-groups were compared by identifying participation rates of each.

The productivity questionaire (PQ) was used to evaluate the productiveness of employees. Each employee who participated completed the PQ in a self-analysis and his or her supervisor also completed the same instrument. Both ratings were tabulated and comparison ratings were completed. The five

productivity areas were used in determining mean scores in both the self and the supervisor ratings. Ten different worker sub-groups were compared to help identify any differences in worker productivity. A t-test was used to determine significant differences in employee productivity when comparing workers of different ages, workers of different gender, and workers of different work environment. The significance tests were done for both the self and supervisor ratings.

A Pearson Correlation Coefficient was used to determine the relationships between job satisfaction and productivity, life satisfaction and productivity, and leisure activities and productivity. An analysis, using multiple regression of worker productivity, was used to determine which independent variable may be most related to worker productivity.

The final step in the analysis was answering the ten research questions using descriptive and statistical data found from the information gathered from the four research instruments.

CHAPTER IV

FINDINGS

Introduction

The purpose for conducting the study was to identify relationships between job satisfaction, life satisfaction, and leisure activity participation of older workers and productivity on the job. Workers of different ages, different gender, and different work setting were compared and evaluated in answering the following ten research questions.

1. Are older workers satisfied with their jobs?
2. Are older workers generally satisfied with life?
3. What are the leisure activities in which older workers participate?
4. Do older workers perceive themselves to be productive workers?
5. Do managers perceive older workers to be productive?
6. Is there a difference in older worker productivity in education when compared to industry?
7. Is there a relationship between job satisfaction and older worker productivity?
8. Is there a relationship between life satisfaction and older worker productivity?
9. Is there a relationship between the leisure activities of older workers and their job productivity?
10. What factor, job satisfaction, life satisfaction, or leisure activity participation, relates most highly to older worker productivity in industry and education?

Are older workers satisfied with their jobs?

In analyzing the data for job satisfaction, national norms were used to determine worker satisfaction to group satisfaction of employees into four quartiles. In Table 4-1 are the national norm scales used in the current study giving national scores for men and women in each satisfaction category.

Table 4-1

National Norms - 1985 Revision of the JDI

	MEN				
PERCENTILE	WORK JDI SCORE	PAY JDI SCORE	PROMOTIONS JDI SCORE	SUPERVISION JDI SCORE	CO-WORKERS JDI SCORE
99	52	54	54	54	54
95	51	50	50	52	54
90	50	50	46	51	52
85	48	50	41	51	52
80	47	46	36	50	50
75	46	44	34	48	48
70	46	44	30	48	48
65	45	42	26	45	48
60	43	36	24	44	48
55	42	36	20	44	46
50	40	34	18	43	45
45	39	30	16	41	44
40	38	30	14	40	43
35	35	28	12	38	42
30	32	22	10	36	41
25	31	22	08	33	38
20	29	16	06	32	35
15	27	12	04	27	32
10	21	10	01	24	26
05	16	04	00	18	2
01	6	00	00	10	12

N=576

Table 4-1 Continued

WOMEN

PERCENTILE	WORK JDI SCORE	PAY JDI SCORE	PROMOTIONS JDI SCORE	SUPERVISION JDI SCORE	CO-WORKERS JDI SCORE
99	52	52	52	54	54
95	51	52	47	53	53
90	49	52	38	51	53
85	46	52	30	51	52
80	45	46	25	50	51
75	45	45	23	48	50
70	43	42	21	46	48
65	42	40	18	46	48
60	42	40	17	44	46
55	41	34	16	43	45
50	39	32	14	42	44
45	37	28	12	40	43
40	37	26	11	39	42
35	34	24	10	38	39
30	33	24	09	36	38
25	31	16	07	35	36
20	29	14	05	32	33
15	26	12	04	29	29
10	23	08	02	27	26
05	18	05	00	21	18
01	09	00	00	09	10

N=588

When comparing workers of different ages, workers of different gender and workers of different work environments, significant differences in satisfaction levels occurred (Table 4-2). Younger workers were significantly more satisfied than older workers in their opportunity for promotion. Females were significantly more satisfied than males in work on the job, supervision, co-

workers and their job in general. Workers in education were significantly more satisfied than workers in industry in work on the job, supervision, co-workers and their job in general.

Table 4-2

Significant Differences in Job Satisfaction for Employees Using Age, Gender and Work Environment Comparisons

	t-test Two Tailed Probability		
	Work	Age	Gender
Work on the Job	.019(Y)	.005*(F)	.005*(E)
Present Pay	.513(Y)	.189(M)	.189(I)
Opportunities for Promotion	.000*(Y)	.712(M)	.712(I)
Supervision	.224(Y)	.000*(F)	.000*(E)
Co-workers	.588(O)	.000*(F)	.000*(E)
Jobs in General	.461(Y)	.003*(F)	.008*(E)

N=180 *Significant difference at the level of significance : P< .01

Note:
(O)-Denotes greater satisfaction of older workers than younger workers
(Y)-Denotes greater satisfaction of younger workers than older workers.
(F)-Denotes greater satisfaction of female workers than male workers
(M)-Denotes greater satisfaction of male workers than female workers
(E)-Denotes greater satisfaction of workers in education than workers in industry
(I)-Denotes greater satisfaction of workers in industry than workers in education

In the Nebraska study, workers on the job indicated several differences in satisfaction depending on the employee type and the different aspects of the job. A reliability check was completed on the Nebraska study using the JDI with Alpha = .9461. In the Tables 4-3 through 4-13 are the ranges of each subgroup for the six different areas of job satisfaction. In each area of the JDI, completed in the Nebraska study, employee responses were divided into lowest, low, high, and highest satisfaction levels as determined by the national norms established for the instrument (Tables 4-3 and 4-4). The lowest categorical range was from 0-25 percentile, low range from 26-50 percentile, high range from 51-75 percentile, and highest range from 76-100 percentile of the national norms. The scores shown on the tables indicate percentile of workers in the Nebraska study that fell into the national low to high ranges.

Table 4-3

Satisfaction with Work on the Present Job of Nebraskans in Industry and Education*

	Males			
	Lowest JDI Score 0-31	Low JDI Score 32-40	High JDI Score 41-46	Highest JDI Score 47-54
	0-25%	26-50%	51-75%	76-100%
Males/ 26-36	24%	33%	25%	18%
Males/ 50+	39%	33%	15%	14%
Males/ Education	18%	55%	9%	18%
Males/ Industry	38%	22%	25%	15%

N=180

Satisfaction with Work on the Present Job of Nebraskans in Industry and Education*

	Females			
	Lowest JDI Score 0-31 0-25%	Low JDI Score 32-39 26-50%	High JDI Score 40-45 51-75%	Highest JDI Score 46+ 76-100%
Females/ 26-36	11%	32%	34%	23%
Females/ 50+	16%	38%	28%	19%
Females/ Education	12%	34%	31%	23%
Females/ Industry	17%	33%	33%	19%

*Low JDI scores indicate low worker satisfaction.
High JDI scores indicate high worker satisfaction.
Note: Coefficient Alpha = .9461; N = 180 cases.

In work on the present job, satisfaction levels for younger males were somewhat higher than for older males in both industry settings. Older males in education indicated the least satisfaction when asked about the work they did on the job (Table 4-3).

In examining the mean scores of the worker subgroups, the results were found to indicate that satisfaction with work on their present job was higher for females than males. The most satisfied workers were employees in education, age 26-36, and the least satisfied with their work on the present job were the industry employees, age 50 and older (Table 4-4).

Table 4-4

Employee Satisfaction with Work on the Present Job

JDI Mean Score for each Employee Sub-group

Employees	Mean	STD
26-36	38.90	9.40
50+	35.56	9.97
Education	38.97	7.9
Industry	35.43	11.40
Males	35.56	10.88
Females	39.07	7.66
Education 26-36	40.38*	7.37
Education 50+	37.37	8.23
Industry 26-36	37.31	11.21
Industry 50+	(33.13)	11.58

* Highest Score N=180
() Lowest Score

As some might expect, workers in education were quite dissatisfied with their present pay (Tables 4-5 and 4-6). Older workers were somewhat more dissatisfied than younger workers. Although females, in the education work setting, did not express as much dissatisfaction with pay as males, females dissatisfaction with pay in industry was similar to their male co-workers. This research contradicts a study done with small businesses in which greater dissatisfaction was found on the part of females with pay (Mills, 1978).

Table 4-5

Employee Satisfaction of Present Pay

	Males			
	Lowest JDI Score 0-22 0-25%	Low JDI Score 23-34 26-50%	High JDI Score 35-44 51-75%	Highest JDI Score 45-54 76-100%
Males/ 26-36	34%	26%	15%	25%
Males/ 50+	45%	21%	13%	21%
Males/ Education	57%	27%	3%	13%
Males/ Industry	31%	22%	20%	27%
	Females			
	Lowest JDI Score 0-16 0-25%	Low JDI Score 17-32 26-50%	High JDI Score 33-3 51-75%	Highest JDI Score 36+ 76-100%
Females/ 26-36	32%	32%	25%	11%
Females/ 50+	41%	28%	22%	9%
Females/ Education	39%	30%	24%	7%
Females/ Industry	17%	33%	25%	25%

N=180

Table 4-6

Employee Satisfaction with Present Pay

JDI Mean Score for each Employee Subgroup		
Employees	Mean	STD
26-36	27.21	16.06
50+	25.64	15.91
Education	22.36	15.03
Industry	31.62	15.77
Males	27.86	16.52
Females	24.70	15.14
Education 26-36	22.38	15.32
Education 50+	(22.33)	14.86
Industry 26-36	32.90*	15.17
Industry 50+	30.05	16.38

* Indicates Highest Satisfaction Score
() Indicates Lowest Satisfaction Score

Satisfaction levels of workers while examining "opportunities for promotion" were found to indicate low satisfaction levels of males in education, especially older males in education (Table 4-7). Older employees across both work environments indicated a strong dissatisfaction in opportunities for promotion. The employees in education, 50+, were the least satisfied, while workers in industry, 26-36, seemed to be the most satisfied with their opportunities for promotion. Females were slightly less satisfied than males with their opportunities to be promoted and employees in education were less satisfied than workers in industry with their promotion opportunities (Table 4-8).

Table 4-7

Employees Satisfaction with Opportunities for Promotion

	Lowest JDI Score 0-8 0-25%	Low JDI Score 9-18 26-50%	High JDI Score 19-34 51-75%	Highest JDI Score 35+ 76-100%
Males/ 26-36	22%	31%	14%	33%
Males/ 50+	34%	52%	6%	8%
Males/ Education	27%	52%	9%	12%
Males/ Industry	29%	37%	11%	24%
	Lowest JDI Score 0-7 0-25%	Low JDI Score 8-14 26-50%	High JDI Score 15-23 51-75%	Highest JDI Score 24+ 76-100%
Females/ 26-36	15%	40%	10%	34%
Females/ 50+	38%	22%	22%	19%
Females/ Education	22%	38%	15%	25%
Females/ Industry	21%	4%	17%	23%

N=180

The results were similar to a study completed on small business employees, (Mills, 1978), where employees were generally dissatisfied with their opportunities for promotion, especially in smaller organizations.

Table 4-8

Employee Satisfaction with Opportunities for Promotion

JDI Mean Score for each Employee Subgroup

Employees	Mean	STD
26-36	21.91	16.18
50+	13.78	10.96
Education	16.78	13.22
Industry	19.75	14.73
Males	18.45	14.93
Females	17.69	15.14
Education 26-36	20.11	14.68
Education 50+	(13.16)	10.42
Industry 26-36	24.04*	17.73
Industry 50+	14.50	11.76

* Highest Satisfaction Score N=180
() Lowest Satisfaction Score

There were no significant differences between younger and older worker satisfaction of co-workers, but employees in education showed significantly higher satisfaction than workers in industry. Significantly higher satisfaction levels were evident in females when compared to males (Table 4-9). The least satisfied with their co-workers were employees, 26-36, in industry (Table 4-10).

Table 4-9

Employee Satisfaction With Co-workers

	Lowest JDI Score 0-38 0-25%	Low JDI Score 39-45 26-50%	High JDI Score 46-48 51-75%	Highest JDI Score 49+ 76-100%
Males/ 26-36	51%	18%	14%	16%
Males/ 50+	40%	14%	15%	31%
Males/ Education	46%	9%	15%	30%
Males/ Industry	46%	19%	15%	21%

	Lowest JDI Score 0-36 0-25%	Low JDI Score 37-44 26-50%	High JDI Score 45-50 51-75%	Highest JDI Score 51+ 76-100%
Females/ 26-36	15%	19%	21%	45%
Females/ 50+	9%	16%	19%	56%
Females/ Education	9%	18%	19%	54%
Females/ Industry	33%	17%	25%	25%

N=180

Table 4-10

Employee Satisfaction of Co-workers -Mean Satisfaction Scores

JDI Mean Scores of Employee Subgroups

Employees	Mean	STD
26-30	41.16	12.41
50+	42.19	12.83
Education	45.18	10.37
Industry	37.22	13.85
Males	38.09	13.16
Females	46.17*	10.21
Education 26-36	45.59	9.88
Education 50+	44.72	10.97
Industry 26-36	(35.93)	13.14
Industry 50+	38.80	14.43

* Highest Satisfaction Score N=180
() Lowest Satisfaction Score

When examining worker satisfaction with supervision females expressed the highest satisfaction levels, especially females in education work environments (Table 4-11).

Table 4-11

Employee Satisfaction with Supervision

	Lowest JDI Score 0-33 0-25%	Low JDI Score 34-43 26-50%	High JDI Score 44-48 51-75%	Highest JDI Score 49+ 76-100%
Males/ 26-36	20%	39%	14%	27%
Males/ 50+	35%	17%	17%	31%
Males/ Education	12%	24%	24%	39%
Males/ Industry	35%	29%	12%	24%

	Lowest JDI Score 0-35 0-25%	Low JDI Score 36-42 26-50%	High JDI Score 43-48 51-75%	Highest JDI Score 49+ 76-100%
Females/ 26-36	11%	13%	17%	60%
Females/ 50+	13%	9%	28%	50%
Females/ Education	9%	10%	21%	60%
Females/ Industry	25%	17%	25%	33%

N=180

In the area of supervision, employees in education, 26-36 indicated the highest satisfaction for their supervision practices. Workers in industry, 50+, were the least satisfied. Younger workers indicated slightly higher satisfaction levels than older workers while females expressed significantly higher

satisfaction than males. Employees in education indicated their satisfaction with supervision at much higher levels than workers in industry (Table 4-12). When asking employees about satisfaction with their overall job in general, employees in education indicated higher satisfaction than workers in industry. Females were more satisfied than males while younger employees were slightly more satisfied than older employees. The research supported a study completed in Nebraska, (Kilgore, 1985) which concluded that teacher morale and general teacher satisfaction with their jobs was relatively high. The most satisfied employees were workers in education 26-36 while the least satisfied group were employees in industry, 50+.

Table 4-12

Employee Satisfaction with Supervision

JDI Mean Scores for each Employee Subgroup

Employees	Mean	STD
26-36	43.34	11.16
50+	41.17	12.67
Education	46.27	9.08
Industry	37.41	13.30
Males	39.33	12.51
Females	46.16	9.90
Education 26-36	47.73*	8.15
Education 50+	44.68	9.83
Industry 26-36	38.15	12.06
Industry 50+	(36.50)	14.54

* Highest Satisfaction Subgroup Score N=180
() Lowest Satisfaction Subgroup Score

The results of the JIG were found to support the JDI findings. Mean satisfaction scores were found to indicate high satisfaction on the job of workers in education and females workers. Low worker satisfactions were reflective the scores of workers in industry and older males, especially in the industry work setting. The highest satisfactions were expressed by younger workers in the education work environment (Table-4-13).

Table 4-13

Employee Satisfaction With Jobs In General - JIG

JIG Mean Score of each Employee Subgroup

Employees	Mean	STD
26-36	43.60	9.95
50+	42.47	10.50
Education	45.40	8.97
Industry	40.17	10.95
Males	41.09	11.37
Females	45.60	8.43
Education 26-36	46.09*	8.65
Education 50+	44.64	9.33
Industry 26-36	40.65	10.66
Industry 50+	(39.58)	11.38

* Highest Satisfaction Score N=180
() Lowest Satisfaction Score

Summary: Are Older Workers Satisfied With Their Jobs?

In the Nebraska study, older workers were somewhat dissatisfied with their overall jobs and aspects of their jobs. In five out of the six areas of job satisfaction, they indicated less satisfaction than younger workers. The aspects of their jobs that were the least satisfying, were their present pay, types of work responsibilities, and opportunities for promotion. The latter, showing the greatest significant difference level of dissatisfaction when compared to the younger workers (Table 4-2).

Are older workers satisfied with their lives in general?

Stated in table 4-14 through 4-30 are the results of the LSES surveys given to the sample population in both industry and education. The results were tabulated for each question using a score of 1 as being the lowest satisfaction indicator and a score of 5 being the highest satisfaction indicator. Seven areas of life satisfaction were measured and tabulated for employees in each subgroup of workers. Satisfaction levels were listed and compared for each worker group.

Satisfaction with over-all daily activities was found to indicate higher satisfaction levels in older workers when compared to younger workers. Females were more satisfied than males and workers in education were more satisfied with their lives in general than workers in industry. (Table 4-14).

Table 4-14

Daily Activities - Satisfaction Levels of Employees

	Percent of Employees Scoring at each Satisfaction Level			
Employees	Lowest LSES Score 1-2	Low LSES Score 2-3	High LSES Score 3-4	Highest LSES Score 4-5
26-36	1%	17%	77%	5%
50+	1%	5%	82%	12%
Males	2%	15%	77%	6%
Females	0%	6%	82%	12%
Education	0%	4%	82%	14%
Industry	3%	20%	76%	1%

N=180

When looking at the satisfaction of "meaning in life," the highest subgroup satisfaction levels were expressed by females and workers in education. Older workers were more satisfied than younger workers and workers in education were more satisfied than workers in industry (Table 4-15).

Table 4-15

Meaning - Satisfaction Levels of Employees

	Percent of Employees Scoring at each Satisfaction Level			
Employees	Lowest LSES Score 1-2	Low LSES Score 2-3	High LSES Score 3-4	Highest LSES Score 4-5
26-36	0%	17%	62%	22%
50+	0%	7%	73%	20%
Male	0%	17%	72%	11%
Female	0%	6%	60%	34%
Education	0%	5%	59%	36%
Industry	0%	21%	76%	3%

N=180

When examining "Goals in Life" workers in education were the most satisfied while workers in industry were the least satisfied. Females were more satisfied than males and older workers more satisfied than younger workers (Table 4-16).

Table 4-16

Goals - Satisfaction Levels of Employees

	Percent of Employees Scoring at each Satisfaction Level			
Employees	Lowest LSES Score 1-2	Low LSES Score 2-3	High LSES Score 3-4	Highest LSES Score 4-5
26-36	2%	33%	65%	0%
50+	0%	27%	72%	1%
Male	2%	34%	64%	0%
Female	0%	27%	72%	1%
Education	0%	20%	79%	1%
Industry	3%	44%	53%	0%

N=180

Employee satisfaction with their present "mood in life" indicated high satisfaction levels from all subgroups. Older workers and workers in education showed slightly higher satisfaction levels with their "mood in life" than the other employee subgroups. Mood was defined as being a feeling happiness opposed to a feeling of depression (Table 4-17).

Table 4-17

Mood - Satisfaction Levels of Employees

	Percent of Employees Scoring at each Satisfaction Level			
Employees	Lowest LSES Score 1-2	Low LSES Score 2-3	High LSES Score 3-4	Highest LSES Score 4-5
26-36	0%	8%	81%	10%
50+	0%	2%	83%	14%
Male	0%	7%	85%	8%
Female	0%	4%	79%	18%
Education	0%	2%	78%	20%
Industry	0%	10%	88%	3%

N=180

The results of the "self concept" satisfaction measure indicated no significant differences (Table 4-23) in the subgroups however, older workers had slightly higher satisfaction levels than younger workers (Table 4-18).

Table 4-18

Self Concept - Satisfaction Levels of Employee

	Percent of Employees Scoring at each Satisfaction Level			
Employees	Lowest LSES Score 1-2	Low LSES Score 2-3	High LSES Score 3-4	Highest LSES Score 4-5
26-36	0%	7%	73%	20%
50+	0%	2%	85%	13%
Male	0%	6%	85%	9%
Female	0%	4%	70%	27%
Education	0%	3%	73%	24%
Industry	0%	8%	85%	8%

N=180

Satisfaction with health was examined in all subgroups and the results indicated younger employees were more satisfied than older employees, females more satisfied than males with no significant difference between workers in the two industries (Table 4-19).

Table 4-19

Health -Satisfaction Levels of Employees

	Percent of Employees Scoring at each Satisfaction Level			
Employees	Lowest LSES Score 1-2	Low LSE Score 2-3	High LSES Score 3-4	Highest LSES Score 4-5
26-36	0%	7%	61%	32%
50+	1%	19%	61%	19%
Male	1%	11%	54%	34%
Female	0%	15%	68%	17%
Education	1%	12%	62%	25%
Industry	0%	14%	59%	28%

N=180

Employee satisfaction with finances showed that younger employees were the least satisfied. Males were more dissatisfied than females and workers in industry were more dissatisfied with their finances than workers in education (Table 4-20).

Table 4-20

Finances - Satisfaction Levels of Employees

Percent of Employees Scoring at each Satisfaction Level

Employees	Lowest LSES Score 1-2	Low LSES Score 2-3	High LSES Score 3-4	Highest LSES Score 4-5
26-36	13%	41%	43%	4%
50+	4%	36%	55%	6%
Male	8%	42%	44%	6%
Female	9%	34%	53%	4%
Education	9%	34%	53%	4%
Industry	8%	44%	43%	6%

N=180

Females indicated the greatest satisfaction with their social contacts. All subgroups indicated high satisfaction levels (Table 4-21).

Table 4-21

Social Contacts - Satisfaction Levels of Employees

	Percent of Employees			
Employees	Lowest LSES Score 1-2	Low LSES Score 2-3	High LSES Score 3-4	Highest LSES Score 4-5
26-36	0%	5%	63%	32%
50+	1%	1%	68%	30%
Male	1%	6%	71%	22%
Female	0%	0%	57%	43%
Education	0%	1%	55%	44%
Industry	1%	6%	78%	15%

N=180

Employee life satisfactions are summarized in table 4-22. Listed information included workers types who were satisfied or very satisfied in each of the seven satisfaction areas.

Table 4-22

Life Satisfaction of Employees in Seven Satisfaction Areas

	Percent of Workers Who Were Satisfied or Very Satisfied						
Employee Types	Daily Activities	Meaning in Life	Goals	Self Concept	Finances	Social Contacts	Health
26-36	82%	83%	64%	92%	47%	95%	93%
50+	84%	92%	72%	98%	61%	98%	80%
Males	83%	89%	64%	94%	51%	92%	88%
Females	93%	94%	74%	96%	57%	100%	85%
Education	86%	95%	80%	97%	57%	99%	87%
Industry	77%	78%	54%	93%	49%	92%	85%

N=180

A t-test was conducted to determine significant differences in life satisfaction when comparing workers of different ages, workers of different gender and workers from different work environments. (Table 4-23) Younger workers were found to be significantly more satisfied with their general health than older workers but were less productive in the area of attendance on the job. Older workers were significantly more satisfied with their financial situation than younger workers. Females were significantly more satisfied with their daily activities, meaning in life, goals in life and their social contacts than their male counterparts. Workers in the education work environment were significantly more satisfied in six out of the eight life satisfaction categories than workers in industry. Health and finances were the areas not significantly more satisfying when comparing workers from different work environment. (Table 4-23)

Table 4-23

Life Satisfaction - Significant Differences

Area of Satisfaction	Age	Gender	Work Environment
Daily Activities	.181	.001*(F)	.000*(E)
Meaning	.202	.001*(F)	.000*(E)
Goals	.021	.000*(F)	.000*(E)
Mood	.015	.002*(F)	.000*(E)
Self Concept	.764	.011	.000*(E)
Health	.001*(Y)	.049	.457
Finance	.003*(O)	.752(F)	.688(E)
Social Contacts	.637(O)	.000*(F)	.000*(E)

N=180 * Indicates significant differences at a level of significance of p< .01

Note:
(O)- indicates greater life satisfaction of older workers than younger workers in the satisfaction area
(Y)- indicates greater life satisfaction of younger workers than older workers in the satisfaction area.
(F)- indicates greater life satisfaction of female workers than male workers in the satisfaction area
(M)- indicates greater life satisfaction of male workers than female workers in the satisfaction area
(E)- indicates greater life satisfaction of workers who work in the education workplace than workers who work in industry
(I)- indicates greater life satisfaction of workers who work in industry than workers who work in education

Results of each individual question on the LES revealed interesting patterns about satisfaction levels of workers and the worker subgroups. The results are located in Appendix J. Mean satisfaction scores for each worker subgroup are listed and highest and lowest group scores are indicated for each question.

Conclusion

Older workers were generally more satisfied than younger workers with their lives in general. On eight out of the ten categories on the LSES, older workers were more satisfied than younger workers. The areas of greater satisfaction for older workers were mood disposition, friendships, and social contacts. The areas of least satisfaction were aspects of their present health, their inability to reach some of the goals they had wanted to accomplish in their life, and their present financial situation.

The results of the research support similar studies of older workers. (Bernberg ,1954; Hubin & Smith 1965; Gibson & Klein 1970; Calitz 1974; Mills 1978).

What are the Leisure Activities in Which Older Workers Participate?

The LAB, which was used to answer question 3, categorized 120 different leisure activities into six subscales. They were defined as:

Mechanics (ME) - Auto repair, billiards, boxing, carpentry, hunting, marksmanship, mechanics, woodworking.

Crafts (CR) - Ceramics, cooking, designing clothes, flower arranging, jewelry-making, knitting, needlework, weaving.

Intellectual (IN) - Attending concerts or plays, political activities, reading, visiting museums, writing poetry or stories, civic or conservation organizations.

Slow Living (SL) - Gardening, going to movies, social drinking, sunbathing, talking on the phone, visiting friends, window shopping, writing letters.

Sports (SP) - Badminton, baseball, basketball, football, jogging, squash, ping pong, volleyball.

Glamour Sports (GS) - Archery, canoeing, horseback riding, motor boating, motorcycling, mountain climbing, sailing, skiing, tennis.

The results taken from the sample for the LAB have been stated in tables 4-24 through 4-30 . The LAB scale used to report the results was:

1= have never engaged in the activity.

2= have tried it once or a few times.

3= have done it regularly, but no longer do it.

4= are currently engaging in it regularly.

In the "mechanics" type leisure activities, older workers (nearly 75%) "tried it once or a few times." The activities included auto repair, billiards, boxing, carpentry, hunting, marksmanship, mechanics, woodworking. Females showed very little participation in mechanics activities while workers in industry favored " mechanics" types of leisure activities over workers in education (4-24).

Table 4-24

Mechanics Activities Employee Participation

	Percent of Employees at Each Involvement Level Using Employee Mean Scores for Each Worker Subgroup			
Employees	Have Never Engaged In The Activity	Have Tried It Once or a Few Times	Have done it Regularly But No Longer Do It	Now Engaging In It Regularly
Age 26-36	0%	75%	25%	0%
Age 50+	5%	76%	19%	0%
Male	1%	59%	40%	0%
Female	4%	96%	0%	0%
Education	2%	86%	12%	0%
Industry	3%	63%	35%	0%

N=180

In the "crafts" activities older and younger worker participation was very similar. The activities included the pastimes of ceramics, cooking, designing clothes, flower arranging, jewelry-making, knitting, needlework and weaving. Females and educators had tendencies to participate in these types of activities on a regular basis at some point in their lives. Workers in education were more active in the crafts activities than workers in industry (Table 4-25).

Table 4-25

Crafts Activities- Employee Participation

	Percent of Employees at Each Involvement Level Using Employee Mean Scores for Each Worker Subgroup			
Employees	Have Never Engaged In The Activity	Have Tried It Once or a Few Times	Have done it Regularly But No Longer Do It	Engaging In It Regularly
26-36	0%	82%	18%	0%
50+	5%	83%	12%	0%
Male	4%	93%	3%	0%
Female	0%	70%	30%	0%
Education	2%	76%	22%	0%
Industry	3%	91%	6%	0%

N=180

Intellectual activities were enjoyed by some subgroups of employees while employees in educational settings and females participated in intellectual types of activities the most. The activities considered intellectual included attending concerts or plays, political activities, reading, visiting museums, writing poetry or stories, belonging to civic or conservation organizations. There were some differences in intellectual activity participation when comparing work settings. Ninty percent of the workers in Industry indicated they had little to no experience in any type of intellectual activities while 43% of the workers in the education work setting indicated they had become highly involved in intellectual activities (Table 4-26)

Table 4-26

Intellectual Activities - Employee Participation

Percent of Employees at Each Involvement Level
Using Employee Mean Scores for Each Worker Subgroup

Employees	Have Never Engaged In The Activity	Have Tried It Once or a Few Times	Have done it Regularly But No Longer Do It	Engaging In It Regularly
26-36	0%	71%	29%	0%
50+	4%	69%	27%	0%
Male	2%	80%	18%	0%
Female	1%	57%	42%	0%
Education	0%	57%	43%	0%
Industry	4%	86%	10%	0%

N=180

Slow living activities were by far the most popular activity group by all subgroups of employees. Over fifty percent of the older workers, females and educators, participated regularly in them (Table 4-27). The activities included gardening, going to movies, social drinking, sunbathing, talking on the phone, visiting friends, window shopping and writing letters.

Table 4-27

Slow Living Activities - Employee Participation

Percent of Employees at Each Involvement Level
Using Employee Mean Scores for Each Worker Subgroup

Employees	Have Never Engaged In The Activity	Have Tried It Once or a Few Times	Have done it Regularly But No Longer Do It	Engaging In It Regularly
26-36	0%	3%	52%	45%
50+	1%	6%	41%	51%
Male	1%	7%	55%	37%
Female	0%	1%	37%	62%
Education	0%	0%	31%	69%
Industry	1%	6%	59%	34%

N=180

The "sports" leisure activities were enjoyed more by younger workers and male workers. Activities such as badminton, baseball, basketball, football, jogging, squash, ping pong and volleyball were included in the sports leisure pastimes. Golf and bowling were not included in the instrument and if included, may have affected the results. Sixty-eight percent of the females had little to no involvement in sports (Table 4-28).

Table 4-28

Sports Activities - Employee Participation

Percent of Employees at Each Involvement Level
Using Employee Mean Scores for Each Worker Subgroup

Employees	Have Never Engaged In The Activity	Have Tried It Once or a Few Times	Have done it Regularly But No Longer Do It	Engaging In It Regularly
26-36	0%	42%	57%	1%
50+	4%	71%	25%	0%
Male	1%	49%	49%	1%
Female	3%	65%	33%	0%
Education	2%	53%	44%	1%
Industry	1%	59%	40%	0%

N=180

The "glamour sports" leisure activities had the lowest worker participation rate of the eight leisure activity types. The glamour types of leisure included archery, canoeing, horseback riding, motor boating, motorcycling, mountain climbing, sailing, skiing and tennis. None of the employee subgroups participated in any glamour sport on a regular basis (Table 4-29).

Table 4-29

Glamour Sports Activities-Employee Participation in percentage

	Percent of Employees at Each Involvement Level Using Employee Mean Scores for Each Worker Subgroup			
Employees	Have Never Engaged In The Activity	Have Tried It Once or a Few Times	Have done it Regularly But No Longer Do It	Engaging In It Regularly
26-36	1	78	21	0
50+	10	81	10	0
Male	5	72	23	0
Female	5	89	6	0
Education	5	83	12	0
Industry	5	75	20	0

N=180

A t-test was conducted to determine significant differences in leisure activity participation when comparing workers of different ages, different gender, and different work environments. (Table 4-30). When examining age differences, only sports and glamour sports indicated significant differences in leisure activity participation. However, gender differences in leisure participation were all significant. Work environment comparisons were found to indicate significant differences in the leisure areas of mechanics, crafts, intellectual, and slow living type of leisure activities (Table 4-30).

Table 4-30

Leisure Activities - Significant Differences

Leisure Type	Age	Gender	Work Environment
Mechanics	.095	.000*(M)	.000*(I)
Crafts	.220	.000*(F)	.000*(E)
Intellectual	.049	.001*(F)	.000*(E)
Slow Living	.999	.000*(F)	.001*(E)
Sports	.000*(Y)	.005*(F)	.507
Glamour Sports	.000*(Y)	.007*(F)	.505

N=180 * Significant differences in leisure participation: $p < .01$

Note:
(Y)- Indicates greater participation of youger workers than older workers
(O)- Indicates greater participation of older workers than younger workers
(F)- Indicates greater participation of female workers than male workers
(M)- Indicates greater participation of female workers than male workers
(E)- Indicates greater participation of education workers than industry workers
(I)- Indicates greater participation of industry workers than education workers

Conclusion

Slow living activities were the most popular activities in which older employees participated. Ninety one percent of all older employees were recently or currently engaged in slow living activities on a regular basis. Significant differences in intellectual activity participation occurred between workers in education and workers in industry. Intellectual activity participation by females was found to be significantly greater than that of their male counterparts. The two findings may indicate intellectual activities may be related to worker productivity.

Do older workers perceive themselves to be productive workers and do their managers have that same perception?

The productivity instrument (Appendix F) used to assess productivity was designed to measure five areas of worker productivity.

(1) Attendance

(2) Positive attitudes towards one's job

(3) Outstanding performance of job responsibilities

(4) Rapport with fellow employees

(5) Time on task while on the job

Each area was rated in a self analysis and a manager analysis. The highest score in any area was a 10 and the lowest score a 1. Included were the mean results for each subgroup in each productivity area as rated by the employees themselves and their supervisors. The tables indicate productivity ratings using the following indicators:

10 - high productivity vs. 1 - low productivity,

* - highest work subgroup vs. ( ) - lowest work subgroup.

Upon examining the ratings of productivity by managers and employees, a t-test was found to indicate some significant differences of perceptions when applied to the overall productivity instrument (Table 4-31).

Table 4-31

Significant Difference in Productivity Ratings Of Manager Vs. Self Analysis

Productivity Area	2 Tailed Probability
Attendance	.003*(S)
Positive Attitude	.041
Performance of Job Responsibilities	.057
Rapport with Fellow Workers	.000*(S)
Time on Task While on the Job	.036

* Significance Level: p<.01
(S)- indicates higher self ratings
(M)- Indicates higher manager ratings

Although manager and self ratings were significantly different in the areas of attendance and positive rapport with fellow workers, the two rating instruments were highly related. When using a Pearson Product correlation to examine if the manager and self analysis were related, results were found to indicate significant correlations between the two ratings (Table 4-32). The significant correlations helped to validate the findings of productivity questionaire.

Table 4-32

Pearson Product Correlation of Manager and Self Ratings

Productivity Area	Pearson Correlation
Attendance	.5228*
Positive Attitude	.1761*
Performance of Job Responsibilities	.2595*
Rapport with Fellow Workers	.3396*
Time on Task While on the Job	.4085*

* Significant correlation at p<.01

N=180

When comparing employee types the results were found to indicate significant data about productivity and its relationship to age, job environment, and gender. Four out of six t-tests were found to indicate significant relationships (Table 4-33).

Upon examining the results of the productivity questionaire, the self

ratings were found to indicate that older workers were significantly more productive than younger workers, workers in education significantly more productive than workers in industry and females significantly more productive than males. Manager ratings, however, were found to indicate only significant differences in age and gender ratings. Managers indicated that the productivity of younger workers was not significantly different than that of older workers. The manager ratings were consistent with the findings that were found to indicate dissatisfaction of older worker supervision practices and older worker dissatisfaction with their jobs in general (Table 4-33).

Table 4-33

Productivity Comparisons of Employee Types

		Mean Productivity Score			
Employee Types		Self Rating	t-test	Manager Rating	t-test
Age	26-36	41.82	(.010)*	40.88	(.757)
	50+	43.64		41.19	
Job	Education	44.28	(.000)*	43.42	(.000)*
	Industry	40.66		38.04	
Sex	Male	41.85	(.008)*	39.99	(.016)
	Female	43.72		42.35	

* indicate significant differences; p<.01
N=180

In both the self-evaluation and manager evaluation of employee attendance older employees rated higher than younger employees. The highest rated

subgroup in both areas were educators, 50+, and the lowest rated group was industry employees, 26-36 (Table 4-34).

Table 4-34

Productivity Rating of employees-good attendance

Employees	Self Rating Mean Score	Manager Rating Mean Score
26-36	9.05	8.50
50+	9.51	9.13
Education	9.40	9.26
Industry	9.10	8.21
Males	9.31	8.68
Females	9.20	8.93
Education 26-36	9.25	9.13
Education 50+	9.56*	9.39*
Industry 26-36	(8.81)	(7.75)
Industry 50+	9.44	8.77

N=180

Workers in the educational work environment scored the highest ratings in the area of positive attitude while on the job. Industry workers, age 26-36, were rated the lowest in both ratings. Females rated higher than males and older workers were rated more positive on the job than younger workers. Manager ratings reflected somewhat lower scores than self ratings in this productivity area (Table 4-35).

Table 4-35

Productivity Rating of
Positive Attitude Toward One's Job

Employee type	Self Rating Mean	Manager Rating Mean
26-36	8.32	8.30
50+	8.71	8.28
Education	8.85	8.77
Industry	8.07	7.70
Males	8.30	8.08
Females	8.75	8.55
Education 26-36	8.57	8.86*
Education 50+	9.14*	8.66
Industry 26-36	(8.02)	(7.13)
Industry 50+	8.13	7.77

N=180

In rating outstanding performance of job responsibilities, workers in education, 50+, rated the highest while employees, 26-36, in industry rated the lowest of the subgroups in the self analysis. Managers, however, rated females and workers in education, 26-36, highest while industry employees, 26-36, were rated the lowest of the subgroups. The self rating of employees were found to be of no significant difference in older and younger work performance. The managers perceived younger workers to perform duties better than older workers, especially in the educational setting. Females were rated in both self and manager ratings as being more productive than males. (Table 4-36).

Table 4-36

Productivity Rating of
Outstanding Performance of Job Responsibilities

Employees	Self Rating Mean Score	Manager Rating Mean Score
26-36	8.11	8.06
50+	8.23	7.82
Education	8.49	8.47
Industry	7.77	7.30
Males	7.99	7.67
Females	8.40	8.30
Education 26-36	8.46	8.71*
Education 50+	8.52*	8.20
Industry 26-36	(7.70)	(7.29)
Industry 50+	7.86	7.30

N=180

In analyzing rapport with fellow workers, the self analysis was found to reveal that employees in education rated themselves the highest and workers in industry, 26-36, rated themselves the lowest. Managers in the education setting rated younger workers in education the highest while younger workers in industry the lowest. Self and manager ratings were found to be inconclusive about tendencies of younger and older workers rapport with fellow workers, but females tended to have better rapport than males in both the self and manager analysis. Manager productivity ratings of employees were once again lower than employee self-ratings. (Table 4-37)

Table 4-37

Productivity Rating of Rapport with Fellow Workers

Employees	Self Rating Mean Score	Manager Rating Mean Score
26-36	8.04	7.90
50+	8.47	7.64
Education	8.66	8.18
Industry	7.72	7.28
Males	7.96	7.55
Females	8.60	8.07
Education 26-36	8.36	8.38*
Education 50+	8.97*	7.95
Industry 26-36	(7.65)	7.34
Industry 50+	7.80	(7.22)

N=180

In rating time on task of employees, the workers, 50+, in education rated themselves the highest while workers in industry, 26-36, rated themselves the lowest. Managers once again rated the younger workers in education the highest while rating younger workers in industry the lowest. Older workers were found to be more task-oriented than younger employees. No difference could be concluded about differences in time on task between males and females (Table 4-38).

Table 4-38

Productivity Ratings of Time on Task While on the Job

Employees	Self Rating Mean Score	Manager Rating Mean Score
26-36	8.29	8.11
50+	8.70	8.31
Education	8.88	8.74
Industry	7.98	7.53
Males	8.27	7.99
Females	8.74	8.48
Education 26-36	8.73	8.90*
Education 50+	9.04*	8.56
Industry 26-36	(7.77)	(7.18)
Industry 50+	8.25	7.97

N=180

Conclusion

Older employees were indeed more productive when compared to younger employees in several areas of productivity. Employee attendance, employee positive attitude, and employee time on task were areas where managers rated older employees higher than younger employees. However, in the areas of rapport with co-workers and performance on the job, older workers were rated by their managers slightly lower than the younger employees. In self analysis, older workers rated themselves higher than their managers rated them, while younger employees ratings were very similar to the ratings given them by their supervisors. The over-all mean productivity of employees was found to be higher in the self-analysis (43.64) Than in the manager analysis (41.1) .

Older employees in education were given high ratings in the areas of positive attitude on the job, good attendance, and time on task while their lowest rated area was rapport with fellow workers. Older employees in industry were given the highest ratings in attendance and time on task, while receiving the lowest ratings in outstanding performance of job responsibilities and rapport with fellow workers. The highest ratings given to any subgroup was in the area of good attendance. Older employees in education received the highest ratings while the lowest rated subgroup was given to employees, 26-36, in industry. The discrepancy in older employees perceptions and supervisor's perceptions of several productivity areas was reflective of older worker dissatisfaction of supervision while on the job as stated in the results of the J.D.I.

Is there a difference in older worker productivity in education when compared to industry?

In examining the results of the productivity instruments, older workers in education were rated to be more productive than older workers in industry as rated by their supervisors in five productivity areas. Positive attitude towards one's job and outstanding performance of job responsibilities were the two greatest differences in supervisor rated scores.

In the self analysis of older workers in both work settings, employees in education once again rated themselves higher than older workers in industry in all five categories. A t-test was found to indicate significant productivity differences in workers in education and workers in industry. When using both the manager and self ratings workers in education were found to be significantly more productive (Table 4-33).

In examining male/female comparisons, supervisors rated the productivity of females higher than males in all five productivity areas. In the self and manager analysis, the female ratings were found to indicate higher productivity (Table 4-33).

In comparing younger employees in education with younger employees in industry, the scores showed significant differences (Table 4-33). Younger employees in education were rated significantly higher in both the supervisor and self analysis. An interesting outcome appeared when examining and comparing supervisor ratings of younger vs. older employees. When rating themselves, younger employees and their supervisors shared similar perceptions of their own productivity. Older employees, however, shared a much

higher perception of their own productivity than the ratings given them by their supervisors. The differences in older worker and supervisor productivity perceptions were evident in the education work setting as well as industry work setting.

What is the relationship between job satisfaction and older worker productivity?

Job satisfaction and older worker productivity were not highly related according to the results found in the study. Older employees were found to be the most productive employees of all the subgroups. However, in examining their satisfaction levels, older employees were less satisfied in five out of six satisfaction categories. (Tables 4-2). They were the least satisfied in opportunities for promotion.

Using a Pearson Correlation Coefficient to relate job satisfaction to productivity, the results indicated little to low correlation with worker productivity in their jobs in general (JIG). (Table 4-39).

Table 4-39

JIG and Productivity Correlations

	Productivity Areas				
Ratings	Attendance	Attitude	Job Performance	Rapport with Worker	Time on Task
Self-Rating	.0691	.4080	.0726	.2109	.0787
Manager-Rating	.1335	.1488	.1723	.1488	.1989

The highest correlations indicated that workers who had positive attitudes

were somewhat more satisfied in their jobs. Workers who the managers rated as being task oriented were also more satisfied with their jobs. When using a regression analysis to evaluate the over-all results of the JDI scores, no significant correlations between job satisfaction and worker productivity could be predicted.

What is the relationship between life satisfaction and older worker productivity?

Life satisfaction and older worker productivity showed strong correlations. Older workers were more satisfied with their lives in general than younger workers in seventy-five percent of the life satisfaction areas. Older workers were rated higher in productivity than younger workers in seven out of ten productivity ratings when totaling both the self-analysis and manager analysis. In using a multiple regression analysis of productivity and factoring in life satisfaction criterion, it was found that 13% of employee productivity was related to life satisfaction.

A Pearson Correlation Coefficient was used to determine the relationship between worker productivity and life satisfaction. The results indicated some positive correlations (Table 4-40).

Table 4-40

Life Satisfaction and Worker Productivity Correlation

	Productivity Areas				
Ratings	Attendance	Attitude	Job Performance	Rapport with Worker	Time on Task
Self-Rating	.3194*	.4080*	.2324*	.5038*	.2658*
Manager-Rating	.3025	.2154	.2078	.2685	.2203

*Significant correlations exist : $p<.01$

The results indicated that worker productivity was moderately related to worker satisfaction in life with the highest worker productivity related to workers who rated themselves high in attendance, positive attitude while on the job, and rapport with fellow workers. The positive correlations were significant at the $p<.01$ level. When using the self rating, life satisfaction was a significant predictor of worker productivity.

What is the relationship between leisure activities of older workers and their job productivity?

The leisure activities of older workers had very little correlation with older worker productivity when doing a multiple regression analysis of productivity and factoring in older and younger worker leisure activities. The analysis concluded that leisure activities could account for only three percent of the variance in determining worker productivity.

Worker productivity and leisure activities were correlated using a Pearson Correlation Coefficient. The results indicated the positive and negative correlations between types of leisure activities and worker productivity (Table 4-41).

Table 4-41

Leisure Activities and Worker Productivity Correlations

Activities	Attendance	Positive Attitude	Job Performance	Rapport	Time or Task
Mechanics					
(S)	.0591	-.1178	-.1651	-.1760	-.2698
(M)	.1556	.1644	-.1120	-.1499	-.1253
Craft					
(S)	.0631	.1392	.0328	.1644	.1387
(M)	.1300	.0731	.1646	.0731	.1595
Intellect					
(S)	.0705	.0565	-.1320	.1513	.0544
(M)	.1648	.2329	.2807	.2177	.2791
Slow Living					
(S)	.1080	.0591	.0363	.2361	.0973
(M)	.1230	.0932	.1532	.1799	.2196
Sports					
(S)	.0274	-.0284	.0111	.0158	.0276
(M)	.1198	.1186	.1548	.1528	.1614
Glamour Sports					
(S)	.0072	-.1457	-.1242	-.0720	.1781
(M)	.0713	-.0444	.0053	-.0577	.0134

(S) Self-rating correlation with productivity
(M) Manager rating correlation with productivity

The strongest relationship between leisure activities and worker productivity included a positive relationship between intellectual activities with job performance and time on task. The greatest negative correlations involved

time on task with mechanic type leisure activities. However, there were few significant positive or negative correlations when relating the five identified productivity factors with employees' leisure activities. (Table 4-41). The overall instrument was found to produce no significant predictors of productivity.

What factor, job satisfaction, life satisfaction, or leisure activity participation, most affects older worker productivity in industry and education?

In examining two multiple regression analyses of older worker productivity using both the self and manager productivity ratings, all three variables could account for 30% of the productivity as self-assessed by employees and 25% of the productivity as assessed by managers or supervisors (Table 4-42).

Table 4-42

Multiple Regression Analysis of Worker Productivity

	% Variance Related to Productivity			
Ratings	Life Satisfaction	Job Satisfaction	Leisure Activities	Work Settings
Manager Rated Productivity	2%	0%	7%	16%*
Self Rated Productivity	13%*	0%	3%	14%*

* Significant variance: $p<.01$ N=180

Because of the nature of the productivity instrument, the relationship of the life satisfaction variable and worker productivity was greater when using the self-analysis productivity rating. Life satisfaction and work environment were the variables that had the strongest correlation to older and younger worker

productivity. Workers in education work settings were rated as more productive than workers in the industry work settings. Significant correlations included life satisfaction and work environments as predictors of worker productivity.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

Introduction

The purpose of conducting the study was to relate job satisfaction, life satisfaction, and leisure activity participation of the older worker in industry and education to productivity while on the job. Age, gender, and work setting were compared and evaluated in answering ten research questions using descriptive, comparative and statistical data. The instruments used in the study, JDI, LSES, LAB and productivity questionaire, were found to be reliable and led the researches to conclude answers to the questions.

Conclusions

1. Were older workers satisfied with their jobs?

   Older employees were generally less satisfied than younger employees across both work environments. The most pronounced dissatisfactions of older employees were caused by lack of opportunities for promotion. Only 14% of older male employees rated themselves satisfied or highly satisfied with promotion opportunities.

   Lack of proper supervision was a second cause of older worker dissatisfaction with work. Major differences in older worker productivity as perceived by older workers and their supervisors appeared as concerns on two of the instruments.

2. Were older workers generally satisfied with their lives?

   Older employees were generally more satisfied with their lives than younger employees. Over 75% of the responses for questions about life satisfaction were found to indicate greater satisfaction of older

workers when compared to younger workers.

3. What were the leisure activities in which older workers participated?

Slow living activities were the most popular activities in which older employees participated. The activities included gardening, going to movies, social drinking, sunbathing, talking on the phone, visiting friends, window shopping, and writing letters. Ninety-one percent of all older employees were recently or currently engaged in slow living activities on a regular basis.

4. Have older workers perceived themselves to be productive workers?

Older workers perceived themselves to be very productive workers. In all five productivity categories older employees rated themselves higher than the self analysis of younger employees. Using the self ratings with a regression analysis of productivity and age, age was found to be a significant variable in predicting productivity. Older workers were more productive than younger workers.

5. Have managers perceived older workers to be productive?

Older workers were viewed by their managers and supervisors to be slightly more productive when compared to all sub-groups of workers. However, in only two out of five productivity areas did managers rate older workers more productive than younger workers. The perception differences of older workers and their managers concerning productivity may be related to the older worker dissatisfaction of on-the-job supervision practices.

6. Is there a difference in the productivity of older workers in education when compared to older workers in industry.

Yes, there were significant differences in the productivity of older workers in the two work agencies. Older workers in the education work setting were more productive in all five productivity areas. The results were found to be the same on both the self-analysis and the manager analysis of the two groups of workers.

7. Was there a relationship between job satisfaction and older worker productivity?

No, there was no measurable relationship between satisfaction on the job and the productivity of older workers. Older workers were found to be less satisfied with work than younger employees but were found to be more productive than younger workers.

8. What was the relationship between life satisfaction and older worker productivity?

Life satisfaction could account for 13% of worker productivity. Of the three independent variables, life satisfaction was the second most predictive variable worker productivity.

9. Was there a relationship between leisure activities of older workers and job productivity?

No significant relationship existed between older worker productivity and leisure activities when $p<.01$. However, intellectual activities and worker productivity correlated significantly at the $p<.05$ level of significance. Workers who were involved in intellectual leisure

activities were more productive. A multiple regression analysis was found to indicate less than 8% variance related to worker productivity.

10. What factor, job satisfaction, life satisfaction, or leisure activity participation related most to older worker productivity?

Life satisfaction and work environment related most to worker productivity. Both of those variables were related to 13% - 14% of older worker productivity. Workers who were satisfied with their lives were somewhat more productive employees. Where a worker was employed had a stronger influence on productivity than satisfaction in the workplace.

Recommendations

1. Better supervision practices need to be developed for older employees. Supervision practices of older workers should include improved communication with supervisors. Opportunities for older worker promotions should be tied to positive performance. There is a lack of congruence in the way older workers and their supervisors perceive job performance and productivity. The area needs further exploration in both work environments. Supervision strategies need to be developed to cope with the incongruence.

2. Older employees need to be given opportunities for promotion. Older employees were found to be more productive but were not given adequate opportunities for promotion. In this study and several related studies opportunities for older worker promotion,

professional growth, and advancement were lacking. Developing new policies and responsibilities concerning personal and professional growth opportunities for older workers needs to be created by employers with imput from older workers. The process should involve input and communication from older workers and attempt to match older worker goals with organizational goals. The results would include specific guidelines for promotion, regardless of age and gender. The promotions may or may not be salary related but should include recognition and responsibility advancements and be available at every stage of an employee's career.

3. Self perceived life satisfaction may be related to worker productivity. Workers who were satisfied with their lives in general were more productive on the job. Employers may need to take this into consideration when hiring employees and include questions about life satisfaction in the interview process.

4. The research was found to indicate that female employees were more productive than males. When new job candidates are of equal qualifications and of opposite gender, the female candidate may be more productive. In hiring employees, employers may want to give strong consideration to this conclusion.

5. Employers need to be providing older employees with options for continuing their employment. Providing personal and professional growth experiences for older employees with a

chance for professional advancement and supervisor recognition should be an important aspect of the professional growth program. If high productivity is important, older workers should be encouraged to work longer and not be encouraged to retire early. Older workers are just as productive if not more productive than younger workers in several areas of work productiveness.

6. The research also was found to indicate that intellectual leisure activities were lacking in employees who were rated the least productive. Further studies about intellectual and thought stimulating leisure activities for employees and their implications for worker productivity should be explored.

Further Studies

The research was found to indicate there is a need for further study of the following questions:

1. What are other variables or motivating factors that cause older and younger workers to be productive? Only 30% of worker productively in the study was related to the independent variables. Are there other important variables that affect the productivity of workers?
2. Are females more productive workers than males as somewhat indicated by this study? Further gender studies about worker productivity is needed.
3. What are company employment practices and incentives given to older productive employees who remain on the job well past

retirement age? How do such incentives relate to their satisfaction and productivity?

4. How can older employees best be utilized when health, age, and strength become factors in their productiveness as a worker?

5. Education background was not identified in the study. Does education background have an effect on one's satisfaction and productivity in life?

Appendix A

Letter to request participation

Appendix A

Dear Employee,

You are being asked to be part of a study being done in cooperation with University of Nebraska, Lincoln. The study involves surveying selected employees about employee satisfaction, employee productivity and employee participation in leisure activities.

Randomly selected employees from public school agencies and industry are being asked to take part in the study. The Elkhorn, Valley and Fremont Public School system make up the education population and the Valmont Corporation will make up the industry population. You have been selected to be a part of the study. However, you may choose not to participate. If so, please return this packet to the office secretary. If you choose to participate, please continue reading.

Your participation and input is greatly appreciated!

All information gained from the surveys will be treated as confidential and only group data will be tabulated, analyzed, and reported. This research has been formally approved by the Education Administration Department at the University of Nebraska.

Thank you and open your packet!

Appendix B

Directions for filling out questionaires

Appendix B

Directions

Enclosed in this packet are four surveys. Each survey take approximately 10-15 minutes to fill out. Please fill out all four surveys make sure your name is on each. If the task becomes tedious, please relax between filling out each survey.

Side 2 of the leisure activities survey need not be completed. However, be sure to put your name on the front of that survey.

Complete all four surveys, put them back into the manila envelope and return it to your office secretary.

Thank you for your input and cooperation in this project. Your employer will receive a copy of the final results of the total population study.

Scott Maline

Appendix C

Job Description Index

Appendix D

Life Satisfaction Scale

Appendix E

Leisure Activities Blank

Appendix F

Productivity Questionnaire

Appendix F

Productivity Questionnaire

This questionnaire is designed to rate productivity of an employee while on the job. The results will be used in correlating and identifying key variables that may be related to employee productivity. The results of the self rating and the manager rating will remain confidential.

Using the rating scale below, rate _____ on the following five productivity areas.

10 9 8 7 6 5 4 3 2 1

High Average Low

_____ Good attendance

_____ Positive attitude toward one's job

_____ Outstanding performance of job responsibilities

_____ Rapport with fellow employees

_____ Time on task while on the job

This rating is a

_____ Self Rating _____ Supervisor Rating

Appendix G

Reliabilty of the JDI

Appendix G

Reliability of the JDI

Scale	Coefficient Alpha
Work on Present Job	.7880
Present Pay	.8575
Opportunities for Promotion	.8575
Supervision	.8873
Coworkers	.9092

Appendix H

Correlation of the JDI and JIG

Appendix H

Intercommunications of JDI and JIG

County Employees N=227

	(2)	(3)	(4)	(5)	(6)
(1) JIG	.821	.278	.434	.400	.422
(2) JID Work	--	.272	.442	.346	.487
(3) JDI Pay	.272	--	.387	.217	.087
(4) JDI Promotions	.442	.387	--	.356	.288
(5) JDI Supervision	.346	.217	.356	--	.260
(6) JDI Coworkers	.487	.087	.288	.260	--

Power Plant Construction N=648

	(2)	(3)	(4)	(5)	(6)
(1) JIG	.788	.260	.401	.450	.465
(2) JDI Work	--	.246	.394	.428	.386
(3) JDI Pay	.246	--	.363	.224	.181
(4) JDI Promotions	.394	.363	--	.368	.245
(5) JDI Supervision	.428	.224	.368	--	.369
(6) JDI Coworkers	.386	.181	.245	.369	--

Appendix I

Lab Scale Reliabilities

Appendix I

LAB Scale Reliabilities

	Split Half	Test - Retest				
	r	r	M	M	SD	SD
LAB Past						
Mechanics	.93	.89	43.5	43.5	10.2	9.9
Crafts	.87	.92	30.9	31.1	7.9	7.7
Intellectual	.84	.77	35.4	35.8	5.9	5.7
Slow Living	.85	.71	59.6	60.7	7.0	6.8
Sports	.81	.80	29.6	30.0	5.1	4.6
Glamour Sports	.85	.82	29.6	30.5	5.5	5.9
Frequent Past	*	.67	54.8	54.6	3.1	3.2

Sample A, N = 288; Sample B, N = 93; * Unavailable

Appendix J

Life Satisfaction Results for

Questions 1-40

On the Life Satisfaction Scale

Appendix J

In examining responses from the individual questions, several key patterns in the satisfaction of worker subgroups appeared. In tables J-1 through J-40 the mean satisfaction score for each worker subgroup has been stated for questions 1-40 from the LSES.

Table J-1
Mean Satisfaction Scores for Workers Regarding Daily Routine

Employees	Mean
26-36	3.68
50+	3.70
Education	3.91
Industry	3.42
Males	3.60
Females	3.81
Education 26-36	3.86
Education 50+	3.95*
Industry 26-36	3.47
Industry 50+	(3.36)

*Is Highest and () is Lowest Mean Score on Tables 4-23-4-62

The highest satisfaction levels were indicated by Educators, 50+, while the lowest levels by Industry employees, 50+. Females indicated higher satisfaction levels in their daily routines than males (Table J-1).

Table J-2

Mean Satisfaction Scores for Workers Regarding Their Life Situation

Employees	Mean
26-36	3.64
50+	3.85
Education	3.87
Industry	3.58
Males	3.66
Females	3.84
Education 26-36	3.73
Education 50+	4.02*
Industry 26-36	(3.54)
Industry 50+	3.63

Once again workers, 50+, in education indicated that "often" they were satisfied with their lives in general. The least satisfied were industry workers, 26-36 years of age. Females indicated higher satisfaction levels than males (Table J-2).

Table J-3

Mean Satisfaction Scores for Workers Regarding Accomplishments

Employees	Mean
26-36	1.93
50+	2.21
Education	2.03
Industry	2.10
Males	2.04
Females	2.08
Education 26-36	(1.82)
Education 50+	2.25*
Industry 26-36	2.04
Industry 50+	2.16

Educators, 50+, indicated they think "often" about their future accomplishments while the younger Educators, 26-36, were the least inclined to think about their future accomplishments (Table J-3).

Table J-4

Mean Satisfaction Scores for Workers Regarding Their Moods.

Employees	Mean
26-36	(3.52)
50+	3.76
Education	3.69
Industry	3.56
Male	3.55
Female	3.73
Education 26-36	3.50
Education 50+	3.89*
Industry 26-36	3.54
Industry 50+	3.58

Older employees seldom to never were in bad moods while younger employees were sometimes to seldom in bad moods. Female employees were generally less moody than males (Table J-4).

Table J-5
Mean Satisfaction Scores for Workers Regarding Satisfaction With Their Health

Employees	Mean
26-36	3.92
50+	3.94
Education	3.96
Industry	3.88
Male	3.95
Female	3.89
Education 26-36	3.94
Education 50+	3.97*
Industry 26-36	3.88
Industry 50+	3.88

The question was answered nearly unanimously across all subgroups with a healthy response (Table J-5).

Table J-6

Mean Satisfaction Scores for Workers Regarding the Need to Take Medication

Employee	Mean
26-36	3.95
50+	(3.35)
Education	3.61
Industry	3.76
Male	3.71
Female	3.63
Education 26-36	3.82
Education 50+	3.37
Industry 26-36	4.11*
Industry 50+	3.33

The healthiest group as indicated by the medication question indicated younger employees received medication seldom to never, while older employees occasionally to seldom took medication (Table J-6).

Table J-7

Mean Satisfaction Scores for Workers Regarding Having Enough Money

Employees	Mean
26-36	3.12
50+	3.48
Education	3.32
Industry	3.26
Male	3.21
Female	3.39
Education 26-36	3.13
Education 50+	3.52*
Industry 26-36	(3.11)
Industry 50+	3.44

Educators, 50+, once again seemed to be the most highly satisfied in this area, while industry employees ,26-36, were the least satisfied. Females were generally more satisfied than males (Table J-7).

Table J-8

Mean Satisfaction Scores for Workers Regarding Time Spent With People

Employees	Mean
26-36	3.69
50+	3.69
Education	3.84
Industry	3.51
Male	3.55
Female	3.87*
Education 26-36	3.80
Education 50+	3.87*
Industry 26-36	3.57
Industry 50+	(3.44)

Educators, 50+, and females indicated that often to always they try to spend time with people. Industry employees, 50+, said that sometimes to often they try to spend time with people (Table J-8).

Table J-9

Mean Satisfaction Scores for Workers Regarding Friendship With Others

Employees	Mean
26-36	3.68
50+	3.71
Education	3.82
Industry	3.55
Male	3.57
Female	3.86*
Education 26-36	3.82
Education 50+	3.81
Industry 26-36	(3.52)
Industry 50+	3.58

Female employees had many to a great many friends while the least number of friendships were listed by workers, 26-36, in industry (Table J-9).

Table J-10

Mean Satisfaction Scores for Workers Regarding Number of Activities in Their Life

Employees	Mean
26-36	3.19
50+	3.14
Education	3.30*
Industry	3.01
Male	3.12
Female	3.22
Education 26-36	3.34
Education 50+	3.25
Industry 26-36	3.02
Industry 50+	(3.00)

Workers in education tended to plan more activities than workers in industry. Generally all workers planned some to many activities (Table J-10).

Table J-11

Mean Satisfaction Scores for Workers Regarding Feelings in Life

Employees	Mean
26-36	3.70
50+	3.77
Education	3.97
Industry	3.45
Male	3.60
Female	3.91
Education 26-36	3.88
Education 50+	4.06*
Industry 26-36	3.50
Industry 50+	(3.38)

Workers, 50+, in education indicated satisfied to very satisfied, while workers in industry were the least satisfied of the subgroups. Females were somewhat more satisfied than males. Employees, 26-36, in the education environment were much less satisfied in general, while the opposite was true with workers in the younger and older subgroups in industry (Table J-11).

Table J-12

Mean Satisfaction Scores for Workers Regarding Physical Pain

Employees	Mean
26-36	3.61
50+	3.48
Education	3.56
Industry	3.55
Male	3.58
Female	3.51
Education 26-36	3.53
Education 50+	3.58
Industry 26-36	3.70*
Industry 50+	(3.36)

Workers, 50+, in education felt pain seldom to never, while their counter parts in industry felt pain sometimes to seldom (Table J-12).

Table J-13
Mean Satisfaction Scores for Workers Regarding Life Satisfaction at the Present Time

Employees	Mean
26-36	3.57
50+	3.71
Education	3.87
Industry	3.35
Male	3.45
Female	3.87
Education 26-36	3.76
Education 50+	3.97*
Industry 26-36	(3.34)
Industry 50+	3.36

Workers in education environment were the most satisfied, while workers, 26-36, in industry were the least satisfied. Generally, older workers were more satisfied than younger workers and females more satisfied than males (Table J-13).

Table J-14

Mean Satisfaction Scores for Workers Regarding Achievements

Employees	Mean
26-36	3.75
50+	3.84
Education	4.03
Industry	3.50
Males'	3.72
Females	3.88
Education 26-36	4.00
Education 50+	4.06*
Industry 26-36	(3.45)
Industry 50+	3.55

Employees, 50+, in education rated their achievement at the highest levels, while employees, 26-36, their achievements the lowest. Females tended to rate their achievements higher than males, while educators rated their achievements much higher than workers in industry (Table J-14).

Table J-15

Mean Satisfaction Scores for Workers Regarding Feelings of Importance.

Employees	Mean
26-36	3.74
50+	3.82
Education	4.03
Industry	3.46
Male	3.51
Female	4.11*
Education 26-36	4.01
Education 50+	4.04
Industry 26-36	(3.40)
Industry 50+	3.52

Females ranked their importance the highest which was important to very important. Age differences were negligible, however workers, 26-36, in industry tended to feel less important to others (Table J-15).

Table J-16

Mean Satisfaction Scores for Workers Regarding Being With Other People

Employees	Mean
26-36	4.04
50+	4.09
Education	4.26
Industry	3.82
Male	3.94
Female	4.22
Education 26-36	4.23
Education 50+	4.29*
Industry 26-36	(3.81)
Industry 50+	3.83

Workers, 50+, stated that being with other people was almost always very pleasurable. This group rated high satisfaction levels when being around others while workers in industry were the least satisfied. Workers in education rated themselves higher than workers in industry. Females rated satisfaction of being with other people higher than males (Table J-16).

Table J-17

Mean Satisfaction Scores for Workers Regarding Current Income

Employees	Mean
26-36	3.16
50+	3.20
Education	3.17
Industry	3.20
Male	3.18
Female	3.17
Education 26-36	(3.15)
Education 50+	3.18
Industry 26-36	3.18
Industry 50+	3.22*

Across all subgroups the satisfaction level indicated fairly adequate income levels. Differences in ratings were less than .05 of one percent (Table J-17).

Table J-18

Mean Satisfaction Scores for Workers Regarding the Company of Others

Employees	Mean
26-36	4.05
50+	4.10
Education	4.23
Industry	3.88
Male	3.95
Female	4.24*
Education 26-36	4.23
Education 50+	4.22
Industry 26-36	(3.84)
Industry 50+	3.94

Female employees rated the company of others as "usually very comfortable" and at the highest levels of all subgroups. Workers, 26-36, in industry rated company of others "somewhat comfortable" and the lowest ratings of any of the subgroups. There were no major differences between younger and older worker responses (Table J-18).

Table J-19

Mean Satisfaction Scores for Workers Regarding Worrying About Finances

Employees	Mean
26-36	2.53
50+	3.01
Education	2.82
Industry	2.67
Male	2.74
Female	2.77
Education 26-36	(2.33)
Education 50+	3.10*
Industry 26-36	2.50
Industry 50+	2.88

Older workers seem to worry the least about finances with workers in education, 26-36, being the most concerned about their financial plight (Table J-19).

Table J-20

Mean Satisfaction Scores for Workers Regarding Their Financial Situation

Employees	Mean
26-36	3.21
50+	3.50
Education	3.40
Industry	3.28
Male	3.29
Female	3.41
Education 26-36	3.26
Education 50+	3.54*
Industry 26-36	(3.15)
Industry 50+	3.44

Employees, 50+, in education rated the question as fair to good while workers, 26-36, in industry were the least satisfied with their financial situation. Older workers were happier with their financial situation than younger workers while male and female responses showed no negligible differences in satisfaction levels (Table J-20).

Table J-21

Mean Satisfaction Scores for Workers Regarding Things They Have Wanted to do in Their Lifetime.

Employees	Mean
26-36	3.04
50+	3.23
Education	3.21
Industry	3.03
Male	3.07
Female	3.20
Education 26-36	3.15
Education 50+	3.27*
Industry 26-36	(2.90)
Industry 50+	3.19

Employees, 50+, in education answer this question with "some/almost all" at the highest satisfaction levels while workers in industry, 26-36, had accomplished few of the things they had wanted to do. Because of the nature of the question, older employees were much more satisfied with their accomplishments than younger workers (Table J-21).

Table J-22

Mean Satisfaction Scores for Workers Regarding Schedule of Activities

Employees	Mean
26-36	3.62
50+	3.78
Education	3.88
Industry	3.47
Male	3.57
Female	3.86
Education 26-36	3.82
Education 50+	3.93*
Industry 26-36	(3.38)
Industry 50+	3.58

Workers, 50+, in education rated their activities as the most satisfying of the subgroups and industry workers, 26-36, were the least satisfied with their activities. Females were more satisfied with their schedule of activities than males (Table J-22).

Table J-23

Mean Satisfaction Scores for Workers Regarding Looking Back on Life

Employee	Mean
26-36	3.63
50+	3.77
Education	3.88*
Industry	3.47
Male	3.59
Female	3.83
Education 26-36	3.88*
Education 50+	3.87
Industry 26-36	(3.34)
Industry 50+	3.63

Employees, 50+, in education rated their satisfaction level as "satisfied" while workers, 26-36, in industry were the least satisfied. Females were generally more satisfied with their past life than males (Table J-23).

Table J-24

Mean Satisfaction Scores for Workers Regarding Things Done Every Day

Employees	Mean
26-36	3.42
50+	3.52
Education	3.74
Industry	3.13
Male	3.29
Female	3.69
Education 26-36	3.65
Education 50+	3.83*
Industry 26-36	3.15
Industry 50+	(3.11)

Employees, 50+, in education indicated their daily routines gave them "a lot of pleasure" while industry averages about daily routines identified only some pleasure. Females once again rated their daily routines as more pleasurable than males (Table J-24).

Table J-25

Mean Satisfaction Scores for Workers Regarding Usual Mood

Employees	Mean
26-36	3.83
50+	3.89
Education	3.95
Industry	3.75
Male	3.79
Female	3.94
Education 26-36	3.92
Education 50+	3.97*
Industry 26-36	(3.72)
Industry 50+	3.77

Workers in education, 50+, rated their mood as usually happy and that subgroup had the happiest ratings. Females were generally happier than males in both age groups (Table J-25).

Table J-26

Mean Satisfaction Scores for Workers Regarding Their Intelligence

Employees	Mean
26-36	3.62
50+	3.40
Education	3.56
Industry	3.47
Male	3.53
Female	3.50
Education 26-36	3.71*
Education 50+	(3.39)
Industry 26-36	3.52
Industry 50+	3.41

The highest rating identified by the subgroups came from females with the lowest self-rating of intelligence coming from employees in education, 50+. Younger workers generally rated their intelligence higher than older workers in both subgroups (Table J-26).

Table J-27

Mean Satisfaction Scores for Workers Regarding Physical Appearance

Employees	Mean
26-36	3.47*
50+	3.31
Education	3.45
Industry	3.33
Males	3.36
Females	3.44
Education 26-36	3.51
Education 50+	3.37
Industry 26-36	3.43
Industry 50+	3.22

Employees, 50+, tended to rate average to somewhat attractive. Females rated their appearance higher than males and younger employees rated themselves more attractive than older employees (Table J-27).

Table J-28

Mean Satisfaction Scores for Workers Regarding Health In General

Employees	Mean
26-36	4.08
50+	3.95
Education	4.07
Industry	3.96
Males	4.05
Females	3.97
Education 26-36	4.13*
Education 50+	4.00
Industry 26-36	4.02
Industry 50+	(3.88)

The employees who rated themselves the healthiest were employees, 26-36, in education while the employees, 50+, in industry rated themselves the least healthy. Males rated themselves healthier than females and younger employees rated themselves healthier than males (Table J-28).

Table J-29

Mean Satisfaction Scores for Workers Regarding Time Spent With Friends

Employees	Mean
26-36	4.04
50+	4.07
Education	4.19
Industry	3.88
Males	3.98
Females	4.15
Education 26-36	4.15
Education 50+	4.22*
Industry 26-36	3.90
Industry 50+	(3.86)

Employees, 26-36, in education scored the highest satisfaction levels when asked about friends. Workers, 50+, in industry were the least satisfied and generally younger employees had more satisfaction in time spent with friends than older employees and females were more satisfied than males (Table J-29).

Table J-30

Mean Satisfaction Scores for Workers Regarding Moodiness

Employees	Mean
26-36	3.86
50+	3.96
Education	4.01
Industry	3.78
Males	(3.77)
Females	4.08*
Education 26-36	3.94
Education 50+	4.08*
Industry 26-36	(3.77)
Industry 50+	3.80

Females rated themselves "usually in good spirits" and the highest rating while males were the lowest rated subgroups. Educators rated themselves in better spirits than industry workers (Table J-30).

Table J-31

Mean Satisfaction Scores for Workers Regarding Present Situation

Employees	Mean
26-36	3.59
50+	3.76
Education	3.81
Industry	3.50
Males	3.59
Females	3.77
Education 26-36	3.65
Education 50+	3.97*
Industry 26-36	3.52
Industry 50+	(3.47)

Employees, 50+, in education rated their situation as pleasurable while older workers in industry rated their present situation as " I get by " to "pleasurable". Females were more satisfied than males and educators more satisfied than workers in industry (Table J-31).

Table J-32

Mean Satisfaction Scores for Workers Regarding Dependent Care of Themselves

Employees	Mean
26-36	4.04
50+	4.11
Education	4.08
Industry	4.07
Males	4.07
Females	4.07
Education 26-36	4.09
Education 50+	4.06
Industry 26-36	(3.97)
Industry 50+	4.19*

Workers, 50+, in industry rated themselves as "usually to always independent" while employees 26-36 in industry rated themselves somewhat more dependent. Males and female differences were negligible (Table J-32).

Table J-33

Mean Satisfaction Scores for Workers Regarding Meaning in Life

Employees	Mean
26-36	4.03
50+	3.97
Education	4.22
Industry	3.73
Males	3.86
Females	4.19
Education 26-36	4.28*
Education 50+	4.14
Industry 26-36	(3.72)
Industry 50+	3.75

Educators, 50+, regarded their lives as the most meaningful of the subgroups while workers in industry, 26-36, found life the least meaningful. Females found life more meaningful than males (Table J-33).

Table J-34

Mean Satisfaction Scores for Workers Regarding What Others Think About Their Financial Situation.

Employees	Mean
26-36	2.95
50+	3.23
Education	3.05
Industry	3.13
Males	3.16
Females	3.00
Education 26-36	(2.84)
Education 50+	3.27*
Industry 26-36	3.09
Industry 50+	3.19

Educators, 50+, rated themselves the highest with a response given from "sometimes to often". Older workers rated themselves significantly higher than younger workers and males higher than females (Table J-34).

Table J-35

Mean Satisfaction Scores for Workers Regarding Number of Doctor Visits

Employees	Mean
26-36	3.69
50+	3.08
Education	3.25
Industry	3.61
Males	3.66
Females	3.08
Education 26-36	3.59
Education 50+	(2.87)
Industry 26-36	3.81*
Industry 50+	3.36

Employees, 26-36, in industry visited their doctor the least while employees, 50+, in education made the most visits to their doctors. Younger employees visited their doctors less than older employees in both work environments (Table J-35).

Table J-36

Mean Satisfaction Scores for Workers Regarding the Way Things Turned Out

Employees	Mean
26-36	3.68
50+	3.70
Education	3.88
Industry	3.46
Males	3.59
Females	3.82
Education 26-36	3.84
Education 50+	3.91*
Industry 26-36	3.50
Industry 50+	(3.41)

Employees, 50+, seemed the most satisfied while employees, 50+, in industry indicated the lowest satisfaction. There were no major differences in male / female responses(Table J-36).

Table J-37

Mean Satisfaction Scores for Workers Regarding Attitude in Life

Employees	Mean
26-36	3.63
50+	3.77
Education	3.83
Industry	3.53
Males	3.65
Females	3.75
Education 26-36	3.73
Education 50+	3.93*
Industry 26-36	(3.52)
Industry 50+	3.55

Workers, 50+, in education were the most satisfied while workers, 26-36, in industry were the least satisfied (Table J-37).

Table J-38

Mean Satisfaction Scores for Workers Regarding Outlook On Life

Employees	Mean
26-36	3.79
50+	3.94
Education	4.02
Industry	3.66
Males	3.81
Females	3.92
Education 26-36	3.98
Education 50+	4.06*
Industry 26-36	(3.56)
Industry 50+	3.77

The most optimistic subgroup were employees, 50+, in education while workers, 26-36, in industry were the least optimistic (Table J-38).

Table J-39

Mean Satisfaction Scores for Workers Regarding the Way Things Are

Employees	Mean
26-36	3.61
50+	3.70
Education	3.79
Industry	3.48
Males	3.53
Females	3.81
Education 26-36	3.71
Education 50	3.87*
Industry	3.50
Industry 50+	(3.47)

Older workers in education indicated the greatest satisfaction levels while older workers in industry were the least satisfied (Table J-39).

Table J-40

Mean Satisfaction Scores for Workers Regarding Daily Activities

Employees	Mean
26-36	3.64
50+	3.89
Education	3.89
Industry	(3.06)
Males	3.67
Females	3.87
Education 26-36	3.75
Education 50+	4.04*
Industry 26-36	3.52
Industry 50+	3.69

Workers 50+ in education were the most pleased subgroup while industry employees were the least pleased. Females and older workers were more pleased than males and younger workers (Table J-40).

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