

## Demographic Differences in Selected Work Ethic Attributes

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A recurring theme in the contemporary literature on work has been a declining work ethic (Applebaum, 1992; Bernstein, 1988; O'Toole, 1981). Concern about this issue was raised in the public forum in 1973 by a task force report of the Department of Health, Education, and Welfare entitled *Work in America* which found that significant numbers of Americans were dissatisfied with the quality of their working lives. Numerous other reports of declining work ethic and concern about work attitudes have appeared since that time (Boardman, 1994; Lipset, 1990; Miller, 1985; Sheehy, 1990; Stanton, 1983).

As is often the case, society's search for a way to address its concerns regarding work attitudes has led to the schools and to programs of study which focus on the preparation of persons for work. The *SCANS Report for America 2000* (Secretary's Commission, 1991) is just such an example. This document identified a three-part foundation employers expect schools to develop in students—basic skills (reading, writing, mathematics, listening, and speaking), thinking skills (creative thinking, making decisions, solving problems, visualization, learning to learn, and reasoning), and personal qualities (individual responsibility, self-esteem, sociability, self-management, and integrity). The items included under personal qualities include issues which are central to work ethic and work attitudes.

The work ethic is a cultural norm that advocates being personally accountable and responsible for the work that one does and is based on a belief that work has intrinsic value (Cherrington, 1980; Colson & Eckerd, 1991; Quinn, 1983; Yankelovich & Immerwahr, 1984). Work

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ethic is a secularized construct derived from Weber's (1904/1905) Protestant work ethic (PWE) theory. The PWE, asserting that Calvinist theology encouraged accumulation of wealth, has been widely used as an explanation for the success of capitalism in Western society. Over the years, however, attitudes and beliefs supporting hard work have blended into the norms of Western culture, and are no longer attributable to a particular religious sect (Furnham, Bond, Heaven, Hilton, Lobel, Masters, Payne, Rajamanikam, Stacey, & Van Daalen, 1993; Lipset, 1990; Rodgers, 1978; Rose, 1985).

Whether or not it should be a function of schools to impart cultural norms to the young is a point on which educators and policy decision-makers disagree. Most would concur, however, that an important part of preparing someone for employment is to facilitate understanding of job requirements and practices which typically lead to success. In this regard, the topic of work ethic should be a key element of any career preparation program.

A study by Stevenson and Bowers (1986) examined typical employer concerns about work ethic. Based on interviews with persons involved in hiring for 60 different companies throughout Ohio, positive work attitude was rated as essential by 40 of the 60 respondents and was rated as advantageous by the other 20. Only reading, selected as essential for 43 of the 60 firms, was rated as a more highly valued attribute. When a question was framed to ask what was the number one worker quality needed, 32% selected skills on the job and 30% selected positive work attitude. The next highest rating for this item was people skills at 10%. The Stevenson and Bowers (1986) study also found that companies often had programs to assist workers in developing job skills but seldom had anything in place for improving work ethic or positive work attitudes. For that reason, schools play a pivotal role in this area of workforce preparation.

For schools and other work preparation programs to properly address the issue of work ethic and work attitudes, an understanding of its status in the contemporary workplace is needed. Potential patterns of difference along demographic variables should be identified and communicated to learners to prevent them from stumbling over unanticipated attitudes once they are on the job. The extent to which factors such as sex, age, level of education, type of occupation, or work experience appear to influence work ethic and work attitudes is information which would enhance understanding of workplace dynamics. With the increasing diversity of the student population now partici-

pating in workforce preparation programs, whether retraining displaced workers or preparing learners for initial entry into the workplace, awareness of potential attitudinal differences among participants with different demographic profiles would also increase an instructor's ability to provide effective guidance and instruction.

The purpose of this study was to investigate whether data gathered from a diverse sample of working individuals would reveal differences for group comparisons based on demographic categories. Selection of the grouping variables for this study stemmed from recognized tenets of sociology as well as previous work ethic research. Two of these variables, sex and age, are universal distinctions evident in any culture (Robertson, 1989) and were conspicuous components for a study of a cultural norm such as work ethic. Three additional grouping variables, consistent with sociological theory and utilized in previous work related research, were level of education, occupational classification, and years of full-time work experience.

Previous studies of work ethic have reported gender effects (Furnham & Muhiudeen, 1984; Hall, 1990, 1991; Miller, 1980; Petty & Hill, 1994; Wollack, Goodale, Wijting, & Smith, 1971), with women having higher work ethic than men. Other studies reported that work ethic did not vary by sex (Baldwin, 1984; Buchholz, 1978; Goodale, 1973; MacDonald, 1972; Mirels & Garrett, 1971; Tang, 1989). Of concern regarding several of these previous studies was the use of samples of convenience where data was collected from college classes or from a single business or industry. In addition, most were completed some-time ago and the participation of women in the workforce has changed considerably since they were done.

A review of past studies of education and work ethic also found differing results. Some researchers found a positive relationship between education and work attitudes (Wollack, Goodale, Wijting, & Smith, 1971; Goodale, 1973), some found no correlation between education and work attitudes (Aldag & Brief, 1975; Baldwin, 1984; Buchholz, 1978; MacDonald, 1972), and some found a negative relationship between education and work attitudes (Tang & Tzeng, 1992). In the twenty-five year span represented by these studies, expectations for education have shifted from thinking that it would assure a person of obtaining a good job to an awareness that education neither guaranteed initial employment nor could it insure continued employment. Based on the dates for previous studies which examined education and work ethic, it appeared that a gradual change in the role of edu-

cation with respect to work ethic has occurred with the passing of time. A careful analysis is needed to provide a clearer picture of what impact, if any, education has on work ethic in the workforce of today.

The extent to which the experience of work itself impacts work ethic would be revealed by examining the responses of people working in different types of jobs and having worked for different amounts of time. These variables were also included for examination in the form of occupational classification and years of full-time work experience.

## Method

### *Participants and Procedures*

The population for this study consisted of workers employed by public and private businesses and industries in one community in the southeastern United States. The boundaries of the study were confined to a single geographic area due to limited resources and need for accessibility.

To capture a snapshot of real-world work ethic, a significant effort was made to sample a cross-section of the work force. The most effective access to workers was through their places of work, so a list of 1011 businesses and industries in the area was compiled using industrial directories and area telephone books. Based on the sample size table ("Small-Sample Techniques," 1960), a random list of 285 workplaces was compiled to represent the 1,011 businesses and industries. Participation by employees of each firm was requested by the researcher during a personal visit to each selected business and industry. Copies of the research instrument were personally delivered and picked up by the researcher to maximize cooperation. Employees from 158 industries and businesses participated in the study. During a two month span of time, a total of 1,840 instruments were distributed and 1,201 completed instruments were collected for an overall response rate of 65.3%. Job titles of respondents ranged from surgeon to sewage plant technician and included several hundred specific occupations.

While it was recognized that gathering data from a single community would limit the generalizability of the study, gathering data from a variety of firms rather than from just one company was intended to increase generalizability. Table 1 illustrates that even where a small number of respondents represented a particular type of occupation,

**Table 1**  
**Number of Firms Included for Each SOC Aggregate Group**

<i>SOC Aggregate Group</i>	<i>n<sup>a</sup></i>	<i>No. Firms Represented</i>
Administrative, engineering, scientific, teaching, and related occupations, including creative artists	243	65
Technical, clerical, sales, and related occupations	353	114
Service occupations, including military	86	30
Farming, forestry, fishing, and hunting occupations	19	11
Precision production, craft, and repair	103	24
Operators, fabricators, and laborers	329	37

<sup>a</sup>Total *n* = 1133.

several different firms were represented. It is also evident from this table that some firms provided positions in more than one occupational classification since a sum for the number of firms represented column would exceed the number of companies included in the study.

The original list of 1,011 businesses and industries, from which the random list of firms was taken, was compiled from a number of sources so that it would be as comprehensive as possible. As a result, however, the original list included a number of firms which were cross-listed, were outside the established geographic boundaries, or were no longer in business at the time data was collected. Of the 285 businesses and industries randomly selected for the study, 13 (4.6%) were cross-listed, 11 (3.9%) were actually located elsewhere, and 38 (13.3%) were no longer in business. In addition to the 158 (55.4%) firms whose employees participated in the study, 34 (11.9%) businesses and industries declined to provide the inventories to their employees and 31 (10.9%) firms were not successfully contacted regarding participation in the study.

The number of observations used in the study was 1,133 due to

missing values on 68 instruments. The final research sample consisted of 573 males (50.6%) and 560 females (49.4%). Grouped by the age ranges provided on the instrument, there were 43 (3.8%) respondents under 20 years, 193 (17.0%) 20–26 years, 326 (28.8%) 27–35 years, 451 (39.8%) 36–55 years, and 120 (10.6%) over 55 years. Data for level of education indicated that 184 (16.2%) respondents had less than a high school diploma, 575 (50.7%) had a high school degree or GED, 194 (17.1%) had two years of college or an Associate's degree, 64 (5.6%) had a Bachelor's degree, and 118 (10.4%) had completed at least some graduate work.

### *Instrumentation*

The instrument used to collect data in this study was the Occupational Work Ethic Inventory (OWEI), developed in 1990 by Dr. Gregory C. Petty of the University of Tennessee, Knoxville. Building on extensive prior research related to work ethic, the value of work, and affective work competencies, the OWEI was constructed to provide a concise, but accurate measure of work ethic endorsement of workers (Petty, 1993). Petty initiated his work with 142 competency statements about work ethic generated from the Affective Work Competencies Inventory (AWCI) project at the University of Missouri. Details of this work were reported by Kazanas (1978) and by Petty, Kazanas, & Eastman (1981). Based on the AWCI statements, Petty gleaned 42 items (one or two words) to be considered by a panel of experts assisting with development of the OWEI. The panel agreed on the 42 but recommended additional items to be added. One expert insisted on an even number (50) and through several reviews by the panel, the final 50 items were selected (Petty, 1993).

The OWEI is comprised of 50 items. It consisted of a stem of "At work I can describe myself as:" and then the list of work ethic descriptors. The stem was constructed to focus the measure on attitudes *at work*. Ratings for each item were registered using a Likert scale with the following choices: 1 = Never, 2 = Almost Never, 3 = Seldom, 4 = Sometimes, 5 = Usually, 6 = Almost Always, and 7 = Always. Eleven of the items were reversed and all items were assigned a random order in the design of the instrument.

To further refine the OWEI, Hill and Petty (1995) completed a factor analysis as a precursor to the present study and identified a four factor solution which explained 48 of the 50 items and accounted for 38.86% of the total variance. In this process, initial factors were ex-

tracted using a principal-components analysis. Kaiser's criterion was applied to eliminate error variance from being included with common variance and specific variance, and then an orthogonal rotation was completed using a Varimax procedure.

Of the four factors identified, three were labelled—interpersonal skills, initiative, and being dependable. The fourth factor, consisting of those instrument items which had been reversed, was attributed to the response patterns which emerged from negative descriptors such as hostile, rude, and selfish, which were part of the instrument design. This factor was not labelled and was not considered to reflect a work ethic construct. It was included along with the other three factors in the analysis of data, however, for those who might find it to be of interest.

The instrument was originally pilot tested using a trial administration with 152 subjects. An overall alpha reliability for the instrument was calculated and found to be .94 in the pilot test (Petty, 1993). Using the data collected from the sample in the present study, the overall alpha reliability of the instrument was .92 and the coefficient alpha for each of the subscales was .91 for interpersonal skills, .88 for initiative, .83 for being dependable, and .77 for the reversed items on the instrument.

Content validity for the OWEI was established through the use of items extracted from previous research in the affective realm and through use of a panel of experts in its construction. Comparison with other validated tests, to establish construct validity, was not possible to do since the OWEI focuses on work ethic attributes specifically of people at work while other work ethic instruments assess a more general list of affective traits. Some evidence for construct validity is provided, however, by the strong internal consistency demonstrated by the correlation alpha scores. Criterion validity was partially addressed in the construction of the instrument by the panel of experts, but further research is needed to establish how closely scores on the OWEI correspond to observed work ethic characteristics in the workplace. The results of this study are limited to the self-rated scores of respondents on the OWEI, and the work ethic characteristics described are operationally defined by the OWEI. It should also be noted that scores for each OWEI factor are intended to only be a "heads up" comparison between groups and are not suggested to be criterion referenced scores.

Other work ethic instruments which might have been selected for use in the study were investigated but none were found to be as suc-

cinct and easy to complete as the OWEI. Since it was anticipated that most respondents in this study would complete the inventory during work hours and no training for administration of the instrument, beyond some brief instructions, was provided to anyone at the collection sites, it was important for the instrument to be brief and easy to understand.

The independent variables selected for this study were sex, age, education, Standard Occupational Classification (SOC), and years of full-time work experience. All data were compared using the categories for demographic information provided on the OWEI. Petty (1993) included five categories for age on the OWEI, each encompassing an age range for a stage of adult development tasks (Okun, 1984). Level of education was divided into five levels based on typical educational milestones or degrees. The U.S. Office of Federal Statistical Policy and Standards has recommended six aggregate groupings of the SOC's for purposes of occupation related research. Petty (1993) used those categories described in the *Standard Occupational Classification Manual* (Office of Federal Statistical Policy and Standards, 1980), to classify occupational type on the OWEI. Three levels for work experience were used representing initiation to the workplace, a settling in phase, and a maintenance period.

## Results

A multivariate analysis of variance was used for each independent variable to determine whether significant differences could be shown for the dependent variables using scores based on OWEI subscale responses. If the multivariate procedure indicated significant differences in the dependent variables, a univariate analysis of variance procedure was used to determine significant differences for the levels of the independent variable. When significant differences were found, results of the  $F$  test were sufficient to identify mean subscale scores which were significantly higher for independent variables with only two levels (sex). For independent variables having more than two levels (age, education, SOC aggregate group, and years of full-time work experience) a Fisher's Protected LSD Procedure was used to perform all pairwise comparisons and to determine which mean subscale scores were significantly different from others. Fisher's Protected LSD Procedure consists of running a Fisher's LSD test only after the  $F$  test for the treatments, or levels of independent variables,



**Table 2**  
**Multivariate Analysis of Variance for Mean Scores of**  
**Respondents Classified by Sex, Age, Level of Education,**  
**SOC Aggregate Group, and Full-Time Work Experience**

	<i>Hotelling- Lawley Trace</i>	<i>df</i>	<i>F</i>	<i>PR &gt; F</i>
Sex	.0603	4,1128	16.9981	.0001
Age	.0199	16,4494	1.3999	.0001
Level of Education	.0861	16,4494	6.0440	.0001
SOC Aggregate Grouping	.1081	20,4490	6.0649	.0001
Full-Time Work Experience	.0407	8,2252	5.7264	.0001

has been shown to be significant (Ott, 1988). Research studies by Cramer and Swanson (1973) showed that the experimentwise error rate for the protected LSD procedure is controlled at a level approximately equal to the alpha for the  $F$  test.

A Hotelling-Lawley Trace statistical procedure was used to test each of the five independent variables. Differences were found for all five of the independent variables at the preselected .05 level of significance (see Table 1).

#### *Sex*

The results of the univariate analysis of variance used to test for significant differences in responses for each OWEI subscale indicated that the respondents grouped by sex differed for all four work ethic factors measured by OWEI subscales. The  $F$ -values computed for each item were as follows: (a) interpersonal skills with  $F = 40.17$  and  $PR > F = .0001$ , (b) initiative with  $F = 12.32$  and  $PR > F = .0005$ , (c) being dependable with  $F = 46.68$  and  $PR > F = .0001$ , and (d) the reversed items with  $F = 33.23$  and  $PR > F = .0001$ .

The mean subscale scores for respondents grouped by independent variables are shown in Table 2. For sex, the higher mean value for each subscale was significantly greater than the lower mean since the  $F$ -values for all four OWEI factors were found to be significant at the a priori .05 level by the univariate analysis, and the independent variable, sex, had only two levels.

**Table 2**  
**Mean OWEI Subscale Scores and Standard Deviations for Respondents Classified by Sex, Age, Level of Education, SOC Aggregate Group, and Full-Time Work Experience**

	<i>n</i> <sup>a</sup>	<i>Interpersonal Skills</i>		<i>Initiative</i>		<i>Being Dependable</i>		<i>Reversed Items</i>	
		<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
<i>Sex</i>									
Female	560	90.04	9.61	90.73	11.59	44.37	4.11	22.98	8.16
Male	573	86.22	10.65	88.30	11.65	42.47	5.15	25.95	9.10
<i>Age</i>									
19 or under	43	89.21	9.66	89.28	11.79	43.44	4.24	25.42	8.09
20—26	193	87.94	10.26	88.65	11.52	42.92	5.07	26.01	10.02
27—35	326	87.45	10.95	89.33	12.12	42.99	5.26	24.59	9.03
36—55	451	88.37	10.31	89.92	11.43	43.78	4.40	23.73	8.13
Over 55	120	88.77	8.88	89.84	11.68	43.89	4.16	24.19	8.21
<i>Level of Education</i>									
Less than high school diploma	184	87.86	12.57	85.79	15.18	42.49	6.24	25.96	10.13
High school degree or GED	575	88.33	10.46	89.43	11.52	43.70	4.67	24.85	9.05
2 years college or Associate's degree	194	87.69	8.62	90.68	9.41	43.27	4.01	23.67	7.47
Bachelor's degree	64	87.81	9.74	91.03	10.52	42.86	4.80	24.22	8.55
Some graduate work	116	88.28	8.58	92.93	8.13	43.95	3.24	21.81	6.21

*SOC Grouping*

Administrative, engineering, scientific, teaching, creative artists	243	88.56	8.21	92.44	8.62	43.81	3.37	22.33	6.73
Technical, clerical, sales	353	89.81	9.39	90.88	10.75	44.08	4.29	23.41	8.13
Service occupations, military	86	88.88	10.68	86.80	14.92	42.94	5.82	25.09	7.90
Farming, forestry, fishing, hunting	19	85.53	11.80	87.47	12.30	43.58	3.91	32.89	16.94
Precision production, craft, repair	103	86.53	11.23	88.52	13.03	42.86	5.21	24.68	6.95
Operators, fabricators, laborers	329	86.38	11.80	86.98	12.48	42.66	5.54	26.51	10.06
<i>Work Experience</i>									
Less than 2 years	116	90.28	9.19	89.41	11.93	43.71	4.99	22.97	8.03
2—8 years	374	87.01	10.98	87.62	11.81	42.67	5.04	26.13	9.77
More than 8 years	643	88.35	10.05	90.61	11.43	43.78	4.50	23.79	8.13

\*Total *n* = 1133.

### *Age*

The respondents grouped by age differed significantly only for the reversed items on the instrument. The  $F$ -value for the reversed items was 2.27 with  $PR > F = .0433$ . For the following aspects of the work ethic, the  $F$ -values computed were not significant at the accepted level chosen for this study: (a) interpersonal skills with  $F = 0.66$  and  $PR > F = .6173$ , (b) initiative with  $F = 0.45$  and  $PR > F = .7718$ , and (c) being dependable with  $F = 2.15$  and  $PR > F = .0722$ .

The mean scores for respondents grouped by age are shown in Table 2. Since responses did not differ significantly by age for the three labelled factors and only marginally differed for the reversed items factor, no further analysis was completed and age was not identified as a significant source of variance in OWEI responses.

### *Level of Education*

Respondents grouped by level of education differed for each of the following aspects of the work ethic: (a) initiative with  $F = 8.13$  and  $PR > F = .0001$ , (b) being dependable with  $F = 2.88$  and  $PR > F = .0218$ , and (c) the reversed items with  $F = 4.73$  and  $PR > F = .0009$ . The  $F$ -value for interpersonal skills was 0.19 with  $PR > F = .9421$  so this aspect did not meet the established level for significant results used in this study.

The mean scores for respondents grouped by level of education are shown in Table 2. Five different levels of education were used to group respondents so a pairwise comparison was computed using a Fisher's LSD procedure to determine which population means differed significantly for each of the three aspects of the work ethic with significant  $F$ -values.

The LSD analysis indicated that the mean score on initiative for respondents in group 1 (less than a high school diploma) was significantly less than means for all other groups for level of education and that the group 2 (high school degree or GED) mean score on initiative was significantly less than group 5 (some graduate work). For being dependable, the mean score for group 1 (less than a high school diploma) was significantly less than those for group 2 (high school degree or GED) and group 5 (some graduate work). The LSD showed that the mean for responses on the reversed instrument items was significantly less for group 5 (some graduate work) as compared to

group 1 (less than a high school diploma) and group 2 (high school degree or GED). The mean score for group 3 (2 years of college or Associate's degree) also was significantly less than that for group 1 (less than a high school diploma).

#### *SOC Aggregate Group*

The SOC aggregate groups differed for each of the following aspects of the work ethic: (a) interpersonal skills with  $F = 4.74$  and  $PR > F = .0003$ , (b) initiative with  $F = 8.57$  and  $PR > F = .0001$ , (c) being dependable with  $F = 3.88$  and  $PR > F = .0017$ , and (d) on the reversed instrument items with  $F = 11.62$  and  $PR > F = .0001$ .

The means for subscale scores by respondents from each SOC group are provided in Table 2. A Fisher's least significant difference (LSD) test was used to provide a pairwise comparison for each OWEI subscale since the factor of SOC aggregate grouping had more than two levels.

The LSD analysis indicated that respondents from groups 1, 2, and 3—the professional, clerical and sales, and service occupations—had mean scores for interpersonal skills that were significantly higher than group 6 (operators, fabricators, and laborers). The mean score on interpersonal skills for group 2 (technical, clerical, sales, and related occupations) was significantly higher than the mean score on this factor for group 5 (precision production, craft, and repair) occupations. For initiative, mean scores for groups 1 and 2—the professional and clerical workers—were higher than those for groups 3 and 6—service workers and equipment operators. The mean score on initiative for group 1 professionals was also higher than the mean score for group 5 (precision production, craft, and repair) occupations. The mean score on being dependable for group 2 (technical, clerical, sales, and related occupations) was significantly higher than that for groups 3, 5, and 6—service, production, and operator occupations. In addition, the group 1 professional worker mean was significantly higher for being dependable than the mean for group 6 (operators, fabricators, and laborers). The mean score for the reversed instrument items by group 4 agricultural occupation respondents was significantly higher than the mean scores for all other occupation groups. Mean reversed item scores for groups 3, 5, and 6—service, production, and operator occupations—were also significantly higher than the mean score for group 1 professional workers. The mean score for group 2 (technical, cleri-

cal, sales, and related occupations) on the reversed items was significantly less than the mean scores for groups 4 and 6—agricultural occupations and equipment operators.

### *Work Experience*

The univariate tests for work experience produced significant  $F$ -values for all four of the OWEI factors. The  $F$ -values computed for the OWEI factors were as follows: (a) interpersonal skills with  $F = 4.92$  and  $PR > F = .0075$ , (b) initiative with  $F = 7.83$  and  $PR > F = .0004$ , (c) being dependable with  $F = 6.71$  and  $PR > F = .0013$ , and (d) reversed instrument items with  $F = 10.47$  and  $PR > F = .0001$ .

The mean subscale scores for respondents grouped by years of full-time work experience are shown in Table 2. Three different levels of work experience were used to group respondents so a Fisher's LSD procedure was needed to determine which population means differed significantly.

The LSD analysis indicated that the mean score for respondents who had less than two years of full-time work experience or more than eight years of full-time work experience was significantly higher than the mean for those who had from two to eight years of full-time work experience for the work ethic aspects of interpersonal skills and being dependable. Respondents who had more than eight years of full-time work experience had a mean score significantly higher than those who had from two to eight years of full-time work experience for the work ethic factor of initiative. For the negative reversed instrument items, respondents who had from two to eight years of full-time work experience had a significantly higher mean score than did those who had less than two years or more than eight years of full-time work experience.

### *Interaction Effects*

Potential interaction effects were investigated for sex and SOC and for sex and years of full-time work experience since results of MANOVAs for these variables produced the greatest evidence for differences. Interaction between these factors would also be of interest because of the ongoing changes in sex representation in different occupations as well as in years of full-time work experience.

Results of the investigation of potential interaction effects showed them to be statistically insignificant in both cases. Additional anal-

ysis with regard to interaction effects, in the absence of specific guidance from prior research, was not conducted due to the sheer magnitude of the task.

### *Power Analysis*

In studies which use a MANOVA with a large sample size, statistically significant differences are sometimes computed where little practical difference exists. For that reason, interpretation of results in such situations should be precluded by statistical power analysis and a determination of effect size. Cohen (1988) used the term *effect size* to refer to the degree to which a measured phenomenon under study is actually present in a population. Using the terms "small," "medium," and "large" as operational definitions for effect size, he described a set of procedures for analyzing the power of a particular statistical treatment.

Effect size for the results of the study reported in this manuscript were in the small to medium range which is appropriate considering the nature of this work. The work ethic factors, while providing the most parsimonious solution to explain the data, only accounted for 38.86% of the total variance. In addition, the results should be viewed as comparative, since the analyses were not intended to provide work ethic ratings on some absolute scale. Consequently, the following conclusions, while based on mean score differences of approximately one-third of a standard deviation, are provided for consideration by the reader and are suggested as a basis for further study of work ethic and work attitudes.

### **Discussion**

The results of this study of selected attributes indicated that work ethic, as measured by the OWEI, differed by sex and that women have a greater propensity to endorse work ethic than do men (cf. Elizur, 1994; Furnham & Muhiudeen, 1984; Hall, 1990, 1991; Miller, 1980; Petty & Hill, 1994; Wayne, 1989; Wollack, Goodale, Wijting, & Smith, 1971). The mean scores for women respondents were higher for interpersonal skills, initiative, and being dependable and their mean score for the reversed instrument items was lower than the mean score for men's responses. The reader should again be reminded that the mean scores were compared in these analyses and should not

be interpreted as "good" or "bad" on some absolute scale. That mean scores for females were higher than those for males neither means that women's work ethic is good or that men's work ethic is bad—only that it differs. On an absolute scale, mean scores for work ethic of women and men would be positioned quite close together and this research was not designed to reveal where that position would fall on a high-low continuum.

Sex effects for a measure of a sociological phenomena were not out of the ordinary. Understanding the cause or reason for these differences, however, will require further research. One area which appears worthy of further probing would be the mechanisms and influences which shape sex-role stereotypes. These influences reach us from a variety of sources—seeing how others perform their jobs and hearing friends, family, and other people talk about their work. In addition, the media is another powerful source of influence on perceptions such as this.

In considering the images of work portrayed by the media, especially television and the movies, research has shown that the media continues to present most occupational information through male role characterizations (Signorielli, 1993). With the average person in America over the age of 2 watching television approximately 4 hours each day, the images portrayed through this medium have an influence on the outlook most people have of the world. To the extent that these images depict male images at work and cast work as a necessary evil and something people enjoy escaping from, a contribution to differences in work attitudes by sex could be inferred.

Certainly many other sources provide images of work which pervade the socialization process within which work attitudes are formed. Many of these attitudes are shaped in the formative years of life. Research has indicated differences in the treatment of girls and boys beginning in the elementary grades (Sadker & Sadker, 1994). Observations have been made that girls tend to follow the rules and display fewer behavior problems than boys, thus prompting less attention from teachers. The appropriate behaviors attributed to girls in these studies bear a remarkable resemblance to many of the characteristics associated with work ethic endorsement. Further investigation into sex differences which show up as early as elementary school might contribute to understanding of work ethic differences by sex in the adult population.

Very little difference was detected in the work ethic attributes for workers grouped by age. These findings were consistent with previous



studies which found that work ethic endorsement did not differ by age (cf. Buchholz, 1978; Furnham, 1982; Ma, 1986). Generalizations about the poor work ethic and work attitudes of young people were not supported by this study.

This study demonstrated that for the attributes examined, level of education was not a strong indicator of a person's work ethic. Respondents with higher levels of education tended to score higher for initiative and being dependable and were less apt to describe themselves in a negative manner on the reversed instrument items. Mean scores for interpersonal skills did not significantly differ for respondents with differing levels of education.

To the extent that respondents' work ethic attributes did differ by level of education, those differences were relatively consistent with predictable outcomes. Higher levels of initiative and being dependable as well as a positive attitude toward one's self would contribute to success in school. In considering the lack of strength for level of education as a predictor of work ethic, only 16.2% of the sample for this study had less than a high school diploma, and most of this group likely attended school long enough to be significantly influenced by the experience. The results of this work would not contradict studies that have shown that schooling, along with the influences of family and society, helps to shape the attitudes which are a component of each person's belief system (Braude, 1975; Chusmir & Koberg, 1988; McClelland, 1961), but it would not strongly reinforce that either.

The work ethic of workers categorized by occupation differed significantly for the aspects of interpersonal skills, initiative, being dependable, and for responses made to the reversed items on the instrument. The pattern for interpersonal skills was predictable; persons in professional, sales, and service occupations scored higher for interpersonal skills than did those in production or equipment operator types of positions. Interpersonal skills, while important in any occupation, would be especially important for people in these occupations. Scoring patterns for initiative and being dependable were also higher for professional and sales occupations than for other occupations. These observations would be consistent with the high discretion work environment these workers typically operate in. For the negative reversed instrument items, workers in professional, clerical, and sales jobs had lower scoring patterns than did workers in other occupations. These workers either are less inclined to exhibit negative attributes or typically have a higher self-concept than workers in other occupations.

The results of this study showed that workers who had between

two and eight years of full-time work experience had lower mean scores for interpersonal skills, initiative, and being dependable than did workers with less than two years or more than eight years of full-time work experience. The two to eight year group also had a significantly higher mean score on the negative reversed instrument items. This was consistent with the Buchholz (1978, p. 226) statement that "young people enter the work force with individualistic notions and a belief in the value of work in and of itself. But after some years of being in the work force and facing the realities of the work place day in and day out, these beliefs may weaken." The present study, however, shows that workers move beyond the disillusionment described by Buchholz, particularly with respect to initiative and being dependable.

Collectively, the results of this study provide a workplace based assessment of selected work ethic attributes for consideration by students and professionals in career and workforce development related fields. For those preparing to enter the workforce, specific insights are provided into work attitude differences one might expect to find on the job. Guidance is also given to professionals seeking to better understand the dynamics of the workplace and to influence work improvement and efficiency.

Inferences from the study are limited to the population of one geographic region in the southeastern United States. A study of work ethic and work attitudes in other regions of the country would be needed to generalize to the national workforce. The work reported here, however, forges new ground in the extent to which data represented workers from a diverse range of occupations and along a broad continuum of career stages.

Some of the findings of this study are related to areas where previous research appeared to be contradictory, in particular with regard to sex differences. With the dramatic shifts in the number and roles of women in the workplace, results of studies completed more than a few years ago might no longer be accurate. In addition, previous studies have not examined differences in work ethic by gender using data from such a broad representation of occupations and encompassing the more balanced composition of the contemporary workforce. The significant differences between work ethic attributes for women and men, with women having significantly higher mean scores for interpersonal skills, initiative, and being dependable merit further study. Certainly the irony of these findings, when considered along

with literature on the glass ceiling and pay inequities, frames an agenda for further inquiry.

Hill and Petty (1995) have reported work that is underway to provide further guidance for influencing and encouraging development of work ethic attributes. Curriculum materials have been produced which provide a series of case studies and other learning activities for high school vocational education students and these items are now being pilot tested in several schools. While the personal traits which underlie individual attributes are largely formed during early childhood, learning activities which promote awareness of the importance of work ethic and issues such as interpersonal skills, initiative, and being dependable can be implemented. Much of what the study reported here provides is a basis for these efforts which is grounded in research rather than in anecdote or opinion.

As we look to the future in the area of career and workforce development, the soft skills and issues such as work ethic and work attitudes will continue to be a very significant concern. More and more jobs involve high discretion with regard to time management and personal effort. In this environment, interpersonal skills, initiative, and being dependable must have a place alongside technical competence as preparations are made for a successful career.

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