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## OSU CASE STUDY

# Faculty Burnout Measured

L. H. Newcomb and Richard W. Clark

### Introduction

Faculty in higher education face increasingly greater challenges in their work. Agriculture faculty are no exception. Edgerton (1980) indicated that a recent study showed that 96% of faculty believe that students are seriously deficient in basic skills. This forces faculty to increase time spent on remedial instruction and student advising. In addition, many faculty in agriculture are frustrated with the fact that an increasing number of students lack an agricultural background thereby making group instruction more difficult.

Role ambiguity also characterizes the faculty situation. This is especially true with agriculture faculty with split appointments in research or extension. With role ambiguity comes frustration which leads to strain.

Future career prospects also have an influence on the vitality of faculty members. The academic career of the university faculty of today is different from that of the 1950's or 1960's. "During the 1950's and 1960's, the size of college and university faculties increased dramatically to accommodate the boom in enrollment. Faculty enjoyed a high degree of mobility and, with it, the leverage for increasing salaries and perquisites" (Novotny, 1981, p. 2). Faculty members can tolerate present positions as long as they think they can move on to better positions. Unfortunately, faculty are becoming more immobilized. According to Edgerton (1980), the demand for services is lessening, and a large percentage (48%) of the faculty are in the middle age category between 35 and 50. Of these, 56% of the full-time faculty are tenured. These conditions lead to limited turnover and, therefore, less job mobility. Current faculty members may spend the next 25 years in their present positions. In a sense, they are trapped.

The combination of tight economic times, decreased job mobility, role ambiguity, job overload,

lower job satisfaction, frustration and a need for personal growth make faculty members prime candidates for "burnout."

### Problem Statement

The purpose of this study was to determine the extent of burnout among faculty in the College of Agriculture at the Ohio State University. Additionally, the study sought to determine the relationship of job satisfaction and coping skills to burnout.

### Objectives of the Study

The study was designed to answer the following research questions:

1. What is the extent of burnout among faculty in Agriculture at the Ohio State University?
2. To what extent is burnout correlated with job satisfaction and coping skills?
3. What differences are there in levels of burnout among three groups of faculty, i.e. 100% resident instruction, >50% research with remainder of appointment in resident instruction, and <50% research with remainder of appointment in resident instruction?

### Procedure

#### Population and Sample

The population for the study consisted of all faculty in the College of Agriculture on the Columbus campus with appointments in resident instruction and/or research (N = 88). The population was stratified into three groups: faculty with 100% resident instruction appointments, 50% or greater research appointments (combined with resident instruction), and less than 50% research appointment (combined with resident instruction). A census was conducted for the 100% resident instruction group (N = 15) and the >50% research group (N = 31). A 50% random sample was drawn from the >50% research group (n = 21). Thus, the sample consisted of 67 people. The response rate from this group was 94%.

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## Instrumentation

In this descriptive-correlational study, demographic data were gathered using a survey form developed by the researchers. The principle variable of interest, burnout, was measured using the Maslach Burnout Inventory (MBI) which was titled "Human Services Survey" to avoid preconditioning the respondents. The MBI measures the aspects of the burnout syndrome: emotional exhaustion, depersonalization, and personal accomplishment using three separate subscales. The emotional exhaustion subscale measures feelings of being overextended and exhausted by one's work. With depersonalization, feelings of impersonal responses and responses without feeling toward one's students are measured. The personal accomplishment subscale measures feelings of competence and successful achievement as related to working with students. Each of the subscales has two dimensions, i.e., frequency with which one experiences the feeling and intensity of strength of the feelings when they are present.

Maslach has previously validated the instrument and demonstrated its reliability. Reliability checks (Cronbach's alpha) were computed for the subjects of this study and the coefficients for the six burnout scores (three subscales, two dimensions each) were all above  $r = .70$ .

In order to measure the coping ability of faculty, the Personal Resources Questionnaire (PRQ) developed by Osipow and Spokane (1983) was used. This instrument measures four sets of coping behaviors: self-care behavior, which gets at one's propensity to follow healthful habits; social support systems, which emphasizes family, friends, and social groups; cognitive skills, which focuses on the ability to reduce stress through the effective management of one's time, effort, and reactions; and recreational activities, which reflects the use of recreation as a distractor from stressful events and as a source of satisfaction outside of work.

The PRQ has been validated and also shown to be reliable. The test retest reliability was  $r = .88$  and the internal consistency was shown to be  $r = .83$  using the Cronbach alpha procedure.

The instrument that was used to measure job satisfaction was used by Bowen (1980) as adopted from Wood and others. It is a job satisfaction/dissatisfaction scale that measures Herzberg's ten satisfiers and

dissatisfiers. Bowen demonstrated that the ten subscales were highly reliable ( $r > .81$  for each of the ten subscales). Cronbach's alpha coefficients were recomputed from the data gathered in this study and the lowest was  $r = .72$ .

## Findings

### Description of Sample

The average faculty member was a married male forty-three years old. Eighty-four percent of the faculty had children; 95% held a doctorate and 79% were tenured; 27% were assistant professors; 24% were associate professors; and about 48% were professors. About 21% held 100% resident instruction appointments; 49% held  $>50\%$  research appointments (remainder of appointment in resident instruction); and 30% held appointments which were less than 50% research with the remainder being resident instruction. All were located on the Columbus campus.

### Introduction to the Burnout Measure

There are three subscales in the Maslach Burnout Inventory: emotional exhaustion, depersonalization, and personal accomplishment. Each subscale has two dimensions; frequency and intensity. For emotional exhaustion and depersonalization the higher the score the more severe the state of burnout for the dimension being measured. In the case of personal accomplishment higher scores mean less burnout. Scores are considered to be high burnout scores if they fall in the upper third of the normative distribution as developed by Maslach.

### Emotional Exhaustion

Seventeen percent of the faculty received scores that placed them in the high burnout classification on the frequency dimension (Table 1). On the intensity dimension about 14% of the faculty were in the high burnout category (Table 1). This means that these faculty were working while having feelings such as: "I feel emotionally drained from my work," "I feel used up at the end of the work day," and "I feel like I'm at the end of my rope."

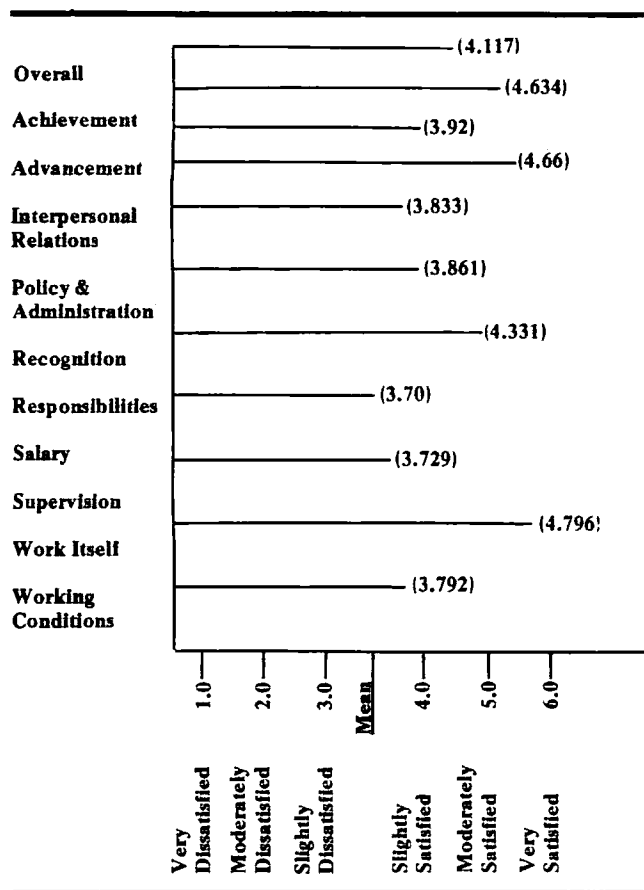
### Depersonalization

About 15% of the faculty received high burnout scores in the area of depersonalization on the frequency dimension (Table 1). Twenty-six percent of the faculty had such intense depersonalization perceptions that they were placed in the high burnout category (Table 1). This means they scored high on such items as "I feel I treat some recipients as if they

Table 1. Burnout Scores

| Level of Burnout | MBI Subscales                  |      |                                |      |                             |      |                             |      |                                   |      |                                   |      |
|------------------|--------------------------------|------|--------------------------------|------|-----------------------------|------|-----------------------------|------|-----------------------------------|------|-----------------------------------|------|
|                  | Emotional Exhaustion Frequency |      | Emotional Exhaustion Intensity |      | Depersonalization Frequency |      | Depersonalization Intensity |      | Personal Accomplishment Frequency |      | Personal Accomplishment Intensity |      |
|                  | N                              | %    | N                              | %    | N                           | %    | N                           | %    | N                                 | %    | N                                 | %    |
| High             | 10                             | 17.2 | 8                              | 13.8 | 9                           | 15.5 | 15                          | 25.9 | 16                                | 29.1 | 27                                | 48.2 |
| Moderate         | 22                             | 38.0 | 26                             | 44.8 | 27                          | 46.6 | 30                          | 51.7 | 22                                | 40.0 | 14                                | 25.0 |
| Low              | 26                             | 44.8 | 24                             | 41.4 | 22                          | 37.9 | 13                          | 22.4 | 17                                | 30.9 | 15                                | 26.8 |
| Totals           | 58                             | 100  | 58                             | 100  | 58                          | 100  | 58                          | 100  | 55                                | 100  | 56                                | 100  |
| Mean             | 20.379                         |      | 29.121                         |      | 6.893                       |      | 10.638                      |      | 36.182                            |      | 38.446                            |      |
| SD               | 8.598                          |      | 9.450                          |      | 4.318                       |      | 6.008                       |      | 6.979                             |      | 7.079                             |      |

**Figure 1. Mean Job Satisfaction Scores by Subscales and Overall**



were impersonal objects," "I don't really care what happens to some of my recipients," and "I worry that this job is hardening me emotionally."

**Personal Accomplishment**

Thirty percent of the faculty scored in the high burnout category for the frequency dimension (Table 1) of accomplishment and 48% were in the high category on the intensity of dimension (Table 1). Hence, faculty in the high burnout category for this subscale do **not** feel they "deal very effectively with the problems of my recipients," are **not** "positively influencing other people's lives through my work," and do **not** feel "very energetic."

**Job Satisfaction**

For job satisfaction an overall score was computed as well as scores for ten different subscales. Figure 1 provides an overall summary of these data.

This instrument consisted of a six point scale with 1 being very dissatisfied and 6 being very satisfied. The mean for the overall scale was 4.1. Eighty percent of the faculty indicated they were slightly, moderately, or very satisfied. However, further examination by subscales is necessary to gain a detailed perspective of the level of satisfaction of the faculty. The data for each subscale appear in Table 2.

There were a number of areas where the faculty expressed very high levels of satisfaction viz. achievement, interpersonal relations, the work itself, and, to a slightly less extent, responsibilities. Areas with levels of dissatisfaction that are notable were advancement, policy and administration, recognition, salary, supervision, and working conditions. In each case, at least 30% of the faculty were slightly, moderately, or very dissatisfied. At least 16% of the

**Table 2. Frequency Distribution of Job Satisfaction Scores by Subscales.**

| Level of Satisfaction               | Job Satisfaction Subscales |      |             |      |                         |      |                       |      |             |      |                  |      |        |      |             |      |             |      |                    |      |
|-------------------------------------|----------------------------|------|-------------|------|-------------------------|------|-----------------------|------|-------------|------|------------------|------|--------|------|-------------|------|-------------|------|--------------------|------|
|                                     | Achievement                |      | Advancement |      | Interpersonal Relations |      | Policy Administration |      | Recognition |      | Responsibilities |      | Salary |      | Supervision |      | Work Itself |      | Working Conditions |      |
|                                     | N                          | %    | N           | %    | N                       | %    | N                     | %    | N           | %    | N                | %    | N      | %    | N           | %    | N           | %    | N                  | %    |
| Very dissatisfied (0.0-1.49)        | 0                          | 0    | 1           | 1.6  | 0                       | 0    | 1                     | 1.6  | 0           | 0    | 0                | 0    | 3      | 4.8  | 3           | 4.8  | 0           | 0    | 0                  | 0    |
| Moderately dissatisfied (1.50-2.49) | 1                          | 1.6  | 5           | 8.2  | 0                       | 0    | 10                    | 16.4 | 5           | 8.2  | 4                | 6.5  | 7      | 11.3 | 8           | 12.9 | 0           | 0    | 3                  | 4.8  |
| Slightly dissatisfied (2.50-3.49)   | 1                          | 1.6  | 13          | 21.3 | 4                       | 6.6  | 10                    | 16.4 | 15          | 24.6 | 9                | 14.5 | 10     | 16.2 | 17          | 27.5 | 5           | 8.1  | 23                 | 37.1 |
| Slightly satisfied (3.50-4.49)      | 22                         | 36.1 | 24          | 39.4 | 17                      | 27.8 | 20                    | 32.8 | 27          | 44.2 | 17               | 27.4 | 26     | 41.9 | 15          | 24.2 | 10          | 16.1 | 19                 | 30.7 |
| Moderately satisfied (4.50-5.49)    | 32                         | 52.5 | 14          | 22.9 | 33                      | 54.1 | 16                    | 26.2 | 10          | 16.4 | 23               | 37.1 | 13     | 21.0 | 13          | 20.9 | 34          | 54.8 | 15                 | 24.2 |
| Very satisfied (5.50-6.00)          | 5                          | 8.2  | 4           | 6.6  | 7                       | 11.5 | 4                     | 6.6  | 4           | 6.6  | 9                | 14.5 | 3      | 4.8  | 6           | 9.7  | 13          | 21.0 | 2                  | 3.2  |
| Totals                              | 60                         | 100  | 61          | 100  | 61                      | 100  | 61                    | 100  | 61          | 100  | 62               | 100  | 62     | 100  | 62          | 100  | 62          | 100  | 62                 | 100  |
| Mean                                | 4.634                      |      | 3.924       |      | 4.66                    |      | 3.833                 |      | 3.861       |      | 4.331            |      | 3.70   |      | 3.729       |      | 4.796       |      | 3.792              |      |
| SD                                  | .686                       |      | 1.013       |      | .696                    |      | 1.155                 |      | .974        |      | 1.026            |      | 1.171  |      | 1.289       |      | .816        |      | .853               |      |

faculty were moderately or very dissatisfied with policy and administration, salary, and supervision.

### Resources for Coping

The resources for coping instrument contained subscales that dealt with the individual's resources for coping in the areas of recreation, self-care, social support, and rational coping. Data are reported in Table 3. In the area of recreation about 10% of the faculty scored in the first quartile and 38% were in the second quartile. For self-care about 10% were in the first quartile and 52% were in the second quartile. Ninety-five percent of the faculty scored in the upper 50% on the social support subscale. Similarly, about 86% scored in the upper 50% on the rational coping subscale.

### Relationship Between Burnout and Job Satisfaction

Pearson product moment correlations were calculated to determine the degree of relationship between burnout and job satisfaction (Table 4). For the emotional exhaustion (frequency) subscale there was a substantial negative relationship indicating that as burnout increases job satisfaction decreases. There was a moderately negative relationship between the emotional exhaustion (intensity) scores and job satisfaction. The remainder of the relationships were low to negligible and generally negative.

### Relationship Between Burnout and Personal Resources for Coping

As can be seen in Table 5 the relationships between burnout and coping were mixed. The most sizable correlations were between emotional exhaustion (both dimensions) and recreation and self-care scores. These correlations were low to moderate.

### Differences in Burnout, Job Satisfaction, and Coping Scores by Type of Appointment

The data were analyzed to determine if there were differences in burnout, job satisfaction, or coping scores among the three groups: those with research appointments of 50% or greater, those with a 100% teaching appointment, and those with any other combination of research and teaching appointments.

For burnout the only significant difference was on the personal accomplishment (frequency) subscale (Table 6). The faculty with >50% research appointments experienced more burnout than the other two groups.

Table 7 reveals the ANOVA results for job satisfaction scores. The 100% resident instruction group had significantly higher job satisfaction scores than the <50% research (remainder resident instruction) group.

No significant differences were revealed in the scores of the three groups on the PRQ scores.

**Table 3. Personal Resources for Coping Stress**

|                | Personal Resources for Coping Subscales |      |           |      |                |      |                 |      |
|----------------|---|------|-----------|------|----------------|------|-----------------|------|
|                | Recreation                              |      | Self Care |      | Social Support |      | Rational Coping |      |
| Quartile       | N                                       | %    | N         | %    | N              | %    | N               | %    |
| First (10-19)  | 6                                       | 9.5  | 6         | 9.5  | 0              | 0    | 0               | 0    |
| Second (20-29) | 24                                      | 38.1 | 33        | 52.4 | 3              | 4.8  | 9               | 14.3 |
| Third          | 30                                      | 47.6 | 23        | 36.5 | 13             | 20.6 | 28              | 44.4 |
| Fourth (40-50) | 3                                       | 4.8  | 1         | 1.6  | 47             | 74.6 | 26              | 41.3 |
| Totals         | 63                                      | 100  | 63        | 100  | 63             | 100  | 63              | 100  |
| Mean           | 29.175                                  |      | 27.794    |      | 43.127         |      | 37.19           |      |
| SD             | 6.467                                   |      | 5.99      |      | 6.079          |      | 6.024           |      |

### Conclusions

1. Burnout is present among faculty in Agriculture at Ohio State University to an extent that warrants action.
2. Burnout is highly correlated with job satisfaction.
3. Faculty are sufficiently dissatisfied with advancement, policy and administration, recognition, salary, supervision, and working conditions to suggest the need for action to improve these areas.
4. The faculty show good coping skills in the areas of social support and rational coping, but are not adequately utilizing the coping resources of recreation and self-care.

### Recommendations

1. College administrators need to be more aware of the possibilities of burnout in their faculty so an action agenda to address concerns can be developed.
2. Administrators should examine areas of dissatisfaction and develop strategies they feel will enhance satisfaction.
3. Faculty should be apprised of burnout and given information regarding the burnout phenomenon.
4. Sessions on coping strategies should be offered.
5. Faculty should be reminded of recreational programs on campus and encouraged to participate.
6. From the literature we know that critical elements helping to prevent burnout are social support systems (at work and at home), reduced overload, and opportunity to change the mix of one's work. Therefore, the college should encourage the development of social support systems in the departments and provide opportunities for, expectations to, and incentives required to have faculty alter periodically the mix of their responsibilities.

**Table 4. Relationship Between Job Satisfaction and Burnout Subscales (n = 57)**

| Variable         | Emotional Exhaustion |           | Depersonalization |           | Personal Accomplishment |           |
|------------------|----------------------|-----------|-------------------|-----------|-------------------------|-----------|
|                  | Frequency            | Intensity | Frequency         | Intensity | Frequency               | Intensity |
| Job satisfaction | -.61                 | -.43      | -.23              | -.16      | .07                     | -.03      |

**Table 5. Relationship Between Burnout Subscales and Coping Subscales (n = 58)**

| Variable                              | Type of Appointment |           |                |                 |
|---------------------------------------|---------------------|-----------|----------------|-----------------|
|                                       | Recreation          | Self Care | Social Support | Rational Coping |
| Emotional exhaustion:<br>Frequency    | -.46                | -.31      | -.13           | -.22            |
| Emotional exhaustion:<br>Intensity    | -.37                | -.15      | -.15           | -.08            |
| Depersonalization:<br>Frequency       | -.20                | -.13      | .00            | .00             |
| Depersonalization:<br>Intensity       | -.11                | .07       | -.10           | .17             |
| Personal accomplishment:<br>Frequency | .05                 | .21       | .06            | .27             |
| Personal accomplishment:<br>Intensity | -.08                | .17       | .00            | .19             |

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**Table 6. Analysis of Variance of Personal Accomplishment Frequency for Faculty by Type of Appointment**

| Source | Type of Appointment                         |                  |   |   |
|--------|---|------------------|---|---|
|        | 50% or more research<br>Balance Instruction | 100% instruction | Less than 50% research<br>Balance Instruction | F |
| n:     | 26  | 12               | 17  |   |
| m:     | 33.4615                                     | 39.2500          | 38.1765                                       |   |
| SD:    | 7.1902                                      | 6.7572           | 5.3763  |   |
| df     | 2   | 58               | 60  |   |
| ss     | 373.00                                      | 2257.18          | 32.8709                                       |   |
| ms     | 186.50                                      | 39.103           | 547.848                                       |   |
| F      | 4.30 <sup>1</sup>                           |                  |   |   |

| Mean  | Group                               |
|-------|-------------------------------------|
| 33.46 | 50% or more research                |
| 38.18 | Less than 50% research <sup>2</sup> |
| 39.25 | 100% instruction <sup>2</sup>       |

<sup>1</sup>p < .02.  
<sup>2</sup>Means for 100% instruction and less than 50% research are significantly different from 50% or more research at the .05 level.

**Table 7. Analysis of Variance of Job Satisfaction Scores for Faculty by Type of Appointment**

| Source | Type of Appointment                         |                  |   | F |
|--------|---|------------------|---|---|
|        | 50% or more research<br>Balance Instruction | 100% instruction | Less than 50% research<br>Balance Instruction |   |
| n:     | 29  | 13               | 19  |   |
| m:     | 4.1283                                      | 4.4577           | 3.8663  |   |
| SD     | .6260                                       | .9775            | .6551   |   |
| df     | 2   | 58               | 60  |   |
| ss     | 2.7066                                      | 30.1643          | 32.8709                                       |   |
| ms     | 1.3533                                      | .5201            | 547.848                                       |   |
| F      | 2.602 <sup>2</sup>                          |                  |   |   |

<sup>1</sup>.....Means are significantly different.  
<sup>2</sup>p < .08.

**TECHNICAL REPORT**

**Soil Core Monoliths**

D.D. Malo and R.D. Nielsen

**Abstract**

Constructing a soil monolith requires an undisturbed soil profile sample that can be easily mounted and displayed. The collection of profile samples from pits or road cuts by traditional methods is time consuming and often expensive. An alternative solution was developed to collect the profile samples using a hydraulic probe fitted with a core tube having an inside diameter of 6.9 cm (2.7 in). The soil core is mounted on 7.6 cm (3 in) diameter plastic polyvinyl chloride (PVC) pipe that has been split longitudinally. Excess soil is removed from the core and the sample is treated with a vinyl fixative solution. The treated core is mounted on a plywood display board that contains classification, site, location, and horizonation information about the soil. Monoliths prepared using this procedure are easy to construct, durable, less expensive, attractive, large enough to show soil properties clearly, and they are comparable to those gathered by traditional methods.

Most of our food, fiber, and lumber directly or indirectly comes from the soil. As the world population increases, pressure mounts to increase production and this can be done wisely only if individuals understand the characteristics of the soil. Surface soil colors change with landscape position, and so do the internal physical and chemical properties of soils. Visible changes in soil structure, drainage, and rooting pat-

Contribution from the Dept. of Plant Science, S. Dak. Agric. Exp. Stn., Project No. H-184, Journal Paper No. 2080, S. Dak. State Univ., Brookings, 57007 and USDA-SCS. Mayo is an associate professor of soils, Dept. of Plant Science, S. Dak. State Univ., Brookings, 57007 and Nielson is a soil scientist with the USDA Soil Conservation Service at Wall, S.D. 57790.