SWP 31/92  STRESS, SOCIAL SUPPORT AND PSYCHOLOGICAL WELL-BEING IN BRITISH CHARTERED ACCOUNTANTS

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ABSTRACT

This paper reports an exploratory study of stress, social support and psychological well-being in British chartered accountants, using data from a 399 self-report questionnaires. The results suggest that the underlying structure of stress in British accountancy can be explained by three dimensions; quantitative overload stressors, professional/administrative interface stressors and nuisance stressors. The underlying structure of social support for the sample can be represented by three dimensions of help support, social dependability and esteem support. Differences in these factors and psychological well-being were demonstrated between senior and non-senior accountants, large and small/medium sized organisations and practices and non-practice organisations. Moreover associations between psychological well-being and the stressor and social support factors are also demonstrated.
INTRODUCTION

Very little research has been done concerning occupational stress in accountancy, even though accountancy is traditionally thought to be a stressful occupation (Coppage and French, 1987), and the realization that stress management has become increasingly important for accountants (Everly and Smith, 1992). Although some research has examined stress amongst accountants in meeting audit deadlines (Campbell et al, 1988, Cook and Kelley, 1988), few studies have addressed wider issues of stress amongst accountants.

Collins and Killough (1989) surveyed 1200 American accountants and found that the major sources of work stress for the accountant is an environment that demands long hours and the need to face frequent and demanding deadlines. Possibly as a result of this type of environment, Collins and Killough’s sample also reported that conflict between home and work was also a major source of stress.

Haskins et al (1991) also examined a sample of American accountants (n=168). They found that the stressors experienced by accountants could be represented by three dimensions; role/organisational stressors, work overload/time pressure stressors and interpersonal relations stressors. However, only the latter two of these factors was found to predict psychological symptoms in a multiple regression.
One of the most important constructs consistently identified as being related to well-being is social support (Cassell, 1976, Kaplan et al, 1977, House, 1981, Wallston et al, 1983). House (1981) has suggested that social support can be subdivided into emotional support, instrumental support, informational support and appraisal support. Brown et al (1986) have noted that there is also a negative aspect to social support, or 'being let down' by people. However, neither of the present authors are aware of any studies that have examined the relationship between stress and well-being amongst accountants.

The aims of the present study are four fold. Firstly, unlike previous studies, this study examines the structure of stress amongst British accountants. Another aim is to examine the underlying dimensions of social support in accountants. The third aim is to relate organisational type (eg. practice versus non-practice) to stressors and social support. The final aim of the study is to examine the relationships between stress, support and psychological well-being in British accountants.

METHODS

Procedure and respondents.

A self-report questionnaire was mailed to 1500 accountants working in England and Wales. The names were selected at random from List of Members of the Institute of Chartered
Accountants for England and Wales. Ninety nine questionnaires were returned uncompleted, either because the targeted individual had moved abroad, had been made unemployed, was taking an extended break from work or else was deceased. Three hundred and ninety nine questionnaires were returned completed and usable for analysis. Thus a response rate of 28.4% was obtained. This low response rate can be explained by the length of the questionnaire administered. The demographic characteristics of the sample are shown in table 1.

Questionnaire design.

The questionnaire included five different scales and a demographic section. Work related psychological well-being was assessed by three short scales devised and validated by Warr (1990). These scales assess job related contentment-anxiety, enthusiasm-depression and pleasure. High scores on these scales indicate good psychological well-being. General psychological well-being was assessed by the twelve item version of the General Health Questionnaire (GHQ12, Goldberg and Williams, 1988). The GHQ12 can be scored by two methods. The Likert scoring method, where items are coded 0-3, is more suitable for multivariate analysis (Banks et al, 1980), and thus was used in this study. High scores on this scale indicate poor psychological well-being.
The frequency and intensity of stressors experienced by accountants was assessed by two parallel eighteen item scales. The items were selected after a series of 20 interviews with accountants conducted by the first author (Daniels 1992). The respondents were asked to rate the frequency with which the eighteen events had been experienced in the previous two weeks on a six-point fully anchored Likert scale (ranging from 'not at all' through to 'all of the time'). Respondents were asked to rate how stressful they had found the eighteen events over the previous two weeks on a five-point fully anchored Likert scale ('not at all stressful' to 'very stressful').

Social support was assessed by a fifteen item scale derived from the interviews reported above and a review of the literature on social support (Daniels, 1992). Support was assessed by asking the respondents to assess the frequency with which they had received supportive behaviours over the previous two weeks. Frequency was assessed by a six-point fully anchored Likert type scales ('Not at all' to 'All of the time').

RESULTS

Descriptive statistics.

The descriptive statistics for the well-being scales are shown at the top of table 2, along with their coefficients of reliability. Coefficients of reliability and descriptive
statistics for the scales derived from principal components analyses, described below, are also shown.

The structure of stress in accountants.

The stressor frequency and intensity items were subject to separate principal components analyses with oblique rotations. In both cases, Cattell's scree plot (Norusis, 1988) revealed clear evidence of three factor solutions (accounting for 43.6% of the variance in frequency items and 46.7% of the variance in the intensity items). Examining the structure matrices for both solutions, a convergence of factor solutions was found. Factor loadings were chosen on the basis of structure matrix loadings above 0.40 for both solutions.

The three factors could be named quantitative work load stressors (items dealing with work load of events interfering with work, eg. 'working long hours'), professional/administrative interface stressors (items that pertain to administrative matters, or the interference of professional pursuits, eg. 'supplying information to the Inland Revenue') and nuisance stressors (stressors largely out of the control of the individual, eg. 'computers developing technical problems'). One item (no definite role at work) did not load to criteria.
The structure of social support received by accountants.

The items in the social support scale were subjected to a principal components analysis with an oblique rotation. An examination of Cattell's scree plot revealed a three factor solution. The three factors extracted accounted for 50.6% of the variance in total. Examining the structure matrices, it was found that the first factor consisted of items pertaining to 'help support' (eg. 'been able to seek advice on technical matters'), the second factor consisted of items relating to 'being let down' (eg. 'people at work been too interested in their own ambitions, rather than help you') and the third factor to items relating to 'esteem support' (eg. 'been told by your colleagues and/or superiors that they have confidence in your work'). Since all the reversed scored items loaded on the second factor, this factor was named 'social dependability', the antithesis of being let down, and was scored to reflect high support. Receiving sympathy was found to load most strongly on esteem support factor, however, since receiving sympathy is a form of emotional help, this item was judged to load on the first factor. Being aware that other people had spotted one's emotional problems loaded positively on the first factor, but only to 0.26. However, given the conceptual fit of the this item with the first factor, it was decided that this item belonged to the help support factor.
Differences in stress, social support and well-being between organisational and job types.

Differences in the stress, support and well-being scales between senior and non-senior position in company, practice and non-practice organisations and small/medium and large organisations were tested in a three-way multivariate analysis of variance (MANOVA). All the main effects were found to be significant ($p<0.01$, df=352). However, none of the interactions were found to be significant ($p>0.01$).

The main effects were further examined by three separate two-groups discriminant function analyses (DFAs). In each of the analyses, a variable was judged to make a significant contribution to a function if its correlation exceeded 0.40 in absolute magnitude.

For seniority of position, the discriminant function was found to account for 33.33% of the between groups variance. The correlations between the function and each of the variables are shown in table 3. For ease of interpretation, the items are ordered by the size of their correlation with the discriminant function.

As can be seen from table 3., the respondents sampled from senior positions reported having a higher frequency of professional/administrative interface stressors, but a
greater amount of job pleasure than their counterparts in non-senior positions.

The correlations between variables and the discriminant function are shown in table 4 for the DFA between practices and non-practices. The discriminant function explained 17.43% of the between groups variance. As can be seen from table 4., those accountants working for practices report a greater frequency of professional/administrative stressors and a higher intensity of nuisance stressors (notice also that intensity of professional/administrative interface stressors and frequency of nuisance stressors almost loaded on the function to criterion).

Table 5. shows the correlations between variables and the discriminant function for the DFA comparing large to small/medium sized organisations. The discriminant function accounts for 21.49% of the between groups variance. As can be seen from table 5., respondents from smaller companies reported experiencing a greater frequency and a greater intensity of professional/administrative interface stressors.
The relationship between stress, social support and psychological well-being.

The degree of association between stress, social support and psychological well-being was assessed by canonical correlation analysis, where all the psychological well-being variables were treated as dependent. The analysis revealed a predominant canonical variate accounting for 80.48% of the total variance between the psychological well-being variables, and a second variate accounting for 16.07% of the variance between psychological well-being variables. The other two variates accounted for less than four percent of the variance, and thus were considered non-significant.

Correlations between the dependent variables and the first canonical variable all exceeded 0.67 in absolute value. This indicates that the canonical variate represents generalized psychological well-being, with high scores on the canonical variate representing poor psychological well-being. Only job enthusiasm and job pleasure correlated above 0.40 with the second variate. This second variate is therefore representative of job pleasure/enthusiasm, with high scores representing high well-being. The correlations between the canonical variates, dependent and independent variables are shown in table 6.

INSERT TABLE 6 HERE
The canonical correlations for the first and second variates came to 0.64 and 0.35 respectively. Squaring these values gives the amount of variance explained by a linear combination of the independent variables for each of the canonical variates. Therefore, a linear combination of the dependent variables explains 41.0% of the variance in the first variate and 12.2% of the variance in the second variate. *

Examining table 6., it can be seen that general poor psychological well-being (variate 1) in accountants is very strongly associated with a high intensity quantitative work load stressors, high intensity nuisance stressors and high intensity professional/administrative interface stressors. To a lesser extent, general poor psychological well-being in accountants is associated with a high frequency of both nuisance stressors and quantitative work load stressors. Good general psychological well-being is associated with high social dependability.

Job pleasure-enthusiasm (variate 2) is shown in table 6. to be highly associated with a high frequency of quantitative work load stressors. A high frequency of professional/administrative interface stressors and high intensity work load stressors are also associated with job pleasure-enthusiasm. Also associated with job pleasure-enthusiasm are help support and esteem support.

*Although the squared canonical correlation does not strictly represent the amount of variance in the dependent variables explained by the independent variables, it was decided to use this index since it is more appropriate when the dependent variables share a lot of variance (Stevens, 1986), as here.
DISCUSSION

The stressors experienced by the sample were found to be represented by three underlying factors; quantitative workload stressors, professional/administrative interface stressors and nuisance stressors. This structure held for both the frequency and intensity items.

One factor emerged in common with the factor structure reported by Haskins et al, ie. workload stressors. Haskins et al also found a role/organisational stressors factor, which is similar to the professional/administrative interface stressor factor reported here. The interpersonal relations factor uncovered by Haskins et al would be subsumed under social support in this study. Thus there appears to be some cross-cultural similarity on the underlying structure of stressors experienced by British and American accountants.

Principal components analysis revealed a three factor solution for the social support scale; help support, social dependability and esteem support. Help support incorporates those types of support that are elicited in response to a stressor (instrumental support, informational support and emotional support). Esteem support corresponds to Cobb’s (1976) component of support that is information leading to individual to believe that s/he is esteemed and valued. Social dependability is the antithesis of negative support, ie. being let down (Brown et al, 1986).
The results demonstrated that senior accountants experience a greater frequency of professional/administrative interface stressors and greater job pleasure than those accountants in non-senior positions. A higher amount of professional/administrative interface stressors may have been expected, since senior professionals have to perform administrative/management functions, as well as their professional duties (Mintzberg, 1979). Therefore, it is not surprising to find that senior accountants experience conflicts between their professional work and their administrative duties more often than their junior colleagues.

There are a number of reasons why more senior accountants should experience greater job pleasure. The greater amount of money earned by senior accountants may not only increase the material quality of the accountants' life, but may also provide a valuable coping resource (Folkman et al, 1979). Moreover, it is to be expected that senior accountants experience more autonomy in their work. Work autonomy has been linked directly to work related well-being (Spector, 1986), and has also been shown to be a facilitator of effective coping (Daniels, 1992). Also, reaching senior accountancy positions may be thought of as the attainment of career goals (cf. Cooper and Marshall, 1976).

Those accountants working in practices were also shown to report a greater frequency of professional/administrative stressors and experience a greater intensity of nuisance stressors. The greater frequency of professional
administrative stressors may be related to the structuring of professional organisations, such as accountancy practices. Mintzberg (1979) notes that in professional organisations, the professional, as well as being responsible for producing the organisation's output, also occupies a managerial/administrative role with respect to support staff and junior staff (especially for senior staff, see above). However, in non-accountancy organisations, the accountant occupies a support role, providing in-house consultancy etc. In this role, the accountant has few administrative functions, since these are provided by the rest of the organisation.

The greater intensity of nuisance stressors reported by those of the sample that work in practices may be due to the nature of practice work. Remember that nuisance stressors were defined as those stressors largely out of control of the individual. Whereas these nuisances interfere with all accountants' work, they may be more stressful for the accountant in practice since the practice may lose money if the work is not delivered on time or to standard. In-house accounts departments do not have to compete for work, so interferences with work become less salient.

Those members of the sample from small/medium sized companies reported experiencing a greater frequency and a greater intensity of professional/administrative stressors. In smaller companies, the administrative back-up is not available to allow this type of work to be moved to specialist
administrators. Hence the greater experienced frequency and intensity of these types of stressors in smaller companies.

Canonical correlation analysis revealed that poor general well-being is associated with a high intensity quantitative work load stressors, a high intensity of nuisance stressors, a high intensity of professional/administrative interface stressors and little social dependability (ie. being let down). To a lesser extent, a high frequency of both quantitative work load stressors and nuisance stressors are also associated with poor general psychological well-being. Job pleasure-enthusiasm was found to be associated with help support and esteem support.

To a large extent, these results are expected, given that previous research (cited in the introduction of this paper) has shown that poor well-being is associated with the occurrence of stressors and being let down, and that good psychological well-being is associated with high social support.

However, the job pleasure-enthusiasm variate was also associated with a high frequency of quantitative workload stressors, a high frequency of professional/administrative interface stressors and a high intensity of quantitative workload stressors. These result converge with those of Burke (1976), who found job satisfaction to be weakly related to high workload is a sample of professionals.
Since job pleasure-enthusiasm was found to be the second variate (accounting for about 16% of the variance within the dependent variable set), it may be that a small amount of variance in job-related psychological well-being is associated with eustress. Eustress is the term invented by Selye (1976) as that stress in one's life necessary for motivation. Conversely, these latter results may be due to the way some people react to stress. Maddi and Kobassa (1984) have put forward the concept of the hardy personality, that is a personality type that buffers the effects of stress. Maddi and Kobasa posit that the hardy personality responds to stress as a challenge, and therefore views stress as an opportunity for personal growth. Clearly, this unusual result deserves further attention.

REFERENCES


FOLKMAN, S., SCHAEFFER, C., LAZARUS, R.S. (1979). Cognitive processes as mediators of stress and coping. In V.Hamilton and


Table 1. The demographic characteristics of the sample.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean or frequency</th>
<th>Standard deviation or percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs)</td>
<td>39.14</td>
<td>9.49</td>
</tr>
<tr>
<td>Time spent as chartered accountant (yrs)</td>
<td>14.18</td>
<td>9.74</td>
</tr>
<tr>
<td>Organisational tenure (yrs)</td>
<td>7.63</td>
<td>7.07</td>
</tr>
<tr>
<td>Time spent in position (yrs)</td>
<td>5.02</td>
<td>5.94</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>334</td>
<td>83.7%</td>
</tr>
<tr>
<td>Female</td>
<td>64</td>
<td>16.0%</td>
</tr>
<tr>
<td>Number working in practice</td>
<td>201</td>
<td>50.4%</td>
</tr>
<tr>
<td>Number working for non-practice organisations</td>
<td>196</td>
<td>49.1%</td>
</tr>
<tr>
<td>Number in senior positions (ie. above middle management)</td>
<td>285</td>
<td>71.4%</td>
</tr>
<tr>
<td>Number working in middle or junior positions</td>
<td>113</td>
<td>28.3%</td>
</tr>
<tr>
<td>Number working for small/medium sized companies</td>
<td>218</td>
<td>54.6%</td>
</tr>
<tr>
<td>Number working for large national/public organisations</td>
<td>179</td>
<td>44.9%</td>
</tr>
</tbody>
</table>
Table 2. Means, standard deviations and internal reliabilities for stress intensity, stress frequency, social support factors and psychological well-being.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std dev</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>job pleasure</td>
<td>2.97</td>
<td>0.88</td>
<td>0.91</td>
</tr>
<tr>
<td>job contentment</td>
<td>3.80</td>
<td>0.91</td>
<td>0.86</td>
</tr>
<tr>
<td>job enthusiasm</td>
<td>4.40</td>
<td>0.88</td>
<td>0.88</td>
</tr>
<tr>
<td>GHQ12</td>
<td>10.65</td>
<td>4.89</td>
<td>0.87</td>
</tr>
<tr>
<td>QWLI</td>
<td>7.26</td>
<td>4.14</td>
<td>0.82</td>
</tr>
<tr>
<td>QWLF</td>
<td>14.67</td>
<td>4.63</td>
<td>0.71</td>
</tr>
<tr>
<td>P/AII</td>
<td>6.17</td>
<td>4.60</td>
<td>0.78</td>
</tr>
<tr>
<td>P/AIF</td>
<td>21.88</td>
<td>7.94</td>
<td>0.76</td>
</tr>
<tr>
<td>NUII</td>
<td>4.18</td>
<td>2.88</td>
<td>0.60</td>
</tr>
<tr>
<td>NUIF</td>
<td>5.28</td>
<td>3.11</td>
<td>0.57</td>
</tr>
<tr>
<td>HELP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOC DEP</td>
<td>12.07</td>
<td>2.63</td>
<td>0.71</td>
</tr>
<tr>
<td>EST SUP</td>
<td>2.41</td>
<td>2.44</td>
<td>0.90</td>
</tr>
</tbody>
</table>

QWLI stands for 'quantitative work load stressors - intensity', QWLF stands for 'quantitative work load stressors - frequency', P/AII stands for 'professional/administrative interface stressors' - intensity, P/AIF stands for 'professional/administrative interface stressors - frequency', NUII stands for 'nuisance stressors - intensity', NUIF stands for 'nuisance stressors - frequency', HELP stands for 'help support', SOC DEP stands for 'social dependability', EST SUP stands for 'esteem support'. 
Table 3. Correlations between variables and canonical discriminant function for DFA comparing between senior and non-senior positions. Positive correlations indicate values are higher for senior positions.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation with function</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/AIF</td>
<td>0.69</td>
</tr>
<tr>
<td>Job pleasure</td>
<td>0.41</td>
</tr>
<tr>
<td>QWLF</td>
<td>0.35</td>
</tr>
<tr>
<td>P/AII</td>
<td>0.32</td>
</tr>
<tr>
<td>Job enthusiasm</td>
<td>0.26</td>
</tr>
<tr>
<td>GHQ12</td>
<td>-0.26</td>
</tr>
<tr>
<td>Job contentment</td>
<td>0.24</td>
</tr>
<tr>
<td>SOC DEP</td>
<td>0.19</td>
</tr>
<tr>
<td>NU1I</td>
<td>-0.14</td>
</tr>
<tr>
<td>NU1F</td>
<td>-0.08</td>
</tr>
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</table>
Table 4. Correlations between variables and canonical discriminant function for DFA comparing between practices and non-practices. Positive correlations indicate values are higher for practices.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation with function</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/AIF</td>
<td>0.73</td>
</tr>
<tr>
<td>NUII</td>
<td>0.41</td>
</tr>
<tr>
<td>P/AII</td>
<td>0.39</td>
</tr>
<tr>
<td>NUIF</td>
<td>0.38</td>
</tr>
<tr>
<td>EST SUP</td>
<td>-0.29</td>
</tr>
<tr>
<td>QWLI</td>
<td>0.24</td>
</tr>
<tr>
<td>SOC DEP</td>
<td>0.08</td>
</tr>
<tr>
<td>Job enthusiasm</td>
<td>-0.07</td>
</tr>
<tr>
<td>QWLF</td>
<td>0.07</td>
</tr>
<tr>
<td>HELP</td>
<td>0.06</td>
</tr>
<tr>
<td>Job contentment</td>
<td>-0.04</td>
</tr>
<tr>
<td>Job pleasure</td>
<td>0.01</td>
</tr>
</tbody>
</table>
Table 5. Correlations between variables and canonical discriminant function for DFA comparing between large and small/medium sized companies. Positive correlations indicate values are higher for small/medium sized organisations.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation with function</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/AIF</td>
<td>0.71</td>
</tr>
<tr>
<td>P/AII</td>
<td>0.41</td>
</tr>
<tr>
<td>SOC DEP</td>
<td>0.27</td>
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<tr>
<td>EST SUP</td>
<td>-0.21</td>
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<tr>
<td>QWLF</td>
<td>-0.17</td>
</tr>
<tr>
<td>HELP</td>
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</tr>
<tr>
<td>Job pleasure</td>
<td>0.11</td>
</tr>
<tr>
<td>NUIF</td>
<td>-0.07</td>
</tr>
<tr>
<td>Job contentment</td>
<td>0.06</td>
</tr>
<tr>
<td>NUII</td>
<td>-0.06</td>
</tr>
<tr>
<td>Job enthusiasm</td>
<td>0.05</td>
</tr>
<tr>
<td>QWLF</td>
<td>-0.04</td>
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</tbody>
</table>
Table 6. Correlations between variables and canonical variates.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Variate no.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Job pleasure</td>
<td>1</td>
<td>-0.67</td>
<td>0.60</td>
</tr>
<tr>
<td>Job contentment</td>
<td>2</td>
<td>-0.73</td>
<td>0.56</td>
</tr>
<tr>
<td>Job enthusiasm</td>
<td></td>
<td>-0.99</td>
<td>-0.05</td>
</tr>
<tr>
<td>GHQ12</td>
<td></td>
<td>0.74</td>
<td>-0.31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Variate no.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>QWLI</td>
<td>1</td>
<td>0.75</td>
<td>0.43</td>
</tr>
<tr>
<td>QWLF</td>
<td></td>
<td>0.35</td>
<td>0.72</td>
</tr>
<tr>
<td>P/AII</td>
<td></td>
<td>0.63</td>
<td>0.33</td>
</tr>
<tr>
<td>P/AIF</td>
<td></td>
<td>0.06</td>
<td>0.55</td>
</tr>
<tr>
<td>NUII</td>
<td></td>
<td>0.57</td>
<td>0.12</td>
</tr>
<tr>
<td>NUIF</td>
<td></td>
<td>0.42</td>
<td>0.12</td>
</tr>
<tr>
<td>HELP</td>
<td></td>
<td>-0.11</td>
<td>0.57</td>
</tr>
<tr>
<td>SOC DEP</td>
<td></td>
<td>-0.73</td>
<td>0.14</td>
</tr>
<tr>
<td>EST SUP</td>
<td></td>
<td>-0.15</td>
<td>0.45</td>
</tr>
</tbody>
</table>

Note that the first variate represents a general psychological well-being and the second variate represents job pleasure-enthusiasm.
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