CHAPTER VII

PREDICTIVE EFFICIENCY OF PERSONAL, PROFESSIONAL AND ORGANIZATIONAL CHARACTERISTICS FOR JOB SATISFACTION
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In order to examine the predictive efficiency of significant personal, professional and organizational correlates of job satisfaction (as identified through Pearson's product moment correlations) and to see whether the prediction of job satisfaction on the basis of the conjoint effect of personal, professional and organizational variables is higher than their separate predictions, as also to determine the combinations of predictor variables which best explain the variance in the job satisfaction of Home Science teachers, the technique of multiple correlations and step-up regression equations involving independent variables of physical need satisfaction, security need satisfaction, social need satisfaction, ego need satisfaction and total need satisfaction, (personal variables); disengagement, hindrance, esprit, thrust, consideration 0, initiating structure, consideration L and leadership behaviour (organizational variables); and with the criterion variable of job satisfaction was applied. Professional characteristics could not be taken as none of them related significantly to job satisfaction totals.

The following hypotheses were tested with the help of regression analysis:

V. Personal characteristics are significant predictors of job satisfaction.
VII. Organizational characteristics are significant predictors of job satisfaction.

VIII. Personal, professional and organizational characteristics, when taken conjointly, contribute more to job satisfaction than when considered individually.

"Multiple regression analysis is a method of analyzing the collective and separate contribution of two or more independent variables "x" to the variation of a dependent variable "y" (Kerlinger and Pedhazur, 1973)."

The square of multiple correlation ($R^2$), called the coefficient of determination, shows the proportion of variance of the criterion accounted for by different predictors. A stepwise multiple regression analysis enables one to know the most relevant variables which account for the maximum variance in the criterion from the total set of variables. Thus all the independent variables, namely physical need satisfaction, security need satisfaction, social need satisfaction, ego need satisfaction and total need satisfaction, and eight organizational variables, as were found to be significantly correlated with job satisfaction totals by way of product moment correlations or their constellation with the criterion variable of job satisfaction in factor analysis, were taken as predictor variables and the measure of job satisfaction (totals) as the criterion variable.
Further, to test the significance of the differences between the values of Rs from one specific combination of independent variables to the subsequent combination of variables explaining the stepping up of an additional variable to the previous set, F-ratios were calculated, and their significance has been tested against at or above .05 level of significance.

First five models of step-up regression equations containing personal characteristics have been reported for their variance towards job satisfaction followed by eight models dealing with step up addition of organizational variables to personal characteristics towards the prediction of job satisfaction in Table 7.1.
Step-up Regression Equations (N=245); Dependent Variable (Job Satisfaction) and Independent Variables (Personal and Organizational)

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>df</th>
<th>R</th>
<th>R²</th>
<th>Increment in R²</th>
<th>F-Ratio</th>
<th>Step-up Regression Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I(4) PhyNS</td>
<td></td>
<td>.18</td>
<td>.032</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II(5) PhyNS+SecNS</td>
<td>1242</td>
<td>.21</td>
<td>.0455</td>
<td>.0131</td>
<td>3.32</td>
<td>24.19 + 1.84 + 1.79</td>
</tr>
<tr>
<td>III(6) PhyNS+SecNS+SocNS</td>
<td>1241</td>
<td>.36</td>
<td>.1274</td>
<td>.0819</td>
<td>22.62**</td>
<td>185.85 + 1.01 + .16</td>
</tr>
<tr>
<td>IV(7) PhyNS+SecNS+SocNS+ENS</td>
<td>1240</td>
<td>.37</td>
<td>.1404</td>
<td>.0130</td>
<td>3.63</td>
<td>172.20 + 3.36 + 2.86 + .93</td>
</tr>
<tr>
<td>V(8) PhyNS+SecNS+SocNS+ENS+TNS</td>
<td>1239</td>
<td>.38</td>
<td>.1410</td>
<td>.0006</td>
<td>.167</td>
<td>172.22 + 3.36 + 0.93 + 2.87 + 0.94 - 0.07</td>
</tr>
<tr>
<td>VI(12) PhyNS+SecNS+SocNS+ENS+TNS+Dis</td>
<td>1238</td>
<td>.40</td>
<td>.1604</td>
<td>.0194</td>
<td>5.499*</td>
<td>199.51 + 2.93 + 2.49 + 7.91 + 2.01</td>
</tr>
<tr>
<td>VII(13) PhyNS+SecNS+SocNS+ENS+TNS+Dis+Hind</td>
<td>1237</td>
<td>.46</td>
<td>.2095</td>
<td>.0491</td>
<td>14.721**</td>
<td>239.49 + 1.15 + 1.37 + 2.42 + 1.26 + 2.22 + 7.24 + 1.79</td>
</tr>
<tr>
<td>VIII(14) PhyNS+SecNS+SocNS+ENS+TNS+Dis+Hind+Esp</td>
<td>1236</td>
<td>.46</td>
<td>.2154</td>
<td>.0059</td>
<td>1.775</td>
<td>229.38 + 0.08 + 1.17 + 2.20 + 1.20 + 16 + 7.10 + 2.31 + 0.07</td>
</tr>
<tr>
<td>IX(18) PhyNS+SecNS+SocNS+ENS+TNS+Dis+Hind+Esp+Thr</td>
<td>1235</td>
<td>.48</td>
<td>.2281</td>
<td>.0127</td>
<td>3.866</td>
<td>228.60 + 0.07 + 1.24 + 2.03 + 1.20 + 21 + 57 + 2.34 + 0.09 + 0.90</td>
</tr>
<tr>
<td>X(19) PhyNS+SecNS+SocNS+ENS+TNS+Dis+Hind+Esp+Thr+Con 0</td>
<td>1234</td>
<td>.48</td>
<td>.2286</td>
<td>.0005</td>
<td>.1517</td>
<td>228.05 + 0.05 + 1.24 + 2.00 + 1.21 + 19 + 61 + 2.35 + 0.07 + 0.78 + 2.94</td>
</tr>
<tr>
<td>XI(21) PhyNS+SecNS+SocNS+ENS+TNS+Dis+Hind+Esp+Thr+Con 0+Init St</td>
<td>1233</td>
<td>.49</td>
<td>.2402</td>
<td>.0116</td>
<td>3.557</td>
<td>218.98 + 1.13 + 1.22 + 1.89 + 1.16 + 2.52 + 2.29 + 0.07 + 0.58 + 0.21 + 0.53</td>
</tr>
<tr>
<td>XII(22) PhyNS+SecNS+SocNS+ENS+TNS+Dis+Hind+Esp+Thr+Con 0+Init St+Con L</td>
<td>1232</td>
<td>.49</td>
<td>.2415</td>
<td>.0013</td>
<td>.3976</td>
<td>213.69 + 0.03 + 1.17 + 1.82 + 1.09 + 20 + 2.52 + 2.27 + 0.12 + 0.49 + 1.17 + 1.43 + 0.21</td>
</tr>
<tr>
<td>XIII(23) PhyNS+SecNS+SocNS+ENS+TNS+Dis+Hind+Esp+Thr+Con 0+Init St+Con L+TLB</td>
<td>1231</td>
<td>.50</td>
<td>.2475</td>
<td>.0060</td>
<td>1.8419</td>
<td>213.40 + 0.03 + 1.16 + 1.82 + 1.09 + 19 + 45 + 2.26 + 0.12 + 0.49 + 1.18 + 1.49 + 0.31</td>
</tr>
</tbody>
</table>

** indicates value - significant at .01 level  * indicates value - significant at .05 level
Model I

\[ R^2_{TJS} = \text{Phy NS} \ (R^2_{TJS} = .0324) \]

The value of "r" between job satisfaction and physical need satisfaction as entered in Table 7.1 was found to be equal to .18, which explains the point that physical need satisfaction contributes 3.2 per cent of the variance towards prediction of teachers' job satisfaction.

Model II

\[ R^2_{TJS} = \text{Phy NS} + \text{Sec NS} \ (R^2 = .0324 + .0131 = .0455) \]

In Table 7.1 the value of multiple R between the independent variables of security need satisfaction and physical need satisfaction with job satisfaction came out to be .21, accounting for a 4.6 per cent contribution towards the prediction of job satisfaction. The above model implies that 3.2 per cent of the variance of job satisfaction is attributed to physical need satisfaction and 1.31 per cent of the variance to security need satisfaction. The F-test shows that security need satisfaction in conjunction with physical need satisfaction increases the value of R from the previous relationship, but the increase is found to be insignificant (F = 3.32).

Model III

\[ R^2_{TJS} = \text{Phy NS} + \text{Sec NS} + \text{Soc NS} (R^2_{TJS} = .0324 + .0131 + .0819 = .1274) \]

Adding of the variable of social need satisfaction to physical and security need satisfaction led to an increase in
the obtained value of $R^2$ ($R^2 = .1274$), which shows that 12.74 per cent of whatever makes teachers differ in their job satisfaction is attributed to three independent variables of physical need satisfaction, security need satisfaction and social need satisfaction. The increase in the value of $R^2$ contributed by the addition of social need satisfaction was found to be .0819, significant at the .01 level ($F=22.62$ vide Table 7.1).

Model IV

$$R^2_{TJS} = (Phy\ NS + Sec\ NS + Soc\ NS + ENS)$$

$$R^2_{TJS} = .0324 + .0131 + .0819 + .0130 = .1404$$

Model IV explains the proportion of variance of the criterion measure of total job satisfaction (.1404) attributable to the effect of physical need satisfaction, security need satisfaction, social need satisfaction and ego need satisfaction. The value of $R^2 = .1404$ shows that 14.04 per cent of the variance is attributable to the above mentioned variables taken together. The remaining 85.96 per cent of the variance of job satisfaction is attributed to the other factors. The increase in the value of $R^2$ with the addition of ego need satisfaction is not significant ($F = 3.63$, Table 7.1).

Model V

$$R^2_{TJS} = Phy\ NS + Sec\ NS + Soc\ NS + ENS + TNS$$

$$R^2_{TJS} = .0324 + .0131 + .0819 + .0130 + .0130 + .0006 = .1410$$

The conjoint effect of physical, security, social ego and total need satisfaction (personal characteristics) indicates
an increase of .0006 in $R^2$. The value of $R^2 = .1410$, slightly higher than the previous $R^2$, exhibits the point that the addition of total need satisfaction has little effect (insignificant) on the prediction of job satisfaction ($F = .167$), which is possible to understand on the basis of the additivity of scores on physical, security, social and ego need satisfaction got in total need satisfaction.

**Model VI**

\[
R^2_{TJS} = \text{Phy NS} + \text{Sec NS} + \text{Soc NS} + \text{ENS} + \text{TNS} + \text{Dis}
\]

\[
R^2_{TJS} = .0324 + .0131 + .0819 + .0130 + .0006 + .0194 = .1604
\]

Disengagement (a measure of organizational climate) when added to measures of need satisfaction contributed significantly to $R^2$, the increase being .0194. The value of $R^2$ came to .1604, which shows that 16.04 per cent of the variance is attributed to need satisfaction (physical, security, social, ego and total need satisfaction) and the disengagement dimension of organizational climate. The value of $F = .550$, is significant at the .05 level indicating thereby the significant contribution of the addition of disengagement towards variance of the criterion variable of job satisfaction.

**Model VII**

\[
R^2_{TJS} = \text{Phy NS} + \text{Sec NS} + \text{Soc NS} + \text{ENS} + \text{TNS} + \text{Dis} + \text{Hind.}
\]

\[
R^2_{TJS} = .0324 + .0131 + .0819 + .0130 + .0006 + .0194 + .0491 = .2095
\]

$R^2 = .2095$ indicates that 20.95 per cent of the variance in job satisfaction is attributable to five measures of need satisfaction and disengagement and hindrance, which are two
dimensions of organizational climate. This variance did account for a significant increase from the previous contribution ($F = 14.72$, significant at the .01 level).

**Model VIII**

$$R^2_{TJS} = Phy\ NS + Sec\ NS + Soc\ NS + ENS + TNS + Dis + Hind + Esp$$

$$R^2_{TJS} = .0324 + .0131 + .0130 + .0130 + .0006 + .0194 + .0491 + .0059 = .2154$$

The effect of adding esprit to the set of independent variables in Model VII led to the value of $R^2 = .2154$, explaining 21.54 per cent of the total variance in job satisfaction. But the addition of the variable of esprit did not bring any significant increase from the previous contribution ($F = 1.775$, Table 7.1).

**Model IX**

$$R^2_{TJS} = Phy\ NS + Sec\ NS + Soc\ NS + ENS + TNS + Dis + Hind + Esp + Thr.$$  

$$R^2_{TJS} = .0324 + .0131 + .0819 + .0130 + .0006 + .0194 + .0491 + .0059 + .0127 = .2281$$

This model reveals the effect of physical, security, social, ego, total need satisfaction, disengagement, hindrance, esprit and thrust on job satisfaction which leads to an increase in $R^2$ from .2154 to .2281, showing a 22.81 per cent variance as the conjoint effect of these variables. But the increase was not significant ($F = 3.866$).
Model X

$$R^2_{TJS}=\text{Phy NS+Sec NS+Soc NS+ENS+TNS+Dis+Hind+Esp+Thr+Con 0.}$$

$$R^2_{TJS} = .0324 + .0131 + .0819 + .0130 + .0006 + .0194 + .0491 + .0059 + .0217 + .0005 = .2286$$

It is evident from Model X that consideration 0 in conjunction with physical, security, social, ego, total need satisfaction, disengagement, hindrance and thrust increases the value of $R^2$ by only .0005, making it .2286. The value explains the total variance contributed by measures of need satisfaction and organizational climate. The increase is not significant as the value of $F$ came out to be .1517, less than the value required for significance at .05 level.

Model XI

$$R^2_{TJS}=\text{Phy NS+Sec NS+Soc NS+ENS+Dis+Hind+Esp+Thr+Con 0+ Ini St.}$$

$$R^2_{TJS} = .0324 + .0131 + .0819 + .0130 + .0006 + .0194 + .0491 + .0059 + .0127 + .0005 + .0116 = .2402$$

The addition of initiating structure, a dimension of leadership behaviour, to Model X enhances the value of $R^2$ from .2286 to .2402. In other words, 24.02 per cent of the variance in job satisfaction is attributable to all these factors. As is clear from the value of $F = 3.557$, the increase is insignificant.

Model XII

$$R^2_{TJS}=\text{Phy NS+Sec NS+Soc NS+ENS+TNS+Dis+Hind+Esp+Thr+Con 0+ Ini St+ Con L}$$

$$R^2_{TJS} = .0324 + .0131 + .0819 + .0130 + .0006 + .0194 + .0491 + .0059 + .0127 + .0005 + .0116 + .0013 = .2415$$
The consideration L dimension of leadership behaviour when added to the variables considered in Model XI again brought only an insignificant increase (F= .3956). The value of \( R^2 = .2415 \) indicates a 24.15 per cent variance towards prediction of job satisfaction by physical, security, social, ego, total need satisfaction, disengagement, hindrance, esprit, thrust, consideration 0, initiating structure and consideration L collectively.

Model XIII

\[
R^2_{\text{TJS}} = \text{PhyNS} + \text{SecNS} + \text{SocNS} + \text{ENS} + \text{Dis} + \text{Hind} + \text{Esp} + \text{Thr} + \text{Con O} + \text{Ini St} + \text{Con L} + \text{TLB}
\]

\[
R^2_{\text{TJS}} = .0324 + .0131 + .0819 + .0130 + .0006 + .0194 + .0491 + .0059 + .0127 + .0005 + .0116 + .0013 + .0060 = .2475
\]

Model XIII reveals the conjoint effect of total leadership behaviour with five measures of need satisfaction, five measures of organizational climate and two dimensions of leadership behaviour. In other words, this model explains the variance contributed conjointly by personal and organizational characteristics towards the prediction of job satisfaction. The value of \( R^2 = .2475 \) shows a slight increase, indicating that the addition of total leadership behaviour has not made a significant contribution.

In the preceding multivariate analysis the characteristics of social need satisfaction (Personal Characteristic) and disengagement and hindrance (organizational characteristics) contributed to a significant variance towards the prediction.
of job satisfaction. The results show that high social need satisfaction, low disengagement and low hindrance (the 'rs' in respect of disengagement and hindrance with job satisfaction being negative) tend to be associated with greater satisfaction in the job. The F test shows that for the dependent variable of job satisfaction, the addition of the predictor variable of social need satisfaction (to physical and security need satisfaction, Model III) is significant at the .01 level (F=22.62), disengagement (to physical, security, social, ego and total need satisfaction, Model VI), is significant at the .05 level (F=5.49) and hindrance (to physical, security, social, ego and total need satisfaction and disengagement, Model VII), is significant at the .01 level (F = 14.72) vide Table 7.1. It may be pointed out that these three variables also acted as correlates of job satisfaction in the results obtained through correlational analysis (vide Chapter V) and two variables namely, social need satisfaction and hindrance exhibited a factorial unification with job satisfaction in factor analysis (vide Original Factor I and Varimax Factors V and X, Chapter VI); the discussion of these variables as correlates of job satisfaction has been submitted earlier in the respective chapters.

From the above results it is observed that:

1. Social need satisfaction is a significant predictor of job satisfaction. The contribution of remaining personal characteristics under consideration in step-up regression
equations, namely physical need satisfaction, security need satisfaction, ego need satisfaction and total need satisfaction do not emerge as potent predictors of job satisfaction.

2. Out of eight organizational variables included in step-up regression equations, only two dimensions of organizational climate namely, disengagement and hindrance emerge as potent predictors for adding significant variance in accounting for the criterion variable of job satisfaction. The addition of remaining dimensions of organizational climate namely, esprit, thrust, and consideration O, as also of all the three variables of leadership behaviour namely, initiating structure, consideration L and total leadership behaviour to their respective preceding models does not show significant contribution in the prediction of criterion variable of job satisfaction.

In the light of the above findings, Hypothesis V that "personal characteristics are significant predictors of job satisfaction" is tenable only in respect of social need satisfaction.

Hypothesis VII, that "organizational characteristics are significant predictors of job satisfaction," may be accepted only in respect of disengagement and hindrance.

3. Although independent variables other than those referred to above did not contribute to job satisfaction significantly, they did contribute to the boosting up of variance from 3.2 per cent (physical need satisfaction and job satisfaction) to 24.75 per cent.
(with all the variables put together, vide Table 7.1).

The value of multiple correlation $R = .50$ is higher than the individual correlations between each of the independent and dependent variables as given in Table 7.2.

Table 7.2

<table>
<thead>
<tr>
<th>Variable</th>
<th>$r$ with Total Job Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phy NS</td>
<td>.18</td>
</tr>
<tr>
<td>Sec NS</td>
<td>.17</td>
</tr>
<tr>
<td>Soc NS</td>
<td>.34</td>
</tr>
<tr>
<td>ENS</td>
<td>.24</td>
</tr>
<tr>
<td>TNS</td>
<td>.33</td>
</tr>
<tr>
<td>Dis</td>
<td>-.18</td>
</tr>
<tr>
<td>Hind</td>
<td>-.31</td>
</tr>
<tr>
<td>Esp</td>
<td>.24</td>
</tr>
<tr>
<td>Thr</td>
<td>.28</td>
</tr>
<tr>
<td>Con O</td>
<td>.16</td>
</tr>
<tr>
<td>Ini St</td>
<td>.28</td>
</tr>
<tr>
<td>Con L</td>
<td>.23</td>
</tr>
<tr>
<td>TLB</td>
<td>.30</td>
</tr>
</tbody>
</table>

Hence Hypothesis VIII that, "Personal, professional and organizational characteristics, when taken conjointly, contribute more to job satisfaction than when considered individually" stands accepted.