

## Chapter 6

# EFFECT OF ORGANISATIONAL, SOCIAL AND PERSONAL FACTORS, PSYCHOLOGICAL STRESS AND WMSDs ON WORK PERFORMANCE

Organisational, social and personal factors are the main contributors to occupational stress and WMSDs. High work demands, unrealistic deadlines, lack of control overwork, lack of support at the workplace and outside the workplace, socioeconomic status, age, gender, and habits of substance use are some of the reasons that lead to occupational stress and WMSDs in employees. These factors affect not only the physical and psychological well-being of employees but also their work performance. Also, these physical and psychological stress contribute significantly to the development of work-related disabilities, sickness, absenteeism, underutilisation of potential, and job satisfaction, thereby affecting the quality of work and thus having an effect on the work performance of the employees.

There are theoretical models of occupational stress that focus on the relationship between organisational factors and occupational stress (Karasek, 1979, Warr, 1987). Also, there are models that focus on the relationship between personal factors and occupational stress (French et al., 1982, Edwards et al., 1998). However, there is a lack of studies that focus on the organisational, social and personal factors to predict occupational stress, WMSDs and work performance of the employees.

So, the present work focuses on the effect of organisational, social and personal factors, occupational stress and WMSDs on work performance for middle-level managers of an Indian organisation. It was hypothesised that:

**H1:** There is a significant effect of organisational factors on work performance.

**H2:** There is a significant effect of social factors on work performance.

**H3:** There is a significant effect of personal factors on work performance.

**H4:** There is a significant effect of occupational stress on work performance.

**H5:** There is a significant effect of WMSDs on work performance.

## 6.1. SEM MODEL

An SEM model was developed to test the hypotheses. This path analysis model was used to determine the effect of organisational, personal and social factors and physical and psychological stress on work performance. The representative hypothesised path analysis model is shown in Figure 6.1.

The assumption in the model shown in Figure 6.1 is that organisational, social and personal factors are exogenous variables, and work performance is an endogenous variable. Also, behavioural stress, somatic stress, cognitive stress, WMSDs and job satisfaction are endogenous variables. Table 6.1 shows the organisational, social and personal factors considered in the present study. Organisational factors “support from colleagues” and “support from supervisors” were merged (as explained in Chapter 2) into a single dimension as “support at work”.

Table 6.1: Organisational, social and personal factors considered in the model

<b>Organisational factors</b>	<b>Social factors</b>	<b>Personal factors</b>
Workload	Support from family	Age
Job control	Support from friends	Gender
Support from colleagues	Socio-economic status	BMI
Support from supervisors	Social media usage	Substance use
Experience in the current position		Workout habits
Experience in the organisation		Laptop/computer use
		Phone use

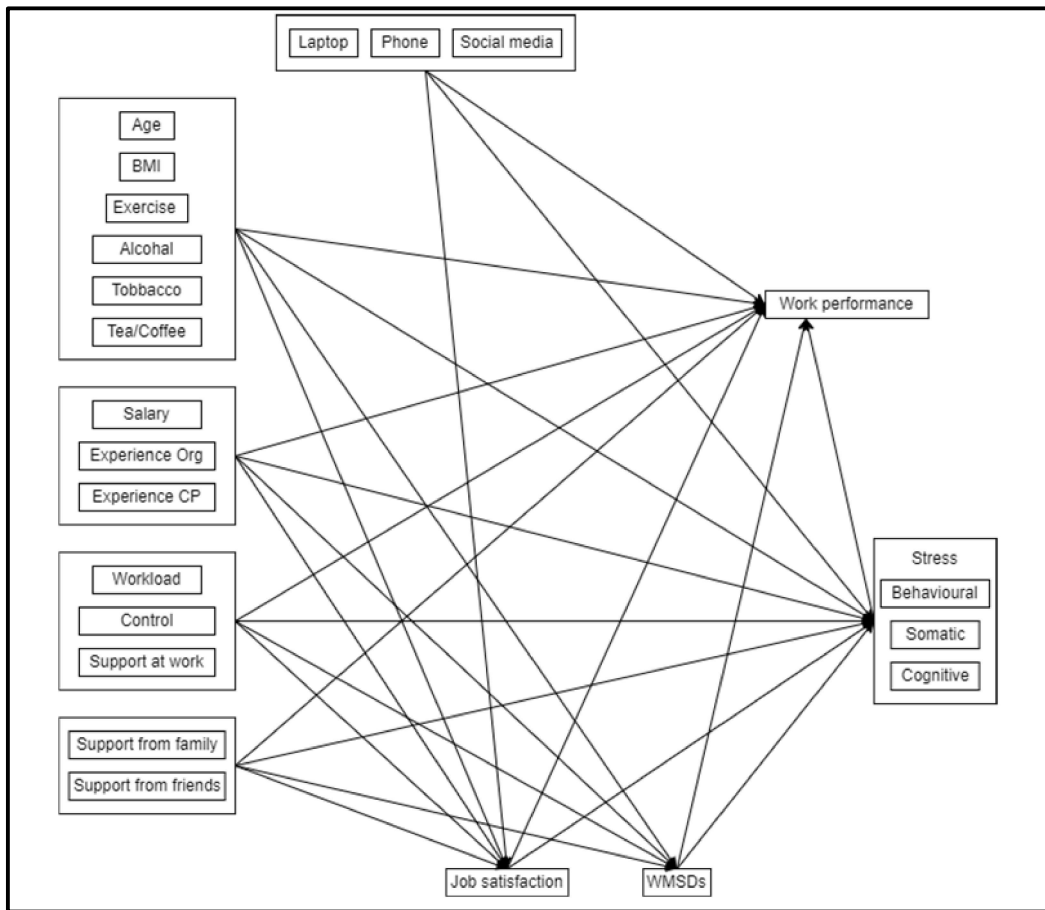


Figure 6.1: Hypothetical Path Analysis Model

The model was tested for goodness-of-fit to check if the data fit the proposed Path Analysis Model. The proposed model had  $CMIN/DF(\chi^2/df) = 1.343$ ,  $RMSEA = .041$ ,  $TLI = 0.837$ , and  $CFI = 0.887$  (Table 6.2).

Significance value ( $p$ ), critical ratio ( $t$ ), and the direct effect of exogenous variables on endogenous variables ( $b$ ) were calculated for all 331 paths of the hypothesised path analysis model (Figure 6.1). In the model, paths with a value of  $p > 0.05$  and critical ratio ( $t$ ) outside the range  $-1.96$  and  $+1.96$  were considered non-significant paths. 301 paths out of 331 were found non-significant.

A modified path analysis model was then obtained after removing the non-significant paths. The goodness-of-fit of the modified model was tested with values shown in Table 6.2. This is clear from Table 6.2 that the modified model had improved

goodness-of-fit over the initial model and was thus selected as the final model (Figure 6.2).

Table 6.2: Model fit Indices

	<b>CMIN/DF(<math>\chi^2/df</math>)</b>	<b>RMSEA</b>	<b>TLI</b>	<b>CFI</b>
<b>Significance value (Hu and Bentler, 1999)</b>	< 3.000	< 0.070	> 0.900	> 0.900
<b>Initial Model</b>	1.343	0.041	0.837	0.887
<b>Modified model</b>	1.364	0.041	0.901	0.903

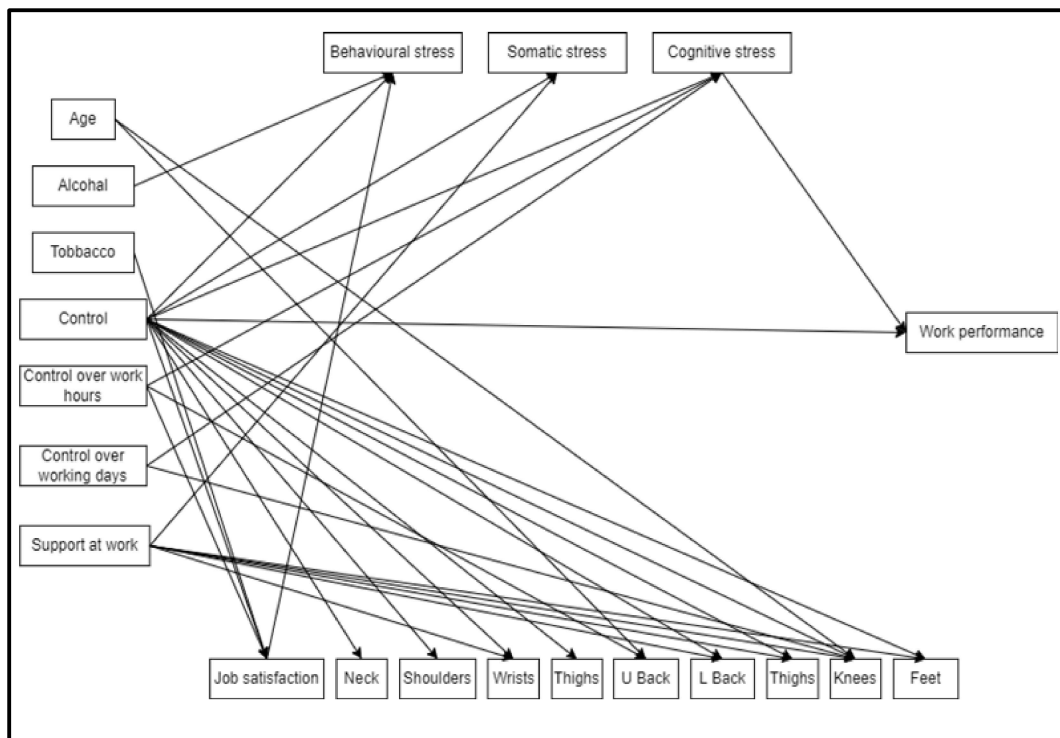


Figure 6.2: Final Model

After identifying the final model, the effect of organisational, social and personal factors, occupational stress and WMSDs on work performance were determined.

## 6.2. RESULTS

After this descriptive analysis, the path analysis model used in the study determined the effect of organisational, social and personal factors, psychological stress and WMSDs on work performance. These results are shown in Table 6.3.

Table 6.3: Direct, indirect and total effects

<b>Exogenous variables</b>	<b>Endogenous variables</b>	<b>Direct effect (significance value)</b>	<b>Indirect effect</b>	<b>Total effect</b>	
<b>Age</b>	Knees	0.296(< 0.001)		0.296	
	Upper back	0.152(= 0.024)		0.152	
<b>Tobacco</b>	Job Satisfaction	-0.173(= 0.007)		-0.173	
	Behavioural Stress		0.028	0.028	
<b>Alcohol</b>	Behavioural Stress	0.173(= 0.012)		0.173	
<b>Control over work</b>	Behavioural Stress	-0.212(= 0.026)	-0.047	-0.259	
	Somatic Stress	-0.604(< 0.001)		-0.604	
	Cognitive Stress	-0.435(= 0.001)		-0.435	
	Neck Pain	-0.290(= 0.002)		-0.290	
	Shoulder Pain	-0.241(= 0.006)		-0.241	
	Wrist Pain	-0.542(< 0.000)		-0.542	
	Upper Back Pain	-0.203(= 0.017)		-0.203	
	Lower Back Pain	-0.679(< 0.000)		-0.679	
	Thigh Pain	-0.749(< 0.000)		-0.749	
	Knee Pain	-0.944(< 0.001)		-0.944	
	Feet Pain	-0.553(< 0.000)		-0.553	
	Job Satisfaction	0.297(= 0.001)		0.297	
	Work Performance	0.306(= 0.009)	0.099	0.405	
	<b>Control over working hours</b>	Behavioural Stress		0.031	0.031
		Cognitive Stress	0.151 (= 0.024)		0.151
Upper Back		0.257(< 0.000)		0.257	
Job Satisfaction		-0.196(= 0.002)		-0.196	
Work Performance			-0.034	-0.034	
<b>Working days</b>	Cognitive Stress	-0.153(= 0.024)		-0.153	
	Knees	0.144(= 0.013)		0.144	
	Work Performance		0.035	0.035	
<b>Support at work</b>	Somatic Stress	-0.233 (= 0.013)		0.233	
	Wrists Pain	-0.205 (= 0.015)		0.205	
	Lower Back Pain	-0.402 (< 0.000)		0.402	
	Thighs Pain	-0.620 (< 0.000)		0.620	
	Knee Pain	-0.500 (< 0.001)		0.500	
	Feet Pain	-0.363 (<0.000)		0.363	
<b>Job satisfaction</b>	Behavioural Stress	-0.160 (= 0.029)		-0.160	
<b>Cognitive stress</b>	Work Performance	-0.228 (< 0.020)		-0.228	

The following sub-sections show the effect of various factors on work performance as per Table 6.3.

### **6.2.1. H1: Effect of organisational factors**

The workload had no significant effect on work performance. However, the dimensions of job control were significantly associated with work performance and other mediating variables. “Control over work” dimensions of job control not only had a significant effect on work performance but also had a significant effect on behavioural, somatic and cognitive stress, WMSDs, and job satisfaction fact already established in the earlier chapter. “Control over work” has also been found to be indirectly associated with behavioural stress and work performance through the mediating variable job satisfaction and cognitive stress, respectively.

The dimension of job control visualised as “control over working hours” directly affected cognitive stress, pain in the upper back, and job satisfaction. However, it has a significant indirect effect on work performance and behavioural stress through mediating variable as cognitive stress and job satisfaction, respectively.

The third dimension of job control visualised as “Control over working days”, had a significant direct effect on cognitive stress and pain in the knees while a significant indirect effect on work performance through mediating variable cognitive stress.

“Support at work” had a significant direct relationship with somatic stress and pain in the wrists, lower back, thighs, knees and feet. It has no effect on behavioural and cognitive stress or on remaining WMSDs. No significant association was found between “support at work” and job satisfaction or “support at work” and work performance.

Also, the experience in the organisation and experience in the current position did not affect work performance or any of the mediating variables. So, the hypothesis that organisational factors have a significant effect on work performance was partially

accepted as only the dimensions of job control had an effect on work performance in MLMs of case organisation.

#### **6.2.2. H2: Effect of social factors**

Any of the considered social factors in the study, support from family, support from friends, salary or the time spent on social media, had no significant effect on work performance, occupational stress or WMSDs. So, the hypothesis that social factors have a significant effect on work performance was rejected.

#### **6.2.3. H3: Effect of personal factors**

The final path analysis model showed no significant relationship between personal factors and work performance. There was a significant association between age and pain in the upper back (0.296) and age and knee (0.152). However, age did not have any significant relationship with pain in any other body part. Also, other personal factors BMI, workout habits, and laptop and phone usage, had no significant association with WMSDs. There was a significant association between alcohol consumption and behavioural stress but no effect on any other psychological stress, WMSDS or work performance. Tobacco consumption had a significant association only with job satisfaction and behavioural stress. So, the hypothesis that personal factors have a significant effect on work performance was rejected.

#### **6.2.4. H4 and H5: Effect of psychological stress and WMSDs**

Behavioural stress was significantly associated with tobacco and alcohol consumption, “control over work”, “control over working hours”, and job satisfaction but had no effect on work performance. Somatic stress was significantly associated with “control over work” and “support at work” only. It also had no effect on work performance.

There was a significant relationship between job control dimensions and cognitive stress. Also, cognitive stress had a significant effect on work performance. So, the hypothesis that psychological stress has a significant effect on work performance was partially accepted.

None of the WMSDs was significantly associated with work performance in the final path analysis model. So, the hypothesis that WMSDs have a significant effect on work performance was rejected.

### **6.3. CONCLUSION**

The present work analyses the effect of organisational, social and personal factors, WMSDs and psychological stress on work performance. Results showed that organisational factors have a more significant effect on work performance in comparison to social and personal factors. However, the workload was found to have no effect in the present study for the case. The most important factor affecting outcome variables in the study was job control. All three dimensions of job control- control at work, control at working hours and control at working days were significantly associated with work performance. Control at work had an effect on work performance, psychological stress, WMSDs and job satisfaction. It showed a positive relationship with work performance and job satisfaction, i.e., work performance and job satisfaction will improve if control is increased.

Similarly, increasing “control over working days” would improve work performance and decrease cognitive stress. However, an increase in “control over working hours” will have the opposite effect when compared to “control over work” and “control over working days”. It is found that high “control over working hours” will decrease work performance. Cognitive stress was also significantly associated with work performance and all three dimensions of job control. Cognitive stress is a mediator

between control dimensions and work performance. So, ultimately the control dimensions were the most important factor affecting the work performance of the employees in the present study.

These findings emphasise the importance of work flexibility for the well-being of employees to improve their work performance. Also, the negative association between "control over working hours" and work performance indicates that autonomy and increased decision-making can be overburdening to the employees and result in poor work performance. In general, the current findings highlight that work performance can be strongly influenced by control in the workplace. Organisational policies and structures that provide control which is not overwhelming for employees can improve the work performance of the employees.

The next chapter summarises the conclusions of this current work focused on MLMs of the case organisation.