

## SLEEP POVERTY AND JOB PERFORMANCE AMONG TEACHERS IN JHELUM: ROLE OF ICT

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### Abstract

Quality sleep is essential for maintaining both the mental and physical well-being of an individual. It is essential for cognitive functions such as memory consolidation, learning, problem-solving, and decision-making. The central theme of this study is sleep poverty and job performance among teachers of Jhelum with a focus on the role of Information and Communication Technology (ICT). The paper aims to investigate whether there is a relationship between sleep poverty and job performance. This relationship was examined using secondary data and random sampling techniques, collecting data from 140 teachers of both genders across various schools and colleges of Jhelum. The data was analysed with two software SPSS and STATA. For measure the sleep poverty four dimensions of sleep poverty like sleep duration, sleep consistently, sleep quality, and sleep disorder are used. These four dimensions have negative effect on job performance... These results also indicate that ICT has solely has a negative impact on job performance. However, individual who use ICT may also suffer from negative outcome such as anxiety which lead to poorer performance and wellbeing. This study supports the link between ICT usage and negative job performance. An interactive term also used in this study for analysing the effect of sleep poverty and ICT on job performance This term shows that there is overall positive effect on job performance because it depreciates the negative effect caused by sleep poverty. People's performance can seemingly remain unaffected by sleep poverty due to ICT use, as interactive digital content increases focus and engagement, improves cognitive processing speed, memory, and problem-solving skills, and enhances creativity. This means that even when individuals don't get good quality sleep, ICT can help them perform well. This study highlights the critical issue of sleep deprivation faced by teachers and its detrimental effects on their job performance.

### 1. INTRODUCTION

Work has consistently been a central element of society. It has been a vital part of human life since the ancient Greeks and Romans, continuing through the medieval era and the Industrial Revolution. Today, work, employment, and labor remain a fundamental part of society,

making it a foundation for a progressive society (Harpaz, 1990). According to Hawking (2018), "... never give up work. Many factors influence an individual's job performance, such as work environment, workload, time management, technology, health and physiological processes in

the human body, and many others. With the increase in infectious disease, technology, and changing life patterns, nowadays, diet and health are considered well-known factors that affect people's performance and productivity at work. Therefore, maintaining good health is essential for smooth functioning of the body which increases productivity and energy and enables people to perform both personal and professional responsibilities effectively. It involves regular exercise, a healthy diet, and adequate sleep. Among all these, sleep is the keystone of good health. (Deng et al., 2022; Sharma, 2023).

In general, sleep may be divided into two categories: quantity and quality. The former describes the length of time spent sleeping (duration), while the latter describes its depth. A lack of sleep or sleep disturbance creates sleep poverty which can significantly increase the risk of contracting infectious diseases, growing older, developing serious illnesses like cancer and cardiovascular disease, and mounting depression. Additionally, inadequate sleep duration can exacerbate other sleep disorders and have a detrimental effect on productivity at work (Irwin, 2015). In the present era, digital phenomena have had an influence that is pervasive across all aspects of human life. Particularly, information and communication technology (ICT) has the largest influence on the quality and quantity of a person's sleeping pattern.

The global usage of electronic gadgets before bedtime, such as cellphones, tablets, and computers, releases blue light that disrupts the body's natural sleep-wake cycle. This results in delayed sleep onset and lower sleep quality, making technology a major contributor to sleep poverty (Polos et al., 2015). Therefore, the cumulative effect of technology on sleep deprivation reduces productivity, efficiency, and overall job performance (Oguche, 2017). Besides these effects of ICT on work performance through sleep poverty, ICT directly affects the work performance of an individual in many ways. The increasing use of digital technologies is transforming work arrangements, leading to more flexible and distributed setups, ultimately impacting job performance positively. (Sophia et

al., 2023).

However, it cannot be denied that work performance can only be enhanced by employing ICT wisely and responsibly. For example, the introduction of ICT in education helps to improve the quality of education. It can be used in various ways to support teaching and learning (Amponsah & Stonier, 2020). From the ongoing discussion, it is apparent that sleep poverty and ICT are strongly connected with work performance. In addition to the direct effect of sleep poverty, which is characterized by a lack of quality and quantity of sleep, and ICT, which is described as the modern use of electronic devices, sleep poverty combined with ICT has an indirect impact on job performance. From the ongoing discussion, it is apparent that sleep poverty and ICT are strongly connected with work performance.

In addition to the direct effect of sleep poverty, which is characterized by a lack of quality and quantity of sleep, and ICT, which is described as the modern use of electronic devices, sleep poverty combined with ICT has an indirect impact on job performance. Among all of these categories, the effect on educators' or teachers' work performance is particularly notable. Teachers are nation builders, their work requires high levels of cognitive skills, creativity, emotional intelligence, and interpersonal skills. Hence, maintaining a balance between ICT usage and quality sleep is important for them to retain long-term performance and well-being in educational environments (Hanushek & Rivkin, 2006; Fujishiro et al., 2017). The objectives of this study are as follows:

- to investigate the impact of sleep poverty and its different dimensions on the work performance of teachers.
- to provide a comparative analysis of sleep poverty on work performance between male and female teachers.
- to examine the relationship between ICT and teachers' work performance.
- to probe the direct and indirect effect (through ICT) of sleep poverty on the work performance of teachers.

Following is the hypothesis of this study

- **HA1:** There is a significant relationship between sleep poverty and work performance of teachers.
  - **HA2:** There is a significant impact of multidimensional sleep poverty on work performance.
  - **HA3:** There is a significant difference between male and female work performance based on sleep poverty.
  - **HA4:** There is a significant impact of ICT on teachers' work performance.
  - **HA5:** There is a significant direct and indirect impact of sleep poverty on the work performance of teachers.
- To the best of our knowledge, there is no such study in the literature for the city of Jhelum. In addition, this is the first study in the literature that explores the multidimensional aspect of sleep poverty on the work performance of teachers. It also provides a comparative analysis by investigating the impact of sleep poverty on work performance across genders. Further, the study investigates the impact of direct and indirect impact (through sleep poverty) of ICT on work performance.

## 2. Literature Review

This comprehensive literature review examines numerous studies that investigated the impact of the of sleep poverty through ICT on the work performance of teachers working in Jhelum, Pakistan. Quality sleep is essential for maintaining both the mental and physical wellbeing of an individual. Employees in all sectors are accountable for the growth and development of their related institute and nation based on their job performance. Most importantly, the nation's progress is determined by the quality of its education.

### Theoretical Literature Review

There are different theories related to sleep and its impact on work performance.

### Transactional Model of Stress and Sleep

Lazarus (1984) developed the transactional model

of stress and sleep. This model proposes a link between stress, sleep, and job performance. According to this model, sleep deprivation can raise stress by impairing an individual's capacity to cope well with job obligations.

### Sleep-Related Rumination Theory

Thomsen et al. (2003) developed a link between ruminating and sleep. According to the theory, rumination, or prolonged thinking about sleep, causes sleep related issues, which lead to sleep poverty. When individuals do not get enough sleep, they may be more prone to rumination, which can exacerbate psychological distress and interfere with their ability to concentrate and perform tasks effectively at work.

### Empirical Literature Review

#### Sleep Poverty and Work Performance

Teichler et al., (1992) analyzed the relationship between supervisor-subordinate sleep relationship in management and organization using a cross-over theory. This study urges to find out how a supervisor's poor night sleep translates into his/her subordinate's poor night sleep. The sample of 101 supervisors and subordinates was used over five consecutive working days. The results of the study indicated that a subordinate's physical exercise has the capacity to mitigate the influence of abusive supervision on a subordinate' poor sleep. The study suggests that supervisor-subordinate sleep relationships should be examined and interventions should be made in both the work and non-work domains of supervisor and subordinates as avenues for improving sleep health and in turn their work performance. Blank & Diderichsen (1997), Hirway (2010), Schwartz et al. (2010) also concluded similar findings.

Fle ijterski & Jodkowska (2011) investigate the effects of working for 48 hours. This study aims to explore the information available concerning the soldier's ability to sustain their performance for extended periods to operate and production of military weapons. Soldiers often fought for longer than 48 hours, but there is no way of estimating accurately the level of efficiency at which this activity took place. The experimental

design was used in which the performance of different groups was compared. The group of soldiers with and without sleep provision was designed to explore this kind of effect. According to the study's findings, the greatest mean scores achieved by the three groups that were working without sleep approached the lowest score obtained by the group that was permitted to sleep. This implies that sleep deprivation negatively affected the work performance of soldiers to the extent that even the performance of the greatest performers in sleep-deprived groups cannot compete with the lowest performers in the well-rested group.

#### Impact of ICT on Sleep Quality

Alshobaili & AlYousefi (2019), focused on understanding the relationship between smart phone usage before bedtime and sleep quality among adults, a sample of 435 Saudi individuals, aged 21 years and above, who are employed at King Saud University Medical City in Riyadh, Saudi Arabia, were participated. Data was collected by using the questionnaire. This study revealed that employee who use their smartphone late at night, especially when used for more than an hour tend to be at more risk of being poor sleepers. This research suggests that using smartphones before bed can lead to poorer sleep quality which could affect how well employees work on the next day.

Xu et al., (2019) explore the relationship between sleep quality and excessive use of mobile cell phones and engagement in social networks. The sample of the study was 380 college students linked with Qom, Iran. They used a proportional stratified sampling method to select participants. Estimation was done through various statistical techniques, such as ttests, chi-square tests, Pearson correlation coefficient, and multivariate logistic regression. The result of this study found that higher scores indicating cell phone addiction

were linked to poorer sleep quality which showed the opposite effect.

#### ICT and Work Performance

N (2013) explores the impact of ICT on teacher educational programs and professional development in Nigeria. The population covered 825 lecturers of colleges of education. They randomly selected 206 lecturers for the study using a stratified sampling method this study found that there is a significant relationship between ICT and lesson presentation, access to teaching materials, effective student learning, and professional support for teacher training and development. This finding suggests that ICT incorporation in teacher education can lead to improving the teaching quality and management system.

Abubakar & Salmanu (2018), show the contribution of technology (internet technology) toward the enhancement of job performance amongst secondary school teachers in the central senatorial district of Kaduna State. Six secondary schools with internet access were selected. For sampling 300 teachers were nominated and both primary and secondary data sources were used in this research. The result of the research found the importance of the internet in secondary school and that ICT is helping the teachers in their various disciplines to boost their knowledge. Ahmed et al., (2019) found that using technology like ICT can help teachers progress professionally. However, university teachers faced challenges in using these tools effectively for lectures and in classrooms. This study shows the positive effect of ICT on the delivery of instruction, evaluation, and assessment systems for the effective teaching-learning process and on the professional development of teachers and it recommended that ICT courses should be conducted to improve the professional development of university faculty.

3. METHODOLOGY

The study aims to evaluate the impact of sleep poverty along with the role of ICT in the work performance of teachers in Jhelum.

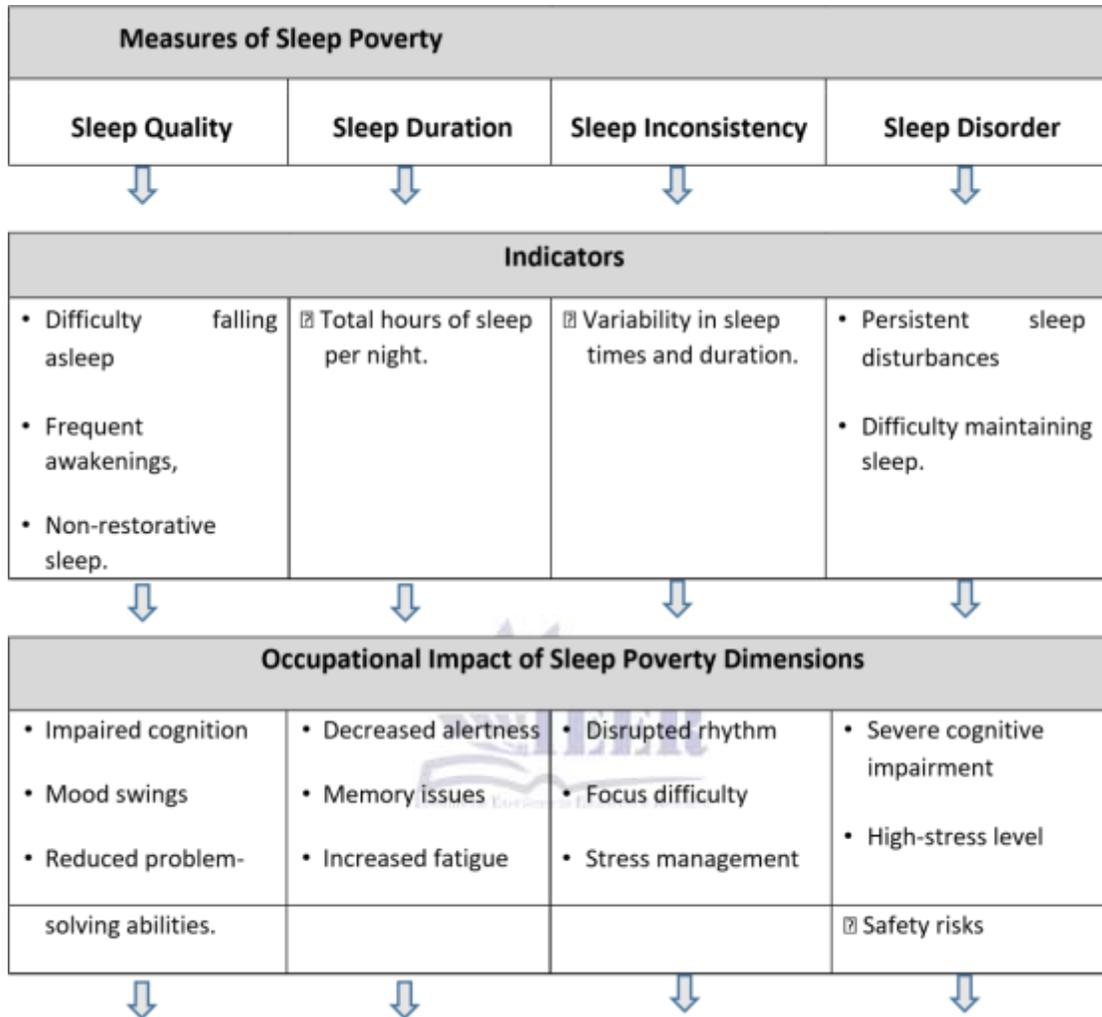


Figure 3.1. Theoretical Framework for Sleep Poverty and Work Performance

<ul style="list-style-type: none"> <li>• Lower overall productivity</li> <li>• Higher error rates</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced work efficiency</li> <li>• Increased fatigue.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased difficulty in handling work stress.</li> <li>• Difficulty maintaining focus in performance.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased risk of errors and accidents</li> <li>• Higher absenteeism</li> </ul>
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Figure 3.1 exhibits the theoretical framework developed based on the details presented above and the theoretical literature. Sleep poverty is measured by evaluating sleep quality, sleep duration, sleep inconsistency, and sleep disorders. Sleep quality includes difficulty falling asleep, frequent awakenings, and nonrestorative

sleep. The indicator of sleep deprivation was total hours of sleep per night while Sleep inconsistency refers to variability in sleep times and duration. Sleep disorders involve persistent sleep disturbances and difficulty maintaining. These dimensions of sleep poverty significantly impact occupational performance.

**Econometric Model**

Based on the theoretical foundation, the presented uses the following econometric model for empirically exploring the impact of sleep poverty on teachers' job performance along with considering the role of ICT:

$$JP_i = \beta_0 + \beta_1 SP_i + \beta_2 ICT_i + \beta_3 (SP * ICT) + \beta_4 G_i + \beta_5 MS_i + \beta_6 ES_i + \beta_7 A_i + \beta_7 E_i + \epsilon_i \quad eq (1)$$

Here, JP shows the Job performance, SP is sleep poverty, ICT is information and communication technology, ICT\*SP is an interactive term, and other are control variables such as gender (G), marital status (MS), economic status (ES), area (A), and education (E).  $\beta_i$ 's are the coefficients to be estimated, and  $\epsilon_i$  is the error term.

**4. Data**

To collect information for the study, we used a questionnaire. The questionnaire is divided into five parts. The first part is demographic variables such as information about age, gender, family type, area, level of education, marital status, education status, religion, etc. The second part is household information such as the family size, facilities, and lifestyle patterns. The third part focused on details regarding sleep poverty, which asked about sleep poverty with the help of four dimensions: sleep duration, sleep quality, sleep disorders, and sleep consistency. The fourth part is information regarding ICT, its usage, and its

impact on personal wellbeing. In this part, different questions were asked like how many hours are spent on social media, which platforms use mostly, the main purpose of using social media, and how ICT makes their job. In the last section information about job performance. It includes information related to the professional profile and measured job performance with the help of different questions such as interpersonal behavior, downtime behavior, and job task proficiency.

**Survey Description and Sample Criterion**

Before conducting the final survey, three rounds of pilot surveys were conducted to gain an understanding, and validity of the instruments used by the participants. In the first round, the questionnaire was distributed to friends. In the second round, the questionnaire was distributed to teachers. After making the required changes, in the last round, the primary data was collected from the teachers in the region of Jhelum. The population of the study comprises those schools and college teachers who belong to Jhelum. In the year 2024 data was collected randomly. Out of 230, only 140 teachers were interviewed. Other respondents refused to complete the questionnaire or were not available at college. **Description of the**

**Variables**

**Table 4.1: List of Variables**

Name of the Variable	Variable Notation	Variable Description
Sleep Poverty		
Sleep Duration	SD	Asked the question regarding all Dimensions of sleep poverty. 1 represents strongly disagree, 2 disagree, 3 neutrals, 4 agree and 5 strongly agree.
Sleep Quality	SQ	
Sleep Disorders	SDIS	
Sleep Consistency	SC	

<b>Job Performance</b>		
<b>Job Performance</b>	JP	Asked questions regarding job performance. It is measured on the Likert scale.1 representing strongly disagree, 2 disagree, 3 neutrals, 4 agree, and 5, strongly agree.
<b>Role of ICT</b>		
<b>ICT</b>	ICT	Asked questions reflecting the role of ICT. It is measured on the Likert scale.1 representing strongly disagree, 2 disagree, 3 neutrals, 4 agree, and 5 strongly agree.
<b>Control Variable</b>		
<b>Gender</b>		Gender is a binary variable where 0=Male and 1 = female
<b>Marital Status</b>		Asked questions regarding marital status like single married, widowed, separated, and divorced. Where 0= single, 1= Married, 2=Widowed ,3= Separated, 4=Divorced
<b>Area</b>		The area was classified as urban and rural where 1 = rural and 2 = Urban
<b>Educational Level</b>		Education in year
<b>Economic Status</b>		Asked questions regarding economic statuses like upper class, Middle class, and lower class where 0= Upper class 1= Middle class, and 2 lower class

**5. Results and Discussion**

In descriptive statistics, data is analyzed by using the frequency distribution of respondents regarding demographic characteristics, gender, age, marital status, economic status, area, and family type. In terms of gender Table 5.1 shows that 57.1% were male and 42.9% were female. This statistic shows that the male population was more than the female population. The age profile of the teachers represents that the minimum age of the respondents was 20 years and the maximum age of the respondents was greater

than 60 years. The finding shows that 45 % of the respondents belonged to the 20-30 age group. 35 % are between the age interval 31-40 years, and 16.4 % are between the age intervals 41-50. 1.4 % belonged to 51-60 and the remaining 2.1% were above 60 years of age brackets. It infers that the majority of the respondents were young. Moreover, 43.6% were single, 50% of respondents were married, 2.9% were separated and 3.6% were divorced. Findings indicate that the majority of the respondents were married.

Table 5.1: Descriptive statistics of demographic variable

Demographic	Category	Frequency	Percentage(%)
Gender	Male	80	57.1
	Female	60	42.9
Age	20-30	64	27
	31-40	49	45.0
	41-50	23	35.0
	51-60	2	1.4
	>60	3	2.1
Marital Status	Single	70	43.6
	Married	60	50
	Separated	4	2.9
	Divorced	5	3.6
Economic Status	Upper Class	11	7.9
	Middle Class	125	89.3
	Lower Class	4	2.9
Area	Rural	67	47.9
	Urban	73	52.1
Family type	Nuclear	12	8.6
	Joint	70	50.0
	Single parent family	58	41.4

Source: Author’s calculation.

The result of the economic status shows that 7.9% of the respondents belong to the upper class, 89.3 % are middle class, and 2.9 % of the respondents are from lower class. From the sample, 47.9% of respondents live in rural areas and 52.1% live in urban areas. Moreover, Table

5.1 postulates that 41.4% of the respondents belong to a nuclear family, 50% of the respondents belonged to a joint family and the remaining 8.6% belonged to a single-parent family.

Table 5.2: Descriptive Statistics of Respondent’s Lifestyle Pattern

Statements	Several times a week	Occasionally	Rarely
How frequently do you engage in leisure activities within the household (e.g., watching movies, playing games)?	74 (52.86)	37(26.43)	29 (20.71)
How often do you engage in cultural or religious activities within the household (e.g., attending ceremonies, and festivals)?	46 (32.86)	17 (12.14)	77 (55.00)

Source: Author’s calculation

Table 5.2 describes the respondent lifestyle pattern. This table indicates that 52.86% of respondents engage in leisure activities several times a week, 26.43% of respondents do leisure activities occasionally and 20.71% of respondents rarely engage in leisure activities. Findings indicate that the majority of the respondents were

engaged in leisure activities such as watching movies, playing games, etc. This table also shows that 32.86% of respondents engaged in religious activities several times a week, 12.14% were engaged occasionally and 55% were engaged rarely in religious activity.

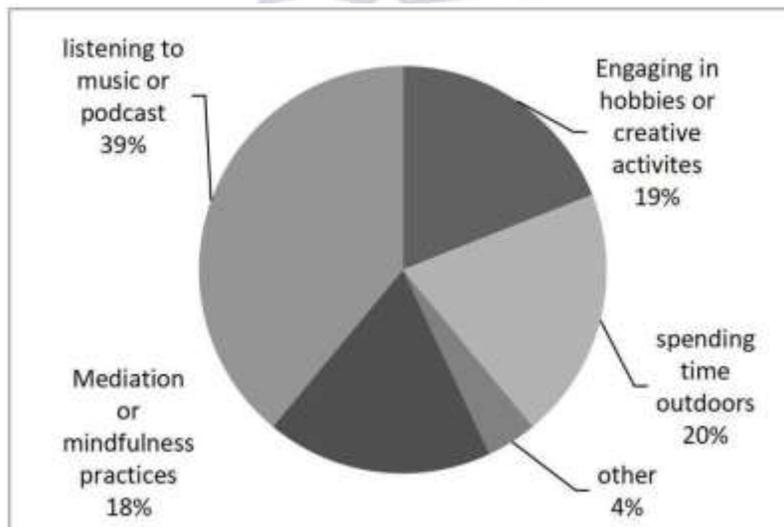


Figure 5.1: How do you manage stress or relax after a long day?

Source: Author’s calculation.

Figure 5.1 analyzes how people feel relaxed and manage their stress. Results illustrate that 20% of

respondents spent time outdoors for relaxation, 18% were doing meditation or mindfulness

practices, 19% of respondents were engaging in hobbies or creative activities, 39% were listening

to music for relaxation, and the remaining 4% involved another activity.

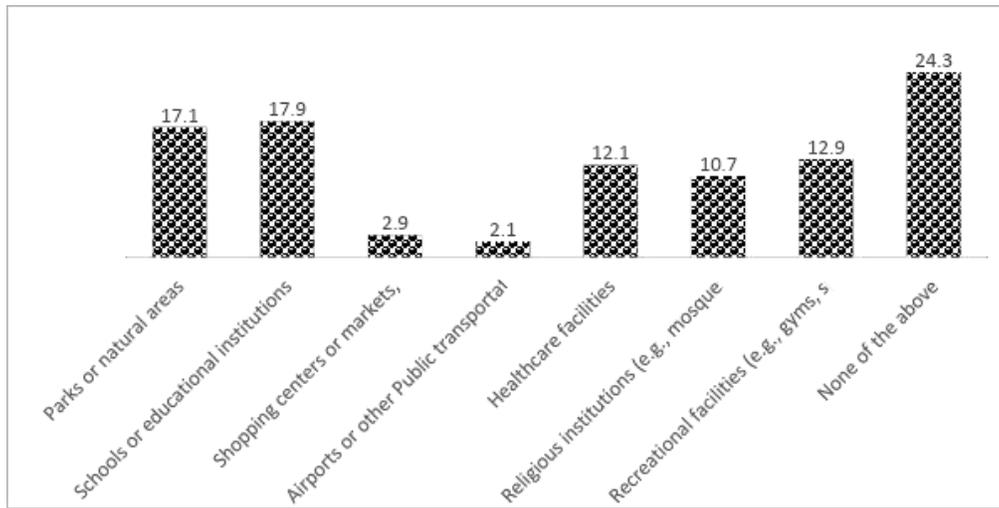


Figure 5.2: Is your house close to any following?

Source: Author’s calculation.

Figure 5.2 shows which facilities were close to the respondent’s house. This statistic shows that 17.1% live near to the parks or natural areas, 17.9% to school or educational institutions, 2.9% to shopping centers or markets, 2.1 to

airports or other public transportation, 12.1% to healthcare facilities, 10.7 % to religious institutes, 12.9% to recreational facilities, and 24.3% are not living near to these areas.

Table 5.3: Descriptive Statistics of Respondent’s Life Style Pattern

	Frequency	Percentage (%)
<b>How would you describe your preferred lifestyle?</b>		
• Luxurious	8	5.7
• Simple	84	60
• Balanced, with occasional luxuries	48	34.3
<b>How important is status or social standing to you?</b>		
• Very important I enjoy displaying wealth and status symbols	13	9.3
• Not very important—I prioritize personal values and relationships over status symbols	50	35.7

<ul style="list-style-type: none"> <li>• Somewhat important—it matters to me to some extent, but it’s not everything.</li> </ul>	75	53.6
Other	2	1.4
<i>What are the typical sleep schedules or bedtime routines followed by members of your household?</i>		
<ul style="list-style-type: none"> <li>• Consistent and regular bedtime routines</li> </ul>	25	17.9
<ul style="list-style-type: none"> <li>• Varied bedtime routines depending on individual preferences</li> </ul>	71	50.7
<ul style="list-style-type: none"> <li>• No specific bedtime routines</li> </ul>	40	28.6
<ul style="list-style-type: none"> <li>• Other</li> </ul>	4	2.9
<i>Do you share your living space with any family members?</i>		
<ul style="list-style-type: none"> <li>• Yes</li> </ul>	74	52.9
<ul style="list-style-type: none"> <li>• No</li> </ul>	66	47.1
<i>How many smart devices do you use?</i>		
<ul style="list-style-type: none"> <li>• Smartphone</li> </ul>	109	77.9
<ul style="list-style-type: none"> <li>• Laptop</li> </ul>	10	7.1
<ul style="list-style-type: none"> <li>• Desktop Computer</li> </ul>	7	5.0
<ul style="list-style-type: none"> <li>• Tablet</li> </ul>	9	6.4
<ul style="list-style-type: none"> <li>• Wearable Technology (e.g., smartwatches)</li> </ul>	2	1.4
<ul style="list-style-type: none"> <li>• Other</li> </ul>	3	2.1
<b>Total</b>	<b>140</b>	<b>100</b>

Source: Author’s own calculation.

Table 5.3 indicates the lifestyle of the respondents, 53.6% of the respondents preferred a luxurious life, 5.7% of the respondents preferred a simple lifestyle, and the remaining 34.3% balanced lifestyle. The study also reflects the importance of social standing or 9.3% of respondents enjoy displaying their wealth and status, 35.7% of respondents prefer personal values and relationships over status symbols and 53.6% of respondents consider it to some extent but not everything but 1.4% were stated others.

Further statistics reveal that 17.9% of respondents have consistent and regular bedtime routines, 50.7% respondents have varied bedtime routines depending on their preferences, and 28.6% have no specific bedtime routines while 2.9% respondents have some other bed routine. Overall, findings show that teachers in Jhelum have varied bedtime routines. Moreover, in the case of sharing space with family members, 52.9% of respondents are sharing their living space with their family members and the remaining do

not share their living space. Table 4.4 also indicates that 77.9% were using a Smartphone, 7.1% used a laptop, 5.0% used a desktop computer, 6.4% respondents used wearable

technology (e.g., smart watches) and the remaining 2.1% used other devices. It infers that the majority of the teachers used smart phones.

**Table 5.4: Descriptive statistics of ICT and its Usages**

Items		Frequency
<b>Percentage</b>		
<b>What is the main purpose of using social media?</b>		
Connecting with friends and family	55	39.3
Networking for personal or professional purposes	17	12.1
Sharing and discovering content (such as photos, videos, and articles)	6	4.3
Staying updated with news and current events	27	19.3
Entertainment, and leisure	20	14.3
Promoting businesses or personal brand	4	2.9
Seeking and sharing information or advice	8	5.7
Expressing opinions and engaging in discussions	1	7
<b>What types of online activities do you engage in regularly?</b>		
Browsing website	46	32.9
Online shopping	26	18.6
Streaming video or music	26	18.6
Online gaming	8	5.7
Online learning or courses	26	18.6
Other	8	5.7

**On average, how much time do you spend on social media each day?**

1 hour	8	
5.7		
1-3 hours	53	37.9
4-6 hours	71	50.7
7-9 hours	5	3.6
10-12 hours	3	2.1

**I believe that \_\_\_\_\_ hours are optimal for my overall well-being.**

1 hour	1	7
1-3 hours	9	6.4
4-6 hours	19	13.6
7-9 hours	88	62.9
10-12 hours	23	16.4

**Are you familiar with the term Information and Communication Technology (ICT)?**

Very Familiar	80	57.1
Somewhat Familiar	50	35.7
Not Familiar with AI	10	7.1
Total	140	100

Source: Author's calculation.

Table 5.4 illustrates the result of ICT and its usage. The results of use of social media indicate that 39.3% of respondents use social media to connect with their friends and family members, 12.1% of respondents prefer social media platforms for networking and professional purposes, 4.3% of respondents use it for sharing and discovering content, 19.3% for staying updated with news and current events, 14.3% for entertainment, and leisure, 2.9% for promoting businesses or personal brand, 5.7% for seeking and sharing information or advice and 7% respondents are using social media tool for expressing their opinions and engaging in discussions. For analyzing the immense use of

ICT and its impact, it is important to have a look at the activities the individuals are performing. The above statistics show that 32.9% of respondents are using it for browsing purposes, 18.6% of respondents are doing online shopping using E-tools, 18.6% for streaming video or music, 5.7% for online gaming, and 18.6% are spending most of their time in doing online courses. Further, in case of how much time they are spending on social media which is affecting their sleep. The result shows that 5.7% of respondents use social media only for one hour, 37.9% of participants spend 1 to 3 hours, 50.7% use it for 4 to 6 hours, 3.6% use 7 to 9 hours, and 2.1% of respondents are spending

their time for 10 to 12 hours on social media. Moreover, 6.4% of respondents believe that 1- 3 hours are optimal for their wellbeing, and 13.6 % believe that 3-6 sleep hours are enough for their well-being, according to 62.9% only 6 -9 hours

are enough for their enough sleep. Further results show that only 57% are familiar with CT, 37% are somewhat familiar with ICT and 7.1% are not familiar at all.

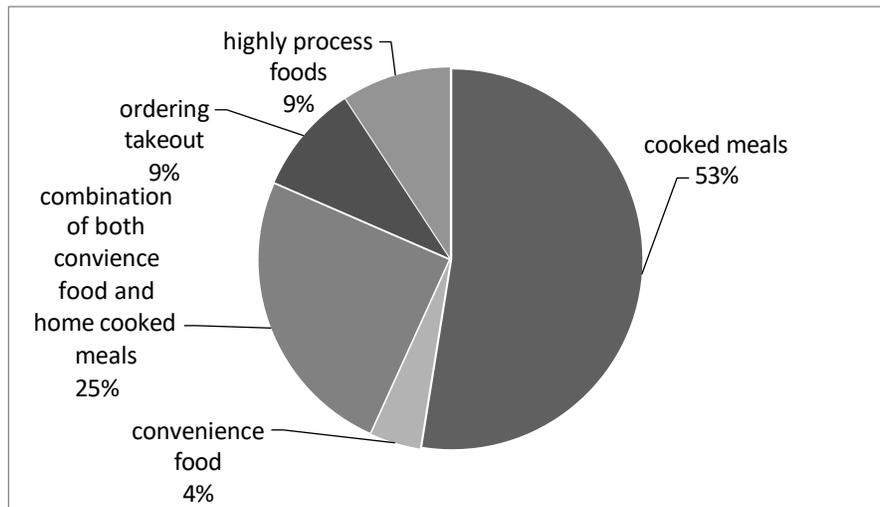
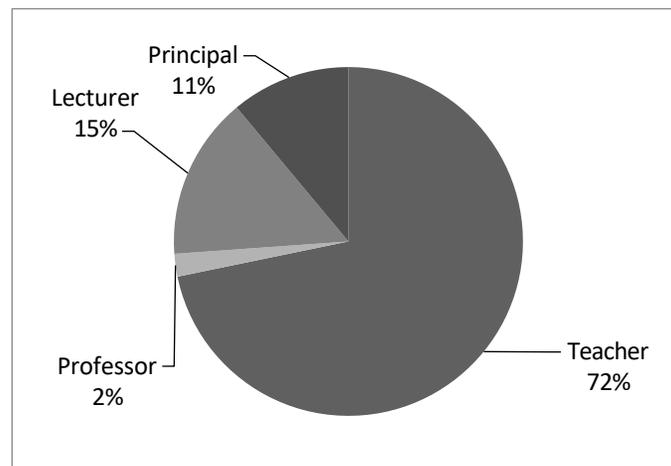


Figure 5.2: Descriptive Analysis of Respondent’s Food Pattern

Source: Author’s calculation.

Figure 5.2 shows the food pattern of respondents which indicates that 52.86% of respondents were eating cooked meals from scratch, 4.29% were eating prepackaged or convenience food, and 24.29% were eating a combination of both convenience food and home-cooked meals.

Further statistics 9.29% mostly ate out of ordering takeout, and the remaining 9.3% mostly consumed highly processed foods. Fig 5.3: Classification of Respondents Regarding Their Job classification



Source: Author’s calculation.

Figure 5.3 represents the distribution of the respondent’s job status. Survey data shows that 72% of the respondents were teachers, 15% were

lecturer where 2% was professor and the remaining 11% was principal.

**Table 5.5 Descriptive Statistics Regarding Their Job Information**

Do you have any diploma certificate?	Frequency	Percentage (%)
Yes	39	27.9
No	94	67.1
<b>Number of working hours per week?</b>		
20-30 hour	28	20.0
30-40 hours	35	25.0
40-50 hours	53	37.9
50-60 hours	24	17.1
<b>Total</b>	<b>140</b>	<b>100</b>

Source: Author’s calculation.

Table 5.5 shows that 27.9% of people had a diploma or certificate, while the other 67.1% had no diploma. The table also indicates the working hours of respondents. 20% of respondents worked 20-30 hours per week, 25.0 % of respondents worked 30 to 40 hours, 37.9% of respondents worked 53 hours and 17.1% of respondents worked 50-60 hours per week.

**Conclusion**

Quality sleep is necessary for optimal productivity at work. Adequate sleep improves cognitive functions such as memory, alertness, and problem-solving skills, making individuals more effective and efficient at their jobs. It can also result in lower productivity. This study aims to examine the impact of sleep poverty on work performance among teachers with the role of ICT. For this purpose, the study uses primary data by using a sample random technique. The analysis has been carried out by taking data from 140 teachers from the city of Jhelum.

The analysis has been performed by using descriptive statistics. The majority of the teachers were male (80) and 60 were female. The study findings reveal that sleep poverty has a negative effect on the job performance of teachers. The

majority of the teachers lived in Urban areas of the city of Jhelum.

Moreover, if we have a look at the impact of sleep consistency and sleep disorder on job performance, they also have a negative influence on health and daily functioning and depreciate our performance at work. This study also reveals that ICT impacts job performance negatively. The main reason for this is the overuse of technology and don't getting enough sleep. The misuse or overuse of ICT impacts our Brain and eyesight and also increases the ratio of diseases. The continuous use of ICT causes depression in youth and among teachers.

The high dependency on ICT reduces the critical thinking of both teachers and students. The abundance of online resources can be overwhelming making it difficult for teachers to find reliable information then the lack of reliable information leads to misconceptions and can impact the reputation of teachers. But if we analyze the interactive term of Sleep Poverty and ICT it shows that ICT leads to sleep poverty but also minimizes the negative effect of sleep poverty by enhancing the work performance of teachers.

This study highlights the serious issue of sleep deprivation faced by teachers and it has a negative

effect on job performance. In conclusion, the interactive term only has a positive effect on job performance. So, if we use ICT brilliantly it can enhance the efficiency of teachers at school which are playing the role of building blocks of any nation.

#### RECOMMENDATIONS:

Based on the study findings the following are some recommendations;

- Conduct regular sleep and well-being surveys to identify which areas for improvement.
- Provide incentives for teachers to prioritize sleep and well-being such as flexible schedules and less workload.
- Respect teachers personal time and avoid contacting them outside of work hours except in an emergency.
- Verify the accuracy of online information on reliable resources because there is much misleading content available and it is hard to pinpoint relevant and useful resources.

#### REFERENCE

- Abubakar, H. (2018). Impact of internet technology usage on job performance of senior secondary school teachers in Kaduna state Nigeria. *International Journal of Curriculum and Instruction*, 10(2), 152-167.
- Ahmed, G., Arshad, M., & Tayyab, M. (2019). Study of effects of ICT on professional development of teachers at university level. *European Online Journal of Natural and Social Sciences: Proceedings*, 8(2 (s)), pp-162.
- Amponsah, B. K., & Stonier, F. (2020). Effects of ICT on Teaching and Learning: A Review of Related Literature. *International journal of scientific advances*, 1(2), 119-123.
- Bertrais, S., André, N., Bèque, M., Chastang, J. F., & Niedhammer, I. (2021). Associations between multiple occupational exposures and sleep problems: Results from the national

French Working

30(3). <https://doi.org/10.1111/jsr.13101>

Blank, N., & Diderichsen, F. (1997). The effects of poverty on sleep problems in Sweden.

*Scandinavian Journal of Social Welfare*, 6(2), 91-98.

Bruner, J. (1997). The culture of education. In *The Culture of Education*. Harvard university press.

Deng, Y., Cherian, J., Kumari, K., Samad, S., Abbas, J., Sial, M. S., & Oláh, J. (2022). Impact of sleep deprivation on job performance of working mothers: Mediating effect of workplace deviance. *International journal of environmental research and public health*, 19(7), 3799.

Deng, Y., Cherian, J., Kumari, K., Samad, S., Abbas, J., Sial, M. S., & Oláh, J. (2022). Impact of sleep deprivation on job performance of working mothers: Mediating effect of workplace deviance. *International journal of environmental research and public health*, 19(7), 3799.

Estrada-Muñoz, C., Castillo, D., Vega-Muñoz, A., & Boada-Grau, J. (2020). Teacher technostress in the Chilean school system. *International Journal of Environmental Research and Public Health*, 17(15), 5280.

Flejterski, S., & Jodkowska, L. (2011). German economy as a global generator of growth and development-trends and prospects. *Folia Oeconomica Stetinensia*, 10(1), 53-65.

Fujishiro, K., Farley, A. N., Kellemen, M., & Swoboda, C. M. (2017). Exploring associations between state education initiatives and teachers' sleep: A social-ecological approach. *social science & medicine*, 191, 151-159.

Hanushek, E. A., & Rivkin, S. G. (2006). Chapter 18 Teacher Quality. *Handbook of the Economics of Education*, 2(06), 1051-1078. [https://doi.org/10.1016/S15740692\(06\)02018-6](https://doi.org/10.1016/S15740692(06)02018-6)

Harpaz, I. (1990). The importance of work goals: An international perspective. *Journal of international business studies*, 21, 75-93.

- Hawking, S. (2018). *Brief answers to the big questions*. Bantam.
- Himashree, G., Banerjee, P. K., & Selvamurthy, W. (2002). Sleep and performance recent trends. *Indian journal of physiology and pharmacology*, 46(1), 6-24.
- Imoluamen, F. (2021). *Good Health as Engine Room of Human Productivity and Performance*. 8(5), 404-411. www.jetir.org/b404
- Irwin, M. R. (2015). Why sleep is important for health: a psychoneuroimmunology perspective. *Annual review of psychology*, 66, 143-172.
- Karimikia, H., & Singh, H. (2020). A meta-analysis of the negative outcomes of ICT use at work, incorporating the role of job autonomy. *27th European Conference on Information Systems - Information Systems for a Sharing Society, ECIS 2019*, 0-22.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.
- Osakwe, R. N. (2013). The Impact of information and communication technology (ICT) on teacher education and its implication for professional development in
- Piaget, J. (2000). Commentary on Vygotsky's criticisms of language and thought of the child and judgement and reasoning in the child. *New ideas in psychology*, 18(2-3), 241-259.
- Polos, P. G., Bhat, S., Gupta, D., O'Malley, R. J., DeBari, V. A., Upadhyay, H., ... & Chokroverty, S. (2015). The impact of Sleep Time-Related Information and Communication Technology (STRICT) on sleep patterns and daytime functioning in American adolescents. *Journal of adolescence*, 44, 232-244.
- Schwartz, T., Gomes, J., & McCarthy, C. (2010). *The way we're working isn't working: The four forgotten needs that energize great performance*. Simon and Schuster.
- Sharma, S. (2023). Sleep well live well. *Journal of Clinical Sleep Medicine*, 19(7), 1173-1174.
- Teichler, U., & Wasser, H. (1992). *German and American Universities: Mutual Influence-Past and Present. Werkstattberichte 36*.
- Thomsen, D. K., Mehlsen, M. Y., Christensen, S., & Zachariae, R. (2003). Rumination—relationship with negative mood and sleep quality. *Personality and Individual Differences*, 34(7), 1293-1301.
- Vygotsky, L. S., & Cole, M. (1978). *Mind in society: Development of higher psychological processes*. Harvard university press.
- Xu, F., Adams, S. K., Cohen, S. A., Earp, J. E., & Greaney, M. L. (2019). Relationship between physical activity, screen time, and sleep quantity and quality in US adolescents aged 16-
19. *International Journal of Environmental Research and public health*, 16(9), 1524.