Kurdish Studies
Sep 2024
Volume: 12, No: 5, pp 1135 - 1140
ISSN: 2051-4883 (Print) | ISSN 2051-4891 (Online)
www.KurdishStudies.net

DOI: 10.53555/ks.v12i5.3430

An Unseen Stress Of Biometrics Attendance Punching Amongst Executive Employees, A Case Study Of Healthcare Workers In Private Hospitals.

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Abstract
Time-centered services from healthcare executive employees are creating stress for the intellectual professionals in private hospitals, Pakistan. Performance of the healthcare employees is measured through biometrics attendance punching in most of the medical and healthcare units across Pakistan. Healthcare employees are supposed to serve during the prescribed time in the workplace and the Human Resources manager monitors it with the help of biometric punching system. Biometric attendance and the salary of the employees are linked in almost all the private healthcare organizations. This study has offered to consider and contribute in a relatively unexplored area. There seem to be very few studies of stress due to Biometric punching available. The study was conducted among 154 healthcare professionals' employees in private medical colleges and hospitals, Lahore, Pakistan to identify the Relationship between Demographic Variables of the healthcare employees and Job Stress Due to Biometric Attendance Punching. The study identified that most of the healthcare employees working in private medical and healthcare units are facing stress due to the implementation of biometric attendance system. It was identified that stress level of healthcare employees due to biometric attendance is independent of educational qualification, experience, age and department in which employees are working but it is associated with the gender of the employees. Executive level employees are found to be more stressful than operational level employees.

Key Words: Biometric Attendance Punching, Electronic Monitoring, Demographic Variables, Job Stress

2. Background of the study

The biometric attendance system is really simple to use, doesn't require any technical support, and doesn't fail to maintain a proper presence record or ensure healthcare worker ID. According to Abid Ali et al. (2018), the government as well as private sector have spent millions of rupees developing their monitoring system to address the issue of improper attendance and unethical absences from healthcare and medical institutions. Healthcare Employees help each other enter signatures for demonstrating that they are on duty in the manual attendance system. In the manual attendance register system, healthcare workers sign for their coworkers (Sing et al, 2015). They perform their tasks on a regular basis out of habit. Healthcare Employee identity corresponds to the extent of an employee's genuine job performance (Abid Ali et al., 2018).

For the past few years, healthcare organizations have adopted biometric clocking system analytics for personnel attendance and time management (Hoo & Ibrahim, 2019). Biometric-based advanced scheduling and attendance solutions are available. Healthcare organizations are operating at a fast pace under uncertain conditions. Human resources account for a sizable amount of the expenses that healthcare services incur to get the desired performances from the employees (Akinduyite, Adetunmbi, Olabode, & Ibidunmoye, 2013).

(E OZ et al, 1999) Electronic monitoring is the process of gathering, storing, analyzing, and reporting data about healthcare workers' activities using computers, electronic observation and supervision, phone calls, telephone service observation, or any other type of visual, auditory, or computer-based technology that is carried out by any means other than the supervisor's direct observation. A survey conducted by American Management Association in 2001 reported that around 82% of organizations are employing some kind of electronic monitoring (AMA, 2001). Employees reacts to electronic monitoring in several ways. There are many studies done by researchers regarding the reaction of employees towards electronic monitoring.

E-monitoring is the process of immediately observing, managing, and assessing healthcare employee performance using electronic technology. Private healthcare workplaces are becoming more dynamic for healthcare leaders. Healthcare Businesses spend huge amount of money for expenses related to their human resources. Healthcare employee attendance is crucial for all medical and healthcare organizations since it has a direct impact on the performance of both individuals and the organization. False leaves are regularly taken by workers from different organizations, which has a detrimental effect on the productivity of the healthcare sector performance. Various management tactics are employed in the banking and commercial sectors, along

with other firm organizations, to sustain employee performance. In this regard, it's believed that the employee attendance tracking system can handle fake leaves and other issues pertaining to attendance.
Performance is defined as how healthcare employees carry duties and do the tasks that are allotted to them. It illustrates the effectiveness, standard, and output of their work. Healthcare Performance has an impact on personnel's assessment of an employee's worth to the contribute significantly towards ailing society. Every healthcare employee is a significant investment for a healthcare company, so they must individually generate a substantial return (Felita, 2021). The workforce is a healthcare sector's greatest asset. It follows that a private healthcare's or organization's success is greatly influenced by the daily performance of its staff. If healthcare units wish to prosper in the current services climate, they must figure out how to maximize healthcare employee performance and retention. In addition to aiding in the recruitment, development, and retention of top talent, this also enables the healthcare unit to cultivate a pool of future healthcare leaders by enabling healthcare employees to advance within their positions and responsibilities (Hill, 2018). Improving worker performance is a constant process that calls for organizing, monitoring, and reviewing work, but it's also a necessary step in achieving company goals.
The success or failure of a firm is influenced by every individual. It makes sense that you would want to maintain high standards of quality and productivity for your team. It will be challenging to sustain, though, if you don't fully understand what affects workers' performance. Whether you're a team leader or an employee, it's imperative that you assess the performance of your team members and pinpoint their areas of weakness (Felita, 2021). Healthcare employees and management should always be aware of their performance level. It's possible to significantly improve work quality and productivity by putting best practices into practice, especially if performance is flagging or if you just need a boost. Absenteeism rates increased rapidly in a number of health and non-health domains. Many different types of staff take false leaves, which negatively impacts hospital operations (Kocakulah et al., 2016). In addition, a growing number of fake sick days are being taken in a lot of industries, which makes firms unhappy.
The role that attendance management plays in maintaining the smooth operation of the company is multifaceted. A study found that when a person makes up a sick leave, other staff members have to take on more work, which adds to the stress.

3. Research methodology

3.1 Research design

In this study, Descriptive research procedure is used for describing the present situation in organization and analytical research to analyze the result by using research tools.

3.2 Population

The study was conducted among four different medical and healthcare units across Lahore, Pakistan. The four healthcare organizations employees 421, 190, 311 and 119 employees respectively. All the four medical and healthcare units are running in a three-shift timing in which healthcare employees are supposed to work 8 or 6 (Medical Doctors) hours in the company. Sample 154 employees from four different companies who were punching their attendance using biometric system was taken for this study. Sample constitute 15% of the population. Sample was taken through stratified random sampling method. The sample included healthcare employees proportionately from four companies

3.3 Data Collection

Structured questionnaire was distributed among employees in order to collect data. Stress level of the healthcare employees was measured bymodifying the questionnaire prepared by (Nair & Kumar, 2014)

4. Analysis

4.1 Nature of job and stress: The healthcare employees selected for the study were classified as teachers, medical doctors, managers, and supervisors, based on the type of job they are doing. Rules and regulations, work environment, routine work schedule, working time, career prospects, punishment, etc., differ from healthcare one employee to another employee based on the position in which they are working, which will have adirect influence on the level of job stress experienced by the employees due to biometric punching. So the level of stress has been analyzed on the basis of the department in which employees are working. The mean stress score, range and S.D. across different sectors are given in the below table 4.1.1

4.1.1 Table showing category of employees and Job Stress-Mean Scores

Department of employees	No. of respondents	Percentage	Mean score	Range Minimum	Maximum	S.D
Academics	85	55.19	40.68	18	63	8.37
Clinical and diagnostics	44	28.94	42.41	19	66	7.61
Patient service	25	16.23	42.85	20	64	9.01
Total	154	100	41.99	19	66	8.29

Source: Primary data

It is shown that healthcare workers in academic departments had the lowest average stress scores, and that staff in patient service had an average stress level that was somewhat higher than that of staff in other departments. It was found that the average job stress level of the healthcare staff in the diagnostics and clinical department was in between that of the patient

service and data analysis departments. Furthermore, a cross study was performed to look at the connection between the position of the healthcare worker and the level of stress brought on by biometric punching. The outcomes are displayed in

Table 4.1.2.Table Showing Category Of Employees And Job Stress.

Department	Low level stress	Medium level stress	High level stress	Total
Academics	12	58	15	85
Clinical and diagnostic	7	32	4	43
Patient service	5	16	5	26
Total	24	106	24	154

Source: Primary data

Due to biometric attendance marking, the majority of respondents (68.8%) from the three categories of healthcare employees reported experiencing medium stress. Employees in thePatient service sector report high levels of stress (19.23%), followed by healthcare workers in the academic department (17.64%). Additionally, medium stress is experienced by 74.41 percent of healthcare workers in the clinical and diagnostic sector.
The following hypotheses were tested statistically using Chi-square on this data.
H0: The type of work and stress level are unrelated to biometric punching. H1: Because of biometric punching, the type of work and stress level are related.

Table 4.1.3Chi –square Test Results

Pearson chi-square	D.F	P Value
6.76	4	0.14

4.1.2 Since there was no discernible difference in the nature of the jobs with respect to stress levels, the null hypothesis is accepted because the value ($p>0.05$) is not significant at the five percent significance level. As a result, it was determined that the type of work and the amount of stress brought on by the introduction of biometric punching were unrelated.

4.1.3 4.3 Age and Stress: People's attitudes and behaviors are thought to be greatly influenced by their age. Employees may experience different levels of occupational stress, which is predicted to be correlated with age. A cross-analysis was conducted to examine the relationship between age groups and the amount of stress as determined by the stress score. It's portrayed in the Table showing age of employee and job stress

Age	Low level stress	Medium level stress	High level stress	Total
30 and below	7	46	9	62
31-40	11	41	12	64
41-50	6	14	3	23
51 and above	0	4	1	5
Total	24	105	25	154

Source: Primary data

It can be seen that most of the age groups in the survey had a medium level of stress in common. Employees over 50 were the least impacted group, with respondents from the age range of 31 to 40 (48%) making up a larger proportion of the very stressed group. This suggests that job stress brought on by biometric punching tends to grow with age, peaking between the ages of 31 and 40 before beginning to drop. This conclusion is indirectly indicated by how differently employees' levels of responsibility vary according to their age and experience.
This was further verified using a Chi-square test for interdependence, using the following hypotheses:Ho: There is no dependence between age groups and stress level due to biometric punching.
H1: There is dependence between age groups and stress level due to biometric punching.

Table no 4.2.2 Chi –square Test Results

Pearson Chi-square	D.F	Value
9.193	6	.163

($P>0.05$) is the accepted null hypothesis. It is established that age and stress level were independent of one another and did not depend on one another as a result of biometric punching.

4.3 Gender and Workplace Stress Level

Men and women differ greatly in terms of their physiology and nature. In addition, the culture enforces some distinctions that change depending on the period and location. It's known as "gender disparity," and it could lead to stress at work. A cross-analysis was conducted to examine the relationship between stress levels as a result of biometric punching based on gender and stress score. It is provided in the following table 4.3.1.

4.1.4 Table showing gender and level of job stress

Gender	Low level stress	Medium level stress	High level stress	Total
Male	11	43	9	65
Female	12	61	16	89
Total	23	104	25	154

Source: Primary data

A close look in the above table shows that male dominated both in high level and medium level stress. Out of 27 employees feeling high level of stress 16 are female (59.25%) and in medium level they constitute 58.05%. In all categories dominance of female was seen.

This is further validated using a Chi-square test for interdependence using the following hypotheses: H0: There is no dependence between gender and stress level due to biometric punching.

H1: There is dependence between gender and stress level due to biometric punching.

Table No 4.3.2Chi –square Test Results

Pearson Chi-square	D.F	P Value
7.822	2	0.02

4.2 Given that the value of P was less than 0.05 and there was no five percent level of significance, the null hypothesis was rejected. This suggests that gender and stress level were correlated as a result of biometric punching. Compared to male respondents, female respondents reported higher levels of stress.

4.3 4.3 Educational Qualification and Job Stress Level: An individual's character and ability to make decisions are greatly influenced by their level of education. It's widely accepted that intelligent people are capable of making wise decisions. Education facilitates a thorough comprehension of all circumstances, enabling workers to effectively handle the pressures of their jobs. An attempt has been made to examine the importance of the connection between educational background and degree of respondent.

4.4 To test the association between level of stress based on stress score and educational qualification of different respondents, a cross-analysis was done and the result is stated in the following table 4.4.1

4.4.1 Table showing educational qualification and level of job stress

Educational qualification	Low level stress	Medium level Stress	High level stress	Total
MBBS/BDS/	8	13	6	27
BS MLT/OTT	9	30	16	55
MBA/ACCA	20	45	7	72
Total	37	88	29	154

Source: Primary data

It is discovered that most members of all groups, regardless of educational background, fell within the medium stress range. High levels of stress are experienced by 29.09 percent of general graduates and 21.42 percent of MLT/OTT degree holders, respectively. Medium levels of stress are experienced by 54.54% of BBA/ACCA graduates and 48.14% of MBBS/doctoral degree holders.

Chi-square statistics were used to examine the significance of the link between education and the degree of job stress caused by biometric punching. The following assumptions guided the analysis:

H0: The relationship between stress level and educational background is independent of biometric punching. H1: Because of biometric punching, there is a relationship between stress level and educational background.

Table No. 4.4.2 Chi –square Test Results

Pearson's Chi-square	D.F	P Value
4.44	4	0.34

4.4.2 Since the value ($p>0.05$) was determined to be statistically not significant at the five percent significance level, the null hypothesis is accepted. Thus, it was determined that the stress level experienced by university staff as a result of biometric punching was unaffected by differences in educational background and that the two variables were independent.

4.4.3 4.6 Employee Experience and Workplace Stress: Experience aids in employees' knowledge, comprehension, and self-assurance growth. It also increases the individual's level of accountability. Thus, there is a relationship between experience and stress level.

4.4.4 To investigate the association between experience and stress level, a cross-analysis was conducted, as shown in Table 4.5.1.

Table showing experience of the employees and job stress

Years of experience	Low level stress	Medium levelstress	High level stress	Total
Less than 2 years	6	29	7	42
2-5 years	4	38	9	51
5-10 years	7	18	5	30
10-15 years	6	14	3	23
More than 15 years	1	3	4	8
Total	24	102	28	154

Source: Primary data

The Table shows that, regardless of service duration, the majority of respondents (70.12%) reported experiencing a medium level of stress. The Table shows that the majority of employees in the highly stressed (32.14%) and medium-stressed (37.15%) groups were those with two to five years of service. This could be as a result of the heavy duty placed on them at this point and the steps they took to go up the organizational ladder. Based on the following hypotheses, a further statistical test was conducted using Chi-square to assess the independence:
Ho: The amount of stress and the duration of service are independent of one another. H1: The amount of stress and length of service are related.

Table no 4.5.2 Chi –square Test Results

Pearson Chi-square	D.F	P Value
9.0	8	.34

The null hypothesis is accepted since the value ($p>0.05$) was determined to be statistically not significant at the five percent significance level, meaning that there was no correlation between the amount of stress caused by biometric punching and the length of service.

4. Results

According to the report, the majority of workers in IT parks are under stress as a result of the biometric attendance system's adoption. Karl Pearson's Chi square test was used to determine that employees' stress levels as a result of their biometric attendance are related to their gender and are unaffected by their age, department of employment, experience level, or educational background. Employees who are female are reported to be more stressful than those who are male.
The workers felt that their life had become more automated as a result of the biometric punching technology. When they have unfinished business, the majority of employees work longer than eight hours, and when they arrive late for work, their pay is withheld.

5. Suggestions

1. Stress audits should be conducted in light of the stress level that IT staff members experience as a result of biometric punching. These assessments provide a means of objectively examining staff members' mental health.
2. Employees who are experiencing stress should be identified by corporate executives, who should also inquire as to the cause of their feelings. Once the cause has been identified, the business needs to act to fix it.
3. In order to avoid clash with employees, their opinion regarding biometric attendance must be taken into consideration.
4. If possible, companies must think of introducing flexible time working (i.e., employees can come at any time to office but must leave the office after spending 8 hours there) and working from home facilities in order to reduce stress among them.

6. Scope for future research

This study must represent the first in a relatively unexplored area. There seem to be very few studies of stress due to Biometric punching. In this study Job stress due to biometric punching has been related with few demographic profiles of the employees in private healthcare sector across Lahore, Pakistan. The study can be done in the same population to identify their attitude, perception etc. towards biometric punching. In a deeper level study, we can analyze how the reaction of employees towards biometric punching affects their job satisfaction, job commitment, motivation etc.

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