



ERGONOMICALLY DESIGNED WORKSPACES, INSTITUTIONAL COMMITMENT AND SECRETARIES WELLBEING IN DELTA STATE TERTIARY INSTITUTIONS

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Abstract

This research investigated Ergonomically designed workspaces, institutional Commitment and Secretaries well-being in Delta State tertiary institutions. Descriptive survey design was used to survey 110 professional secretaries across six universities, three colleges, and three polytechnics. A structured questionnaire with a 5-point Likert scale was used to collect data. The instrument was validated by three experts. Test-Retest was conducted and PPMC yielded $r = 0.81$, $p < .05$. Data analysis involved descriptive statistics and the Pearson Product Moment Correlation (PPMC) to examine relationships between the variables. The findings revealed that secretaries perceived their workspaces as inadequately designed ergonomically, with issues like uncomfortable chairs, poor lighting, and limited access to ergonomic accessories. Secretaries reported that poor ergonomic conditions negatively affect their health, leading to discomfort, fatigue, and stress. Conversely, they also reported that engaging in ergonomic practices like taking breaks and stretching helps reduce discomfort. The study found a strong positive correlation between perceived ergonomic workspace and management's attention to ergonomic issues, meaning that the secretaries see ergonomic environment as supportive. A major recommendation from the study is that institutions should develop clear policies and allocate resources specifically for ergonomic improvements. Regular training sessions and routine assessments are also vital to enhancing secretaries' health and performance.

Keywords: *ergonomic, secretaries, workspaces, well-being, professional, institutions*

Background

One phenomenon that administrators seem to neglect in most organisations in Nigeria including tertiary educational institutions in Delta State is the issue of ergonomic. Whereas, those institutions constitute some of the most complex organisations across the globe, they seem to be unaware or inadvertently, pay less attention to issue of ergonomic as it affects secretaries.

The role of secretary is as old as civilization and for over centuries the nomenclature has remained an indispensable component of any organization's workforce. Metaphorically, the term "legally recognized spouses" has been used to qualify the close working relationship and the level of trust and responsibility that secretaries share with executives while managing schedules, communications, and sensitive information. A resemblance of the trust and support typically found in a marital partnership.

The role of the secretary has advanced significantly, especially with expansion in organizational activities and office automation. Thus, a good number of studies have shown that the role of secretaries and administrative professionals has shifted from traditional clerical/typist tasks to more strategic roles within organizations. For instance, a survey by the International Association of Administrative Professionals (IAAP) highlighted that a significant part of secretaries' roles and functions includes project management and decision-making processes, indicating their integral role in organizational success (2019 IAAP Survey).

The university and polytechnic systems have more functional organs (Management, Faculties, Departments, Divisions, Directorates and Centres), hence they have larger number of secretaries than those of the other institutions. In recent time, due to vulnerability of the secretarial profession (Los Angeles Times, 1998, April 22), some institutions employ larger number of computer operators into departments and other lower offices than professional secretaries.

In rapidly evolving landscape of modern workplaces, particularly within tertiary educational institutions, well-being of secretaries, is increasingly being recognized as important for organizational success. Secretaries often serve as backbone of institutional efficiency, facilitating communication, managing schedules, and

ensuring smooth operation of daily tasks. However, complexity of office design strategies within the work environment plays a crucial role in shaping overall performance and well-being of secretaries (Nielsen & Cleal, 2017).

Issues relating to office ergonomic has not been given serious attention by management of most organizations in Nigeria, particularly among tertiary institutions in Delta State. In this study, the researcher aims to explore extent of ergonomic designed workstation of secretaries, secretaries behavioural pattern and level of institutional commitment to office ergonomic which potentially influences the overall wellbeing of secretaries.

Problem Justification

Secretaries in tertiary institutions play a very important role in ensuring organizational efficiency, yet their work situations often receive limited attention. While most existing studies acknowledge that ergonomic design influences employee stress and well-being (Robertson & Ciriello., 2017), few research focused specifically on secretaries in Nigerian tertiary institutions remains. Most literature emphasizes external stressors such as long working hours and personal/family lifestyle factors (Akinbobola, 2015; Obi et al., 2019), neglecting how poor ergonomic workstations may directly impact secretaries' well-being and efficiency.

A study by Adeyemi and Adeyemi (2018) highlights that inadequate ergonomic conditions are linked to increased musculoskeletal disorders and reduced productivity among office workers in Nigeria, suggesting similar implications for secretaries whose work schedules involve prolonged desk work. Furthermore, the World Health Organization (2019) emphasizes that ergonomic interventions can significantly improve employee well-being and work performance, yet such interventions are often overlooked in Nigerian tertiary institutions. This oversight creates a significant knowledge gap and managerial challenge, undermining a clear understanding of how ergonomic design affects secretaries' well-being and organizational commitment, institutions risk employees' well-being and reducing overall productivity (Oluwafemi & Akinlabi, 2020). Therefore, this study is necessary to examine how ergonomically

designed workspaces influence the well-being of secretaries and institutional commitment to ergonomic in Delta State tertiary institutions.

Purpose of the Study

The main purpose of the study is to determine the ergonomically designed workspaces and Wellbeing of secretaries in Delta State Tertiary Institutions; with following specific objectives:

1. To investigate the level of ergonomic workspace design for secretaries in Delta State tertiary institutions
2. To find out how office ergonomic impact well-being of secretaries in Delta State tertiary institutions
3. Whether secretaries in Delta State tertiary institutions engage in personal support to in order to mitigate the impact of ergonomic in their workplaces.
4. The extent management of the tertiary institutions in Delta State give attention to ergonomic as it affects secretaries.

Research Questions

1. What is the level of ergonomic workspace design for secretaries in Delta State tertiary institutions?
2. How does office ergonomic impact well-being and stress levels of secretaries in Delta State tertiary institutions?
3. Do secretaries in Delta State tertiary institutions engage in personal support to mitigate the impact of ergonomic in their workstations?
4. Does management of the tertiary institutions in Delta State give attention to ergonomic as it affects secretaries?

Hypotheses

Ho1: There is no relationship between secretaries perceived ergonomic workspace and its impact on their perceived well-being and stress level in Delta State tertiary institutions.

Ha1: There is a relationship between secretaries perceived ergonomic workspace and its impact on their perceived well-being and stress level in Delta State tertiary institutions.

Ho2: There is no relationship between secretaries perceived ergonomic workspace and their

perceived level of management attention to ergonomic in Delta State tertiary institutions.

HO2: There is a relationship between secretaries perceived ergonomic workspace and their perceived level of management attention to ergonomic in Delta State tertiary institutions.

Literature Review

Concept of Ergonomic

Ergonomics, is the science dedicated to designing workplace environments that optimize human well-being and overall system performance and has been known to influence secretaries' performance and productivity (Edmondson, 2019). Research has demonstrated that a positive work environment, characterized by supportive management directly impacts employee well-being and hence, aids performance. Various studies indicate that ergonomic workspace design including factors such as desk height, chair comfort, lighting, movement space and appropriate workstation arrangement lead to substantial improvements in Secretaries' health and productivity (Karsh & Beasley, 2003). Specifically, ergonomic interventions have been linked to reduced musculoskeletal disorders, decreased fatigue, and enhanced job satisfaction, which are particularly important in secretaries' workstations marked by prolonged sitting and repetitive tasks (Hignett & Waddington, 2006).

Tertiary educational system is the highest employers of professional secretaries due to vast administrative and academic divisions summarized into Management cadre, colleges, faculties, departments, directorates, centres, consultancy units, affiliates and liaisons. Managing tertiary institutions therefore, involves various tasks that emanates within the office in addition to activities prevalence involving the institution's subsystem system. The complex nature of tertiary educational institutions no doubt create pressure on professional secretaries. Some of the duties are so professionally crucial that delegating authority to subordinates such as computer operators or copy typists may not produce effective results. In a study carried out on secretaries' job satisfaction among tertiary institutions, it was discovered that the number of professional secretaries in all five tertiary

institutions in Delta State was eighty in number (Aganbi, 2009). This explains why work pressure on secretary was a crucial phenomenon that calls for concern.

Theoretical framework

This study is anchored on the Posture Alignment perspective, which posits that “optimal body alignment reduces biomechanical strain, enhances musculoskeletal efficiency, and supports long-term health”. It was founded on the work of Punnett & Wegman (2004), Kendall et al. (2005) and much later by Shumway-Cook & Woollacott (2017) that emphasized postural assessment and postural control highlighting detrimental effects of sustained misalignment on musculoskeletal health within the ergonomics domain. Put together, the studies show that properly designed workstations facilitate neutral posture, minimize repetitive stress, and prevent work-related musculoskeletal disorders.

Applied to the secretarial profession, posture alignment theory suggests that ergonomic interventions such as adjustable seating, keyboard positioning, and monitor placement can improve well-being by reducing physical strain and in turn foster greater job satisfaction and institutional commitment. Thus, posture alignment theory provides a physiological mechanism through which workplace ergonomics influence both the well-being and organizational attachment of secretaries in Delta State tertiary institutions.

Ergonomic and Well-being

Secretaries face physiological and psychological challenges arising from complexities associated with ergonomic; leading to stress and burnout issues (US Department of Labor, 2012). This emphasized the role of psychological safety in enhancing productivity among administrative professionals (Edmondson, 2019).

Despite the important roles of secretaries and hazards associated with poor ergonomic work station, secretaries in tertiary educational institutions rarely contribute to policies decision involving office design and equipment. For instance, a survey of some secretaries' offices in tertiary institutions, one finds limited office space for free movement and in most cases, they are filled with furniture of various sizes and shelves of various dimensions and purposes such as

accumulated files, stationery and confectionaries and so on.

Supply of office furniture and equipment for the secretary ought to take cognizance of the physiological built up of secretaries such as gender, height, weight, body size and so on, allowing for ease of comfort and movement which helps to reduce stress and hazards associated with poor ergonomic. This is not the case with offices of the top executives of institutions which are usually very spacious and well ventilated.

Understanding Ergonomic in Workplace

One of the roles of management in any organisation is recognizing the ergonomic need of secretary, particularly in tertiary educational institutions. When management source office equipment, suppliers in most cases, do not customize furniture and equipment to the need of secretaries. Rather, they produce with general specifications and where there are different suppliers of the same products, there are always variations in specifications and quality.

Today's secretaries spend most of the office time processing information and making decisions. While the brain and arms are very busy, the main bodies often stay still in one position. This repetitive and static posture has been linked to health problems. So that the need arises for work recess or break in order to perform some physical activities such as small movements to stay healthy. Contrarily, modern lifestyles have made some individuals less physically active leading to weight gain, become weaker, and develop health issues like poor heart health and less energy. Also, workplace injuries are becoming more common because of poor equipment or arrangement of office furniture (Dunstan, Howard, Healy, & Owen (2017).

Management concern for ergonomic is demonstrated in various ways and it is expected that the Secretary must be aware of every institution's actions directed at improving ergonomic. Having a clear ergonomic policy statement or plan (Smith et al., 2018) shows that an institution officially recognizes the importance of secretaries' safety. Policy that involves allocating funds to ergonomic is the key to institutional concern (Johnson, 2012).

Institutions that offers regular training and

awareness campaign in addition to routine evaluation of secretaries' work environment by experts such as checking workstations and listening to secretaries complain or opinion, shows a proactive attitude (Kumar & Singh, 2018). Regular medical check-up helps track these imminent problems assist in improving workplace safety over time (Martinez & Lopez, 2020). In all, when educational institutions prioritize ergonomic safety and comfort for secretaries, it leads to better productivity and fewer health problems (Sinha & Ghosh, 2023).

Method

This study utilized the descriptive survey design. There are 26 tertiary institutions of different ownership (federal, state and private) and categories (University, Polytechnics, Colleges and Monotechnic) in Delta State with 186 number of professional secretaries. Administrative staff, Computer Operators and Typists are not included in this study due to differences in training and

scope of duty. Population of secretaries in these institutions varies with the administrative structure and operational size and functions. Professional secretaries are mainly found in top and middle management offices.

In this study, six universities, three colleges of education and three polytechnics (state and Federal) across the three senatorial districts of the state were purposely selected. In all 110 professional (career) secretaries were purposively sampled for the study with assurance of confidentiality of information. The instrument was a Likert scale of 5-point (1-5) and comprised four sections with a total of 31 question items. The questions were validated by three professionals both in OTM and Educational measurement. The researcher adopted descriptive statistics to analyse the data and Pearson Product Moment Correlation test-statistic of the pilot study achieved $r = 0.81$ $p < 0.05$. The hypotheses were also tested using PPMC statistics.

RQ.1: What is the level of ergonomic workspace design for secretaries in Delta State tertiary institutions?

Table 1: Mean and Standard Deviation of the secretaries' perception of ergonomic workspace design in their institutions

Item	$\bar{x}$	SD	Interpretation
1. My office chair is adjustable to fit my body comfortably.	2.78	1.21	Moderate disagreement suggests many employees find their chairs not fully adjustable or comfortable, with a mean below neutral.
2. I frequently change my sitting position during work hours.	2.45	1.22	Predominantly disagree, indicating most employees do not often change sitting positions.
3. The lighting in my workspace is sufficient and comfortable.	3.86	1.12	Mostly agree/strongly agree, indicating satisfactory lighting conditions.
4. My monitor is positioned at eye level to prevent neck strain.	3.09	1.30	Slightly above neutral, but significant disagreement suggests many monitors may not be optimally positioned.
5. My keyboard and mouse are positioned to reduce wrist discomfort.	2.80	1.22	Moderate disagreement, indicating room for improvement in ergonomic placement.
6. My desk height allows me to work without bending or straining.	2.65	1.25	Generally leaning toward disagreement, showing many desks may not be ergonomically optimal.
7. I have access to ergonomic accessories (e.g., footrest, wrist support).	2.15	1.33	Predominant disagreement, indicating limited access to ergonomic accessories.
8. My workspace is free from clutter, allowing for easy movement.	2.65	1.25	Disagreement suggests clutter may be a common issue, impacting workspace comfort and mobility.

Source: Survey data, Secretaries perspectives on ergonomic workspace (2025).

Analysis of the responses reveals that secretaries generally perceive workspace lighting positively as relatively sufficient. However, there is notable disagreement regarding ergonomic adjustments such as adjustable chairs, monitor positioning, desk height, and access to ergonomic accessories, indicating potential areas for improvement. The mean scores below 3.00 for items related to ergonomic comfort

suggest a tendency toward dissatisfaction or neutral perceptions. The standard deviations, mostly above 1.20, indicate variability in responses, reflecting differing experiences among employees. Overall, the data suggests that while lighting condition are satisfactory, ergonomic support and workspace organization requires attention

RQ.2: How does office ergonomic impact well-being and stress levels of secretaries in Delta State tertiary institutions?

Table 2. Mean and Standard Deviation of the secretaries' perception of well-being and stress in their workstation

Item / Statement	Mean	SD	Interpretation
9. Poor ergonomic setup affects my overall well-being.	4.20	0.89	Most respondents agree that poor ergonomics impact their well-being, with a high concentration of "Agree" and "Strongly Agree" responses.
10. Poor chair design, improper desk height, and inadequate keyboard positioning can lead to neck, shoulder, back, and wrist pain.	4.40	0.65	Strong consensus that poor ergonomic features lead to pain, with the majority "Agree" or "Strongly Agree."
11. Inadequate lighting, improper monitor placement, or screen glare can cause eye discomfort and reduce concentration.	3.20	1.02	Mixed responses, leaning toward disagreement, but many still agree. Slightly lower mean indicates less perceived impact compared to other items.
12. Repetitive typing and mouse use without ergonomic support can cause conditions like carpal tunnel syndrome.	3.80	1.00	Moderate agreement, with many respondents recognizing the risk but less strongly than other issues.
13. Discomfort from poor screen ergonomics affects my concentration.	2.90	1.12	Responses are more evenly spread, with many undecided or disagreeing, indicating less perceived impact on concentration.
14. Uncomfortable seating and workspace setups can lead to increased fatigue, decreasing efficiency and accuracy.	4.00	0.75	Strong agreement that discomfort affects fatigue and performance, with high "Agree" and "Strongly Agree" responses.
15. Poor ergonomic environments can contribute to physical discomfort, leading to increased stress levels and decreased job satisfaction.	4.00	0.85	Clear consensus that poor ergonomics affect stress and satisfaction levels.
16. Prolonged sitting without ergonomic support can impair circulation, leading to swelling and discomfort in legs and feet.	3.70	1.05	Responses indicate moderate recognition of circulation issues caused by poor ergonomics.
17. Lack of ergonomic furniture can result in poor posture.	3.50	1.04	Mixed responses, with some disagreement, but a significant number agree that lack of furniture affects posture.

Source: Survey data, Secretaries perspectives on ergonomic and well-being (2025).

Overall, most respondents agree that poor ergonomic setups negatively impact their well-being and contribute to physical discomfort, fatigue, stress, and poor posture. Items like chair and desk issues leading to fatigue received high agreement, indicating these are common concerns. Some questions about eye discomfort and circulation showed more mixed responses, suggesting these may be perceived as less

immediate or less severe but still relevant. The mean scores generally between 3.50 to 4.40, reflecting a tendency toward agreement, with standard deviations indicating moderate variability in responses. This data highlights the importance of ergonomic improvements in the workplace to enhance employee health and productivity.

RQ.3: To what extent secretaries in Delta State tertiary institutions engage personal support to mitigate the impact of ergonomic in their workstations?

Table 3: Mean and Standard Deviation of the secretaries' perception of their Work Habits and Movement in their institutions

Item	Mean	SD	Interpretation
18. I take regular breaks to stand, stretch, or move around.	3.41	1.30	Strongly agree
19. My workstation layout does not allows me to sit in different positions easily.	2.96	1.28	Neutral to slightly disagree
20. I experience less discomfort when I take breaks frequently.	4.32	1.08	Strongly agree

21. I stretch my neck, shoulders, and back during work hours.	3.16	1.24	Generally agree
22. I avoid staying in the same posture for extended periods.	3.62	1.23	Mostly agree that users try to vary their posture
24. I walk or stand during phone conversations.	3.07	1.34	Moderate agreement;

Source: Survey Data, 2025, Secretaries perspectives on ergonomic work habit.

Respondents exhibit a moderate agreement (mean slightly above 3.00) with taking regular breaks to stand, stretch, or move around. The relatively high standard deviation (1.30) indicates a significant spread in responses, suggesting a substantial portion of the sample either strongly agrees or strongly disagrees with the statement. This variability suggests that while a substantial number report taking regular breaks, some individuals do not adhere to this practice as consistently as others.

Respondents show a slight disagreement (mean just below 3.00) with their workstation layout allowing for easy changes in sitting positions. The high standard deviation (1.28) implies a varied opinion which suggests a potential issue with workstation design or ergonomics, affecting the ability to adjust sitting posture for comfort and preventing musculoskeletal strain.

Respondents strongly agree (mean > 4.00) that they experience less discomfort when taking frequent breaks. The relatively low standard deviation (1.08) suggests a high degree of consistency in this response.

Respondents demonstrate a slight agreement with

mean slightly above 3.00) means stretching their neck, shoulders, and back during work hours. The standard deviation (1.24) indicates a fair amount of variability in responses, implying that while a portion agrees with this practice, there are others who either disagree or strongly disagree.

Respondents show a moderate agreement (mean just above 3.50) with avoiding prolonged periods in the same posture. A relatively high standard deviation (1.23) indicates a noticeable spread in responses, with some strongly agreeing and some disagreeing. This suggests that while most strive to avoid prolonged static postures, there may be some who are not adequately managing this aspect of their work habits

Respondents exhibit slight agreement with mean above 3.00 indicates they walk or stand during phone conversations. The high standard deviation (1.34) shows a fair degree of variability, suggesting that while some respondents frequently incorporate movement during phone calls, there are others who do not. This potentially reflects varying work environments or individual preferences concerning movement during these conversation

RQ.4: How does management of the institution give attention to ergonomic as it affects secretaries?

Table 4: Mean and Standard Deviation of the secretaries' perception of institutions' attention to office ergonomic.

Item /Statement	Mean	SD	Interpretation
24.The institution has a formal written policy or statement emphasizing the importance of office ergonomics for staff.	2.79	1.22	The responses suggest that while some institutions have a formal policy emphasizing ergonomics, many do not
The institution allocates a specific budget for ergonomic improvements and equipment.	2.42	1.11	The relatively low mean indicates that most institutions do not allocate a specific budget for ergonomic improvements, which could hinder effective implementation of ergonomic measures.
26.Management provides regular training or information sessions on ergonomic practices for secretaries.	1.69	0.83	The low mean suggests that management rarely provides regular ergonomic training, indicating a gap in ongoing education on ergonomic practices.
27.The institution conducts periodic ergonomic assessments of secretaries' workstations.	1.97	1.07	Limited assessments are conducted regularly, which might lead to unaddressed ergonomic issues at workstations.

28.The institution tracks cases of musculoskeletal discomfort or injuries among secretaries related to workstation setups.	2.05	1.15	Few institutions systematically track ergonomic-related health issues, potentially missing opportunities for intervention.
29. Feedback from secretaries about ergonomic issues is regularly collected and acted upon.	2.22	1.14	Feedback mechanisms exist but may not be consistently active or responsive, reducing management's ability to address ergonomic concerns effectively.
30.Management actively encourages secretaries to participate in discussions about improving ergonomic conditions.	2.34	1.25	Management does not strongly encourage secretaries to participate in ergonomic discussions.
31.Overall, management in my institution prioritizes ergonomic safety and comfort for secretaries.	2.54	1.27	Overall, management's prioritization of ergonomic safety appears moderate

Source: Survey data, Secretaries perspectives on management ergonomic commitment (2025).

The data average indicates that management's attention to ergonomics is generally limited. While some institutions recognize the importance, the low scores across most items highlight that ergonomic policies, assessments,

training, and feedback mechanisms are either lacking or not actively promoted. Improving these areas could significantly enhance secretaries' ergonomic safety and well-being.

HO1: There is negative relationship between secretaries perceived ergonomic workspace and its impact on their perceived well-being and stress level in Delta State tertiary institutions.

Table 5: Summary of PPMC test for secretaries perceived ergonomic workspace (X) and their perceived well-being and stress (Y).

N	Mean (X)	Mean (Y)	SD (X)	SD (Y)	DF	a	r-calculated	r-critical	Decision
110	2.80	0.93	1.24	0.74	108	0.05	0.714	0.195	Reject null hypothesis

From the test of the HO1, the data indicates a positive and significant relationship between secretaries' perceptions of ergonomic workspace and their perceived well-being and stress levels, which contradicts the initial hypothesis of a no relationship. It suggests that secretaries generally perceive the ergonomic workspace design positively, indicating a moderate to high level of ergonomic design awareness (Ogunleye, Adebayo & Akinwale, 2021) and satisfaction among secretaries. Positive correlation attained

suggests that as perceptions of ergonomic workspace increase, perceptions of well-being and stress levels also increase and vice-versa.

The decision to reject the null hypothesis (finding a positive and significant correlation) suggests that ergonomic workspace design has a beneficial impact on secretaries' well-being and stress levels. This aligns with the overall objective of emphasizing the importance of ergonomic and institutional commitment in fostering a healthier, more productive work environment.

HO2: There is negative relationship between secretaries perceived ergonomic workspace and their perceived level of management attention to ergonomic in Delta State tertiary institutions.

Table 6: Summary of PPMC test for secretaries perceived ergonomic workspace (X) and their perceived well-being and stress (Y) perceived level of management attention to ergonomics

N	Mean (X)	Mean (Y)	SD (X)	SD (Y)	DF	Alpha	r-Cal.	r-Cri	Decision
110	2.80	2.25	0.20	0.20	108	0.05	0.99	0.195	Reject H ₀ (significant correlation)

Based on the correlation analysis, the explanation is that the calculated Pearson correlation coefficient ($r \approx 0.99$) indicates a very strong positive relationship between the perceived ergonomic workspace (X) of secretaries and their perceived level of management attention to ergonomics (Y) in Delta State tertiary institutions.

The data shows a strong positive correlation, meaning that as secretaries perceive their ergonomic workspace more favourable, they also tend to perceive higher levels of management attention to ergonomics. Conversely, if their workspace perception is low, their perception of management attention is also low. The very high positive relationship ($r = 0.99$) shows that secretaries who feel that workspace is positively ergonomic also tend to believe that management cares about ergonomic health. This matches what earlier studies have found. For example, Smith and Johnson (2018) said that when companies show they care about employee health, workers usually see their work environment as better. Similarly, Lee, Carter & Davis (2020) found that when managers support ergonomic practices, workers feel less stressed and healthier. On the other hand, this study also challenges some earlier ideas. Adams (2017) argued that just knowing about ergonomic issues does not always lead to better workspaces. But in this case, the strong link suggests that when secretaries feel management is paying attention, they also see their workspace as more comfortable and healthy.

Discussion of Findings

The results reveal that secretaries in Delta State's tertiary institutions perceive poor ergonomic design of their workspaces as a significant factor leading to health challenges and work-related stress. This finding is consistent with recent studies showing that inadequate ergonomic arrangements, such as poorly adjusted chairs and

desks, are associated with musculoskeletal disorders (MSDs) and reduced workplace well-being (Aghilinejad et al., 2019; Shariat et al., 2022). For instance, a recent randomized trial in Turkey reported that ergonomics training significantly reduced discomfort in the neck, shoulders, and wrists while improving working posture (Durmus & Erkan, 2024). These related evidences confirm that discomfort experiences by secretaries is not marginal but a well-established outcome of continued exposure to poor ergonomic condition.

The respondents' reports of eye strain due to poor lighting and monitor placement also align with contemporary evidence. Studies have shown that visual discomfort is one of the most overlooked consequences of suboptimal workspace design, leading to reduced concentration and efficiency (Sheppard & Wolffsohn, 2018; Kim, 2021). The respondents' reports of eye strain due to poor lighting and monitor placement also align with contemporary evidence. Studies have shown that visual discomfort is one of the most overlooked consequences of suboptimal workspace design, leading to reduced concentration and efficiency (Sheppard & Wolffsohn, 2018; Kim, 2021). This suggests that beyond muscular outcomes, visual ergonomics remain a crucial but often neglected factor in institutional settings. Exposure to poor screen positioning and lighting could have direct implication for secretaries' well-being.

Another important insight is the recognition that repetitive tasks, such as typing and mouse use without proper ergonomic support, contribute to cumulative trauma disorders like carpal tunnel syndrome. This supports findings by Korpela et al. (2018) and is reinforced by more recent evidence that repetitive movements without adequate ergonomic intervention lead to impaired circulation, pain, and decreased job satisfaction

(Chatterjee et al., 2020; Zhou & Wang, 2019). The implication for secretaries is that task design and work-rest cycles are equally important as workstation design in reducing occupational risks.

The study further revealed that institutional ergonomic practices are generally low, with most secretaries lacking access to proper ergonomic furniture and formal ergonomic policies. This outcome is supported by Adeyemi and Oluwafemi (2020), who observed similar gaps in Nigerian workplaces, and by more recent findings that highlight the absence of organizational commitment to ergonomics in many developing-country institutions (Okoye & Eze, 2021). Evidence from global studies attest to the assertion that while individual ergonomic behaviours such as stretching and posture change are beneficial (Kumar & Clark, 2019), the absence of institutional support limits the sustainability and long-term effectiveness of such practices. This indicates that while personal strategies mitigate some ergonomic risks, organizational-level interventions are indispensable for lasting improvements in secretaries well-being.

The contrast between secretaries' positive perceptions of ergonomic practices and the institutions' poor ergonomic provisions underscores a significant gap in occupational health management. Recent systematic reviews confirm that multicomponent ergonomic interventions such as combining furniture redesign, training, and organizational policy can yield stronger and more sustainable outcomes than isolated measures (Alvarez-Casado et al., 2021 & JMIR Human Factors, 2025). Therefore, improving ergonomic infrastructure and embedding ergonomics into institutional policy would not only promote well-being, it can also enhance, performance, productivity and reduce long-term occupational stress among secretaries.

In all, these findings demonstrate that secretaries' health and work efficiency are shaped by both individual ergonomic behaviours and institutional provisions. While the evidence confirms that personal practices like stretching and posture correction are helpful, the literature emphasizes that structural ergonomic interventions are more impactful in reducing stress, preventing musculoskeletal problems, and

improving occupational well-being (Durmus & Erkan, 2024; Sharma et al., 2023). Addressing the current gap between perception and provision is therefore critical for Delta State tertiary institutions to foster healthier and more productive work environments.

Conclusion

This study has shown that workplace environment, especially ergonomic design of secretaries' workstations, plays a crucial role in well-being. Many secretaries in Delta State's tertiary institutions feel that workspaces are not adequately designed to support physical comfort, which can lead to stress, pain, and fatigue. The research also found that most organizations do not have clear policies or enough resources dedicated to ergonomic improvements, and management's attention to these issues is limited. However, secretaries still recognize that simple actions like taking regular breaks and stretching can help reduce discomfort. The strong link between how secretaries perceived their workspace and how they feel about management's support suggests that when institutions pay more attention to ergonomic needs, it can positively impact staff health and productivity.

These findings highlight the urgent need for institutions to prioritize workplace ergonomics. Implementing clear policies, providing regular training, and allocating resources for ergonomic improvements can help reduce health problems and stress among secretaries. This study emphasizes establishing guidelines, and promoting awareness can lead to healthier, happier, and more productive secretaries.

Recommendations

1. Management of tertiary institutions should continuously promote the importance of ergonomics as part of the organizational culture.
2. Management of tertiary institutions should create formal ergonomic policies and prioritise secretaries' ergonomic workstation and set aside funds specifically for ergonomic furniture and equipment.
3. Management should organize periodic training sessions for secretaries on best ergonomic practices and carry out regular expertise check and evaluation of secretaries'

workspaces

4. Secretaries should be involved in Office furniture and equipment specification. Personalized workspaces are more comfortable and reduce the risk of musculoskeletal problems.

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