

## INDIVIDUAL FACTORS CONTRIBUTING TO LOWER BACK PAIN AMONG MALES AGED 20 TO 35 YEARS ATTENDING THE SPINAL CLINIC AT MULAGO NATIONAL REFERRAL HOSPITAL IN KAMPALA DISTRICT. A CROSS-SECTIONAL STUDY.

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### Abstract

#### Background

The gradual increase in cases of Back pain among the general population has been one of the neglected health concerns in developing countries. The study aims to assess the specific individual factors contributing to lower back pain among males aged 20 to 35 years.

#### Methodology

A cross-sectional survey involving the collection of quantitative data from 190 respondents including 14 Surgeons and other doctors, 40 nursing staff, 19 Administrative and support staff, and 108 patients.

#### Results

Prolonged sitting, poor posture, workplace ergonomics, stress, sleep quality, diet, and previous injuries or medical conditions were identified as significant contributors to LBP. Extended periods of sitting lead to an increase in LBP, with a mean score of 4.30. The standard deviation of 0.396 suggests agreement in opinions regarding the influence of poor posture on LBP. A relatively high standard deviation of 1.291 suggests variability in opinions regarding the relationship between stress and lower back pain. The overall mean score for all specific individual factors analyzed is 3.78, with a standard deviation of 0.489, indicating a high level of agreement among respondents regarding the impact of these factors on LBP. Most of the staff fall within the age range of 31 to 40 years, comprising 58% of the total surveyed population followed by staff aged 40 years and above, accounting for 25%. Potential age-related factors that may influence the occurrence of LBP. 53% are male, while 48% are female.

#### Conclusion

Poor posture, workplace ergonomics, stress, sleep quality, diet, and previous injuries or medical conditions were identified as the most significant contributors to LBP.

#### Recommendation

Developing patient education and self-management programs can empower individuals with low back pain to take an active role in managing their condition and preventing recurrences.

**Keywords:** Low back pain, self-management programs, Spinal Clinic, Mulago National Referral.

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#### Background of the study

The gradual increase in cases of Back pain among the general population has been one of the neglected health concerns in developing countries. Back pain, specifically lower back pain (LBP), has emerged as a significant global health concern over the years with Low back and neck pain rising from being the 12th leading cause of Disability-Adjusted Life Years (DALYs) in 1990 to the 4th leading cause in 2015 (Hurwitz et al, 2018). This alarming increase, totaling a 59.5% rise in DALYs, underscores the growing impact of back pain on global health. By 2015, low back and neck pain became the leading cause of disability in most countries, emphasizing the need for targeted research and interventions (Hurwitz et al, 2018). Specific individual factors refer to unique characteristics and traits inherent to an individual

that may contribute to the occurrence or exacerbation of lower back pain (LBP) (Girma, 2016). The Biopsychosocial Model supports the exploration of specific individual factors contributing to lower back pain. Biological factors like age, gender, and physical activity, as well as psychological factors such as stress and lifestyle choices, are integral components that the study will investigate (Smith, & Frankel 2013).

Understanding these individual factors is crucial for developing personalized interventions. Numerous studies, including that In Ethiopia, the potential protective effect of regular physical activity against the development of lower back pain among males in the specified age group has been highlighted where engaging in moderate and consistent physical activity was argued to enhance muscular strength, flexibility, and overall spinal health, thereby reducing the risk of LBP (Delele et al, 2018).

However, it is essential to acknowledge the gaps in this viewpoint, as some researchers, such as Jeon, et al., (2017), argue that the relationship between physical activity and LBP may be more nuanced than a simple protective effect. Older age has been associated with an increased likelihood of chronic lower back pain among males aged 20 to 35 years suggesting that age-related changes in musculoskeletal structures may contribute to the persistence of pain over time (Assefa, 2017). Other studies propose that age may not be the sole contributor to the chronicity of LBP and emphasize the need to consider psychosocial factors, genetics, and lifestyle elements in understanding the complex nature of chronic lower back pain (Bin et al, 2016).

The theoretical framework guiding this study was the Biopsychosocial Model of Health, proposed by Dr. George L. Engel in the 1970s. This model challenges the traditional biomedical perspective that solely considers biological factors in understanding health and illness whereas the Biopsychosocial Model posits that health outcomes are influenced by interactions among biological, psychological, and social factors (Miaskowski et al, 2020). It recognizes that lower back pain (LBP) is not merely a physical ailment but a complex interplay of various influences. The model assumes that biological, psychological, and social systems are interconnected and mutually influence each other (Nagasawa et al., 2021). For example, psychological factors like stress or mental health can impact biological processes, affecting susceptibility to back pain. The study aims to assess the specific individual factors contributing to lower back pain among males aged 20 to 35 years attending the Spinal Clinic at Mulago National Referral Hospital in Kampala District.

## Methodology

### Research Design

A cross-sectional survey design, as proposed by Amin (2005), was employed to ensure a robust exploration of factors associated with lower back pain among males aged 20 to 35 years at Spinal Clinic, Mulago National Referral Hospital, Kampala district. This approach allowed for the collection of data at a single point in time, optimizing efficiency and minimizing costs associated with data collection. The quantitative component of the research involved the administration of structured questionnaires to gather numerical data, enabling rigorous statistical analysis to draw reliable conclusions. Quantitative analysis facilitated the identification and quantification

of specific individual, socioeconomic, and environmental factors contributing to lower back pain among the target demographic. The selection of a cross-sectional design was motivated by its ability to provide a snapshot of the current situation, allowing for the examination of relationships between variables at a specific point in time. This design choice enabled the study to capture a wide range of factors associated with lower back pain among males aged 20 to 35 years, supporting correlation studies and the exploration of associative measures.

### Description of setting and rationale

The study area was carried out at the Spinal clinic in Mulago National Regional Referral Hospital located in the heart of Kampala capital city in Central Uganda. It was a government national referral hospital. It had a bed capacity of 3000 beds. The spinal ward, the only one of its kind in Uganda, was established in 2009 and handled all spine-related illnesses like surgeries and infections in the country. The spinal ward at Mulago National Referral Hospital was to be fully renovated, courtesy of the Rotary Club of Kampala Metropolitan. The spinal ward, the only one of its kind in Uganda, was established in 2009 and handled all spine-related illnesses like surgeries and infections in the country. The charge of the spine unit, the hospital admitted between 600 and 700 patients annually, and about 300 patients were operated on annually. The victims of spine-related injuries were majorly accident victims who ended up paralyzed, patients with infections like bacteria and tuberculosis of the spine, children with congenital abnormalities (children born with deformities), and senior citizens who had developed generative spine conditions.

### Study Population

The study targeted employees of Spinal Clinic, Mulago National Referral Hospital. The questionnaires were administered to 15 Surgeons and other doctors, 45 Nursing staff, 20 Administrative and support staff, and 150 patients making a total a total of 230 individuals.

### Sample Size

A sample size determination table developed by Krejcie and Morgan (1970) was used to develop a sample size for this study. Therefore, considering the distribution of the target population, a total sample size of 181 respondents was used and was distributed as follows: 14 Surgeons and other doctors, 40 nursing staff, 19 Administrative and support staff, and 108 patients. This is shown in Table 1.

**Table 1: The distribution of the population and sample size**

No.	Details	Study Population	Sample size
1.	Surgeons and other doctors	15	14
2	Nursing staff	50	44
3	Administrative and support staff	25	24
4	Patients	150	108
<b>Total</b>		<b>240</b>	<b>190</b>

*Source: Primary data*

## Sampling Techniques

### Stratified Random Sampling

Stratified random sampling involves dividing the population into subgroups or strata based on certain characteristics, and then randomly selecting samples from each stratum. Surgeons and other doctors had varying schedules, responsibilities, and expertise. Stratified sampling ensured representation from different subgroups, allowing for a more comprehensive understanding of the entire medical team's perspectives. The list of surgeons and doctors was divided into strata based on their specialization and experience levels. Random samples were then selected from each stratum.

### Simple Random Sampling

Simple random sampling involves selecting samples randomly from the entire population, where each member has an equal chance of being chosen. Nursing staff, having similar roles and responsibilities, were considered as a homogenous group. Simple random sampling ensured that every nurse had an equal opportunity to be included, preventing bias in the selection process. A complete list of nursing staff was created, and individuals were randomly selected from this list.

### Convenience Sampling

Convenience sampling involved selecting individuals who were easiest to reach or were readily available for participation. Administrative and support staff may have had limited availability due to their non-clinical responsibilities. Convenience sampling was practical when accessibility was a priority, and the focus was on gathering insights from this group without strict representation. Administrative and support staff who were available during the study period were approached for participation.

### Systematic Sampling

Systematic sampling involves selecting every nth member from a list after a random start. Patients visiting the spinal clinic may have had diverse conditions, and systematic sampling ensured that every nth patient was included, providing a representative sample of the patient population. Patients were approached at regular intervals during the study period, starting with a random selection, to ensure a systematic and unbiased representation.

## Data Collection Sources

### Primary sources

The acquisition of firsthand information was facilitated through primary data, involving direct interactions with respondents. This encompassed engaging respondents in discussions, and interviews, and soliciting their perspectives on various issues. The process aimed to gather comprehensive insights into their

experiences and challenges, with subsequent discussions on potential solutions.

### Secondary Sources

Supplementary information was derived from secondary sources such as university public libraries and other resource centers. Utilizing materials like textbooks, journals, newsletters, manuals, dissertations, and annual reports contributed to a more extensive understanding of the study. This method broadened the scope of available information and supported a more comprehensive analysis.

## Data Collection Methods and Instruments

### Quantitative data collection methods

#### Questionnaire

A questionnaire, a structured research instrument containing a series of inquiries and prompts, was utilized to gather information from nursing staff, patients, and administrative and support staff. The choice of questionnaires was motivated by their ability to elicit more accurate responses to personal questions, especially when respondents could answer at their convenience. The questionnaire aligned with the study's objectives, encompassing both independent variables (specific individual factors, socioeconomic factors, and environmental factors) and the dependent variable (lower back pain among males).

### Quality Control (Validity and Reliability)

#### Validity of Study Instruments

To ensure the accuracy of the study's findings in representing the researched phenomenon, a comprehensive validity assessment was conducted. Preliminary testing of the instruments involved the identification and rectification of issues such as unclear or ambiguous questions. Collaborating closely with the supervisor, the researcher sought expert judgments to evaluate the content validity index (CVI) for each category of questions. The CVI was calculated using the formula:

$$\text{CVI} = \frac{\text{Number of items rated correct}}{\text{Total number of items}} \times 100$$

Total number of items

#### Reliability of Study Instruments

To measure the consistency of the research instruments, the internal consistency method was employed. Questionnaires were administered to a sample of at least 10 respondents, and their responses underwent correlation analysis using Cronbach's Alpha. A reliability threshold of 0.7 and above, as advised by Amin (2005), indicated that the instruments yielded consistent results across repeated trials.

### Procedure of Data Collection

Upon receiving approvals from the University (Tutors College Mulago) and securing necessary permissions from the Spinal Clinic, Mulago National Referral

Hospital, the data collection process was initiated. Initially, the instruments underwent a pilot phase to identify and address any potential challenges. Subsequently, research assistants were trained to ensure standardized data collection procedures. The actual fieldwork involved the distribution of questionnaires by assistants and the conduct of interviews.

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## **Data Analysis**

### **Quantitative Analysis**

Quantitative data underwent a systematic analysis process. Initially, the collected data were edited, coded, and entered into the Statistical Package for Social Sciences (SPSS). Univariate analysis techniques were then employed to describe the data, including calculating the mean and standard deviation to identify patterns within it. The Pearson correlation coefficient was utilized to assess relationships between study variables. Descriptive analysis was utilized to examine the distribution of variables, while inferential tests were applied for hypothesis testing.

## **Ethical Considerations**

### **Anonymity and Briefing**

To uphold ethical standards, the research instruments were meticulously designed to omit any mention of the respondent's name. Ethical considerations were paramount, with respondents being thoroughly briefed on the research's purpose, their significance in the process, and what was expected of them.

### **Permission and Confidentiality**

At the initiation of data collection, the researcher provided an introductory letter from the University and formally requested permission for data collection. Informants received assurances regarding the confidential treatment of their provided information, emphasizing that the study findings would be exclusively used for academic purposes.

### **Bias Avoidance and Objectivity**

In a conscious effort to prevent bias and any potential psychological harm to respondents, the researcher refrained from posing questions that may be detrimental. Both during data collection and subsequent analysis, a commitment to objectivity was maintained. Interview bias

was mitigated by ensuring that the interviewer remained unaware of the outcome of interest.

## **Plagiarism Mitigation**

Stringent measures against plagiarism were implemented, with the researcher committing to acknowledge every source used in the writing process. Whether paraphrased, summarized, or directly quoted, proper attribution was provided. Any verbatim text borrowed from other authors was delineated within quotation marks.

## **Paraphrasing and Summarizing**

When paraphrasing or summarizing the work of others, the researcher adhered to a principled approach. The goal was to faithfully reproduce the precise meaning of the original ideas or facts, utilizing the researcher's own words and sentence structure. This ensured integrity in conveying the intended content without deviating from the source's essence.

## **Anticipated Limitations of the Study**

### **Time Constraints**

The research might have faced time constraints due to the busy schedules of medical professionals and staff. To overcome this limitation, the researcher implemented flexible data collection schedules, including evenings or weekends, to accommodate the availability of the participants. Prioritized efficient and quick data collection methods.

### **Limited Accessibility of Administrative Staff**

Administrative and support staff might have been occupied with non-clinical duties, making them less accessible. To overcome this limitation, convenience sampling was used but also established communication channels with the administration to identify specific time slots or breaks when staff might be available. Ensured clear communication of the study's importance.

### **Patient Privacy Concerns**

Patients might have been hesitant to share information due to privacy concerns. To overcome this limitation, confidentiality and anonymized data during analysis was emphasized. The purpose of the study was clearly explained and how their information would be protected. Obtained informed consent and assured participants that their responses would not affect their medical care.

Results

**Table 2: Showing the Demographic Characteristics of Patients.**

Category	Options	Frequency	Percentage
Age	20 -25 years	6	6
	26 -30 years	40	37
	31-35 years	62	57
<b>Total</b>		<b>108</b>	<b>100</b>
Occupation	Manual Laborer	28	26
	Office work	24	22
	Boda Boda riders	30	28
	Drivers	14	13
	Market vender	12	11
<b>Total</b>		<b>108</b>	<b>100</b>
Marital Status	Single	30	28
	Married	52	48
	Divorced/separated	26	24
<b>Total</b>		<b>108</b>	<b>100</b>

Source: Primary Data, 2024

Table 2 presents the demographic characteristics of male patients aged 20 to 35 years suffering from lower back pain at Mulago National Referral Hospital. The data shows a breakdown of patients by age group. The majority of patients fall within the age range of 31 to 35 years, constituting 57% of the total sample. Following this group, individuals aged 26 to 30 years represent 37% of the patients, while those aged 20 to 25 years make up the smallest proportion at 6%. The distribution of patients across these age groups suggests that lower back pain is more prevalent among males in their late twenties to mid-thirties. This finding could indicate that this age range may be particularly susceptible to factors contributing to lower back pain, such as occupational hazards or lifestyle factors.

Table 2 further outlines the occupational distribution of male patients suffering from lower back pain. The data reveals that the largest proportion of patients, constituting 28% of the sample, are manual laborers. Following

closely behind are boda boda riders at 28%, and office workers at 22%. Drivers and market vendors represent 13% and 11% of the patients, respectively. The distribution of patients across various occupations suggests that certain professions may pose a higher risk of developing lower back pain. Occupations that involve manual labor or prolonged sitting, such as manual laborers and office workers, may predispose individuals to back pain due to repetitive movements or poor posture. Table 3 further illustrates the marital status of male patients suffering from lower back pain. The data indicates that almost half of the patients (48%) are married, while 28% are single, and 24% are divorced or separated. The distribution of patients across marital status categories provides insights into how personal relationships might influence the experience or management of lower back pain. For instance, married individuals may have different support structures compared to single or divorced/separated individuals, which could impact their coping mechanisms or access to healthcare resources.

**Table 3: Showing the Demographic Characteristics of Staff.**

Category	Options	Frequency	Percentage
Gender	Male	42	53
	Female	38	48
<b>Total</b>		<b>80</b>	<b>100</b>
Age	20 -25 years	6	5
	26 -30 years	10	13
	31-35 years	22	28
	36-40 years	24	30
	40 years and above	20	25
<b>Total</b>		<b>80</b>	<b>100</b>
Marital Status	Single	28	35
	Married	42	53
	Divorced/separated	10	13
<b>Total</b>		<b>80</b>	<b>100</b>

Source: Primary Data, 2024

Table 3 displays the gender distribution among the staff of the Spinal Clinic at Mulago National Referral Hospital. Out of a total of 80 staff members surveyed, 53% are male, while 48% are female. This indicates a slightly higher representation of male staff in the clinic compared

to female staff. By capturing the gender distribution, the study ensures that the findings are representative and applicable to both male and female staff members, enhancing the generalizability of the results.

Table 3 presents the age distribution of the staff at the Spinal Clinic. The data shows that most of the staff fall within the age range of 31 to 40 years, comprising 58% of the total surveyed population. This is followed by staff aged 40 years and above, accounting for 25%. Understanding the age distribution allows for the identification of potential age-related factors that may influence the occurrence of lower back pain, contributing to a more comprehensive analysis and interpretation of the study results.

Table 3 provides insight into the marital status of the employees at the Spinal Clinic. The data reveals that the majority of the staff are married, constituting 53% of the total surveyed population, while 35% are single, and 13% are divorced or separated. Marital status can impact an individual's access to social support, financial resources, and lifestyle choices, all of which may play a role in their

susceptibility to lower back pain. Therefore, by capturing this demographic information, the study ensures a more nuanced understanding of the factors contributing to lower back pain among staff members at the Spinal Clinic, Mulago National Referral Hospital.

### Specific individual factors contributing to lower back pain among males aged 20 to 35 years attending the Spinal Clinic

In the following section, several responses were analyzed to examine the specific individual factors contributing to lower back pain among males aged 20 to 35 years while considering the following scale; 4.20-4.99mean = *Very High*, 3.40-4.19mean = *High*, 2.60-3.39mean = *Moderate*, 1.80-2.59 mean= *low* and 1.00-1.79mean = *Very Low*

**Table 4: Descriptive Analysis for specific individual factors contributing to lower back pain among males aged 20 to 35**

Assertions/Questions	Mean (N=188)	Std. Deviation	Interpretation
Many individuals experience lower back pain due to extended periods of sitting.	4.30	.308	Very high
Regular physical activity can help alleviate lower back pain in individuals.	2.87	.335	Moderate
Poor posture, especially when sitting or standing, is a common factor contributing to lower back pain	3.95	.396	High
The setup of one's workplace, including the chair and desk arrangement, can significantly impact lower back pain	4.11	.427	High
High stress usually leads more intense lower back pain for people.	3.33	.291	Moderate
Inadequate sleep or poor sleep quality can worsen lower back pain for many people.	3.87	1.533	High
Diet and nutrition play a role in managing lower back pain for some individuals.	3.97	.402	High
Previous injuries or underlying medical conditions may contribute to the development of lower back pain	3.90	.221	High
<b>Overall mean</b>	<b>3.78</b>	<b>0.489</b>	<b>High</b>

Source: Primary data 2024

Findings in Table 4 show that extended periods of sitting lead to an increase in lower back pain, with a mean score of 4.30. The low standard deviation of 0.308 indicates agreement in opinions and perceptions among respondents regarding this assertion. This implies that the majority of individuals experiencing lower back pain attribute it to prolonged sitting. The very high effect suggests that this factor significantly contributes to the occurrence of lower back pain among males aged 20 to 35 years at the Spinal Clinic, Mulago National Referral Hospital, and Kampala District. Regarding the statement about regular physical activity alleviating lower back pain, the mean score is 2.87, indicating a moderate effect. The standard deviation of 1.335 suggests variability in respondents' opinions regarding the effectiveness of physical activity in reducing lower back pain. This implies that while physical activity is perceived to have a positive impact on alleviating lower back pain, opinions vary

among individuals. Some may strongly agree with this assertion, while others may not find physical activity as effective in managing their lower back pain. For the statement on poor posture contributing to lower back pain, the mean score is 3.95, indicating a high effect. The standard deviation of 0.396 suggests agreement in opinions among respondents regarding the influence of poor posture on lower back pain. This implies that the majority of individuals attribute lower back pain to poor posture, especially when sitting or standing. The high effect suggests that poor posture is a significant contributing factor to lower back pain among males aged 20 to 35 years at the Spinal Clinic, Mulago National Referral Hospital Kampala District.

The assertion regarding the setup of one's workplace, including the chair and desk arrangement, shows a mean score of 4.11, indicating a high impact on lower back pain. The standard deviation of 0.427 suggests agreement in

opinions among respondents regarding this factor. This implies that the majority of respondents believe that the ergonomics of the workplace, such as the design of chairs and desks, significantly affect lower back pain. A very high mean score indicates that addressing workplace setup could potentially alleviate or prevent lower back pain among this demographic. Regarding the statement about high stress usually leading to more intense lower back pain, the mean score is 3.33, indicating a moderate impact. However, the relatively high standard deviation of 1.291 suggests variability in opinions among respondents regarding the relationship between stress and lower back pain. This implies that while many individuals acknowledge stress as a factor contributing to lower back pain, opinions on its intensity vary. Some may strongly agree with this assertion, while others may not perceive stress as a significant contributor to their lower back pain. For the assertion about inadequate sleep or poor sleep quality worsening lower back pain, the mean score is 3.87, indicating a high impact. The standard deviation of 0.533 suggests agreement in opinions among respondents regarding the influence of sleep quality on lower back pain. This implies that the majority of individuals believe that insufficient or poor-quality sleep exacerbates their lower back pain. A high mean score indicates that addressing sleep issues could be important in managing or reducing lower back pain among males aged 20 to 35 at the Spinal Clinic, Mulago National Referral Hospital. The assertion regarding diet and nutrition's role in managing lower back pain shows a mean score of 3.97, indicating a high impact. The standard deviation of 0.402 suggests agreement in opinions among respondents regarding this factor. This implies that the majority of individuals believe that diet and nutrition play a significant role in managing lower back pain. A high mean score indicates that addressing dietary habits could potentially alleviate or prevent lower back pain among this demographic. Regarding the statement about previous injuries or underlying medical conditions contributing to the development of lower back pain, the mean score is 3.90, also indicating a high impact. The standard deviation of 0.221 suggests agreement in opinions among respondents regarding this factor. This implies that the majority of individuals recognize previous injuries or underlying medical conditions as significant contributors to the development of lower back pain. A high mean score indicates that addressing these factors could be important in managing or reducing lower back pain among males aged 20 to 35 at the Spinal Clinic, Mulago National Referral Hospital. The overall mean score for all specific individual factors analyzed is 3.78, with a standard deviation of 0.489, indicating a high level of agreement among respondents regarding the impact of these factors on lower back pain. This suggests that specific individual factors such as diet, nutrition, previous injuries, and underlying medical conditions are perceived as important determinants of lower back pain among males aged 20 to 35 at the Spinal Clinic, Mulago National Referral Hospital. Addressing these individual factors through dietary interventions, proper medical

management of underlying conditions, and preventive measures for injury prevention may help alleviate the burden of lower back pain in this population.

## Discussion

### The specific individual factors contributing to lower back pain among males aged 20 to 35 years.

The findings from the study reveal several specific individual factors that contribute to lower back pain (LBP) among males aged 20 to 35 years attending the Spinal Clinic at Mulago National Referral Hospital. Prolonged sitting emerges as a significant contributor to lower back pain, with respondents attributing their pain to extended periods of sitting. This finding aligns with existing literature, where scholars like Allegri et al. (2016) have highlighted the occupational risk factors associated with prolonged sitting, such as sedentary desk jobs. The agreement among respondents regarding the impact of prolonged sitting on lower back pain supports the notion that sedentary behavior is a prevalent risk factor for LBP among young males. However, the effectiveness of regular physical activity in alleviating lower back pain receives mixed opinions among respondents. While some perceive physical activity as beneficial for managing their pain, others may not find it as effective. This finding resonates with the literature, where researchers like Luchini et al. (2017) have highlighted the nuanced relationship between physical activity and LBP. While regular physical activity is generally recommended for spinal health, the type, intensity, and individual variability in response to exercise must be considered, as argued by Jeon et al. (2017).

Poor posture is identified as another significant contributor to lower back pain among the respondents. The majority attribute their pain to poor posture, especially when sitting or standing. This finding is consistent with existing literature, where scholars like Hurwitz et al. (2018) emphasize the role of workplace ergonomics in spinal health. The agreement among respondents regarding the influence of poor posture underscores the importance of promoting proper posture habits to prevent or alleviate lower back pain. Moreover, the setup of one's workplace, including the design of chairs and desks, is perceived to have a high impact on lower back pain. Respondents believe that addressing workplace ergonomics could potentially alleviate or prevent lower back pain. This finding resonates with research by Allegri et al. (2016), who highlight the significance of occupational factors in LBP.

The agreement among respondents regarding the importance of workplace setup underscores the need for interventions to improve ergonomic conditions in work environments. Stress and sleep quality also emerge as factors influencing lower back pain among the respondents. While stress is perceived to moderately intensify lower back pain, poor sleep quality is believed to have a high impact on exacerbating pain. These findings are consistent with literature suggesting a relationship between psychosocial factors and LBP. Scholars like

Wang et al. (2016) emphasize the role of stress and sleep disturbances in contributing to the development or aggravation of LBP. The variability in opinions regarding stress highlights the complex interplay between psychological factors and pain perception.

Furthermore, diet and nutrition are perceived to play a significant role in managing lower back pain among respondents. The majority believe that dietary habits impact their pain experience, reflecting a high level of agreement among respondents. This finding aligns with research by Yehualaw (2017), who suggests a link between educational attainment and health behaviors, including dietary habits. The agreement among respondents regarding the influence of diet on lower back pain underscores the importance of nutritional interventions in managing LBP.

Lastly, previous injuries or underlying medical conditions are recognized as significant contributors to the development of lower back pain. Respondents acknowledge the role of medical history in shaping their pain experiences, highlighting the importance of addressing underlying health conditions. This finding is consistent with research by Dembele et al. (2020), who emphasize the impact of medical history on musculoskeletal health outcomes. The agreement among respondents regarding the influence of medical history on lower back pain underscores the need for comprehensive healthcare management strategies. In summary, the findings from the study provide valuable insights into the specific individual factors contributing to lower back pain among young males. These findings align with existing literature on LBP, highlighting the multifactorial nature of the condition and the importance of addressing various determinants, including physical activity, posture, workplace ergonomics, psychosocial factors, diet, and medical history, in managing and preventing lower back pain.

### Conclusion

The study findings shed light on various specific individual factors contributing to lower back pain among males aged 20 to 35 years attending the Spinal Clinic at Mulago National Referral Hospital. Prolonged sitting, poor posture, workplace ergonomics, stress, sleep quality, diet, and previous injuries or medical conditions were identified as significant contributors to lower back pain. These findings align with existing literature on lower back pain, emphasizing the multifactorial nature of the condition. Addressing these individual factors through interventions targeting physical activity, posture correction, workplace ergonomics, stress management, sleep hygiene, dietary modifications, and healthcare management strategies could play a crucial role in managing and preventing lower back pain among this demographic.

### Recommendation

#### Implement a Multidisciplinary Care Approach

The Spinal Clinic should adopt a multidisciplinary care approach to provide comprehensive treatment and management for patients with low back pain. This approach involves collaboration between healthcare professionals from different disciplines, including orthopedics, physiotherapy, pain management, and psychology, to address the complex needs of patients. For example, integrating physiotherapists into the clinic can enable patients to receive tailored exercise programs and manual therapy interventions to alleviate low back pain. Additionally, incorporating psychologists or counselors can support patients in managing psychosocial factors contributing to their pain experience.

#### Enhance Patient Education and Self-Management Programs

Developing patient education and self-management programs can empower individuals with low back pain to take an active role in managing their condition and preventing recurrences. The Spinal Clinic can offer educational workshops or seminars to educate patients about the anatomy of the spine, common causes of low back pain, and strategies for self-care and pain management. Providing educational materials such as brochures or online resources can reinforce key concepts and empower patients to make informed decisions about their health. For instance, creating instructional videos demonstrating proper lifting techniques or ergonomic principles can help patients adopt healthier behaviors and reduce the risk of exacerbating their symptoms.

#### Implement Quality Improvement Initiatives

Continuous quality improvement initiatives can help enhance the efficiency, effectiveness, and patient satisfaction of services provided at the Spinal Clinic. The clinic should establish mechanisms for collecting and analyzing patient feedback, monitoring clinical outcomes, and identifying areas for improvement. Regular audits and reviews of clinical practices can ensure adherence to evidence-based guidelines and promote consistency in care delivery. Additionally, fostering a culture of interprofessional collaboration and professional development among staff members can contribute to a positive work environment and enhance the overall quality of care. For example, conducting regular peer reviews and case conferences can facilitate knowledge sharing and promote best practices in the management of low back pain.

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### List of Abbreviations

DALYs: Disability-Adjusted Life Years

LBP: Lower Back Pain

MNRH: Mulago National Referral Hospital

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### Author Biography

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