UNIVERSITY OF EDUCATION, WINNEBA

PHYSICAL HEALTH EXPERIENCES AND WORKING CONDITIONS OF SIGN LANGUAGE INTERPRETERS AT THE UNIVERSITY OF EDUCATION, WINNEBA

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A Thesis submitted to the School of Graduate Studies in partial fulfilment of the requirements for the award of the degree of Master of Philosophy (Special Education)

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DECLARATION

Student's Declaration

I, Nyabire Emmanuel, declare that this thesis, except for quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature: .....

Date: .....

Supervisor's Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis as laid down by the University of Education, Winneba.

Name of Supervisor: Dr. Frank Twum

Signature: .....

Date: .....

DEDICATION

I dedicate this work to my wise Ms. Naomi Nsowaa, Mrs. Safuratu Seidu and brother, Akwasi Ababio, whose encouragement and support have brought me this far.

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I thank Lord Almighty for granting me the strength and good health which has brought me this far. I am also grateful to my research supervisor, Dr. Frank Twum, for his support, encouragement and guidance offered. Every encounter with him boosted my understanding and professional advancement in research. I thank my Head of Department, Dr. Emmanuel K. Acheampong, for his encouragement and profound interest in my work.

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May the good Lord bless all of you.

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ABSTRACT

This study explored the physical health experiences and working conditions of sign language interpreters at the University of Education, Winneba (UEW) guided by Karasek's Demand-Control Theory using a qualitative approach. Data was gathered through semi-structured interviews and non-participant observations. Six participants were used in the study, selected through census sampling. Of the total participants, four (4) were males and two (2) were females. Findings revealed that sign language interpreters frequently experienced back pains, neck pains, shoulders pains, wrist pains and waist pains and repetitive strain injuries. The participants mentioned factors that contributed to sign language interpreters' physical health experiences such as prolong interpreting sessions, poor furniture, heavy workload, and poor ventilation. These factors significantly contributed to sign language interpreters' poor physical health experiences. Despite the poor working conditions and inadequate institutional support protocols, sign language interpreters employed self-initiated coping strategies such as stretching, posture adjustments, massages, and informal breaks to manage their physical health experiences. Participants also highlighted challenges such as insufficient furniture, inadequate health policies, and limited professional development opportunities which negatively affected interpreters' physical health and their work sustainability. The study concluded that strengthening institutional support systems, health policies and available resources could enhance the physical health and wellbeing of interpreters.

Keywords: physical health, working conditions**,** musculoskeletal, institutional support, coping strategies.

CHAPTER ONE

INTRODUCTION

1.1 Background to Study

Physical health is the state of bodily well-being that allows individuals to perform daily activities without pain, fatigue, or physical limitations (Huber et al., 2016; World Health Organisation, 2020). This perspective emphasised functional ability of the body to operate effectively in everyday life. This perspective emphasised functional ability of the body to operate effectively in everyday life. Furthermore, Lazarus et al. (2018), Harridge and Lazarus (2017), Koban et al. (2021), and Kapoor et al. (2022) described physical health as a complete state of the body in which all physiological systems function optimally and are free from disease, injury, physical distress, and mental fatigue. This understanding highlights the interconnectedness between bodily systems and overall wellbeing of sign language interpreters. Supporting this systemic approach, Syrovatko et al. (2023) define physical health as the natural state of the body resulting from the normal functioning of all organs and systems, further noticing that it is influenced by individual characteristics, genetic factors, environmental conditions, and levels of physical development. Together, these perspectives position physical health not merely as the absence of illness, but as a multidimensional construct shaped by biological, environmental, and functional factors.

Physical health of sign language interpreters has been challenged due to the nature of their work demand (Pollard et al., 2021). Whiles Their work demand involves a lot of repeated actions of hands, arms and body gestures meant to help pass adequate information to deaf and deafblind students (Sussman et al., 2019). Frequent use of hands and wrists in the intricate gesture common in sign languages could lead to repetitive stress, injury, including tendinitis and carpal tunnel syndrome (Jimenez-

Arberas et al., 2022;). A study stipulates that physical health disorders are caused by continuously manipulation of hands, shoulders and wrists in repetitive movements by interpreters (Lisboa et al., 2020). While sign language interpreters often remain in one position for long time, they frequently suffer from work-related illnesses such as neck, shoulder and back pain (Woodcock & Fischer, 2008). Therefore, sign language interpreters are more prone to physical health experiences due to their long hours of work, poor ergonomic support, poor posture, mental fatigue and continuous movements of the hand and arm (Jimenez-Arberas et al., 2022; Napier & Johnston, 2015; Dean & Pollard, 2011).

Globally, research has shown that sign language interpreters face physical health disorders such as repetitive strain, injuries and musculoskeletal disorders, compromised by poor ergonomic support and inadequate rest period (Escudero, 2017; Meidert et al., 2016). These conditions resulted in chronic pain in areas such as the wrists, shoulders, back and neck (Lisboa et al., 2020).

Over the year, sign language interpreters in the University have faced numerous physical health experiences due to limited human resources, high workload and lack of policies that address ergonomic support and workload management (Fobi, 2021; Meidert et al., 2016). According to Fobi (2021) between "2013 and 2021, fewer than three full-time sign language interpreters were employed at UEW". This situation has caused workload on the available interpreters while inadequate sign language interpreters increased the risk of physical health experiences of interpreters. A study by Jimenez-Arberas and Diez (2022 emphasised that sign language interpreters working long hours without sufficient rest at a heightened risk of experiencing chronic musculoskeletal conditions and work-related injuries.

Through researcher personal observation as a student of Special Education and physical therapist, it was noted that sign language interpreters at the University of Education, Winneba, frequently wear wrist bandages, massage their arms and fingers, and frequent complaint of physical health discomforts such as wrist pain, shoulder pain, waist pain, and back pain whenever they visit our physical therapy center (Paradise Rehabilitation Foundation and Training Center, Winneba). These real-life observations align with existing literature and affirm that interpreters at UEW are experiencing work-related injuries and body pains (Lisboa et al., 2020).

"To manage and maintain physical health experiences of sign language interpreters' studies suggested that interpreters utilise methods such as physical therapy, regular physical activities, scheduled rest break, and stress management techniques to cope these physical health experiences such as waist, shoulder hands pain, arthritis tendinitis, and repetitive strain injuries" (Gheonea et al., 2023; National Institute for Occupational Safety and Health, 2016). However, these coping strategies are often implemented on personal level without institutional support and structured programs that promote sign language interpreters' physical health and wellbeing (Roma al et., 2022).

Though some developed countries such as the United States and members of the European Forum of Sign Language Interpreters (Jimenez-Arberas & Diez, 2022). while little studies have been done in Ghana about how institutional support impact interpreters to manage physical health experiences. Hence, insufficient institutional policies on workload management, ergonomic support, and rest breaks significantly increase physical health experience among sign language interpreters at UEW. Without formal recognition, policy-based support, and sufficient rest interpreters are at a heightened risk of experiencing chronic musculoskeletal conditions and work-related injuries (Jimenez-Arberas & Diez, 2022).

While there is growing awareness of the physical health experience of sign language interpreters globally (Roman et al., 2024), there remains a significant gap in the local literature concerning how these matters are being addressed in Ghana specifically in UEW. It is not well known whether any formal institutional mechanisms exist to mitigate interpreters' physical health experiences at University of Education, Winneba.

1.2 Statement of the Problem

The physical health experiences of sign language interpreters are significantly increasing due to prolonged interpreting periods (Jimenez-Arberas & Diez, 2022), repetitive strain and musculoskeletal disorders (Jimenez-Arberas et al., 2022), poor ergonomic settings (Escudero, 2017; Meidert et al., 2016), and limited institutional support (Dean & Pollard, 2011). While these physical health experiences of sign language interpreters have been well-documented globally, minimal research has been conducted in the Ghanaian context, particularly at the University of Education, Winneba (Fobi, 2021).

Considering this, the researcher's personal observation as a student of special education and a physical therapist in practice, noticed that sign language interpreters in UEW used wrist bandages, massaged their arms and fingers, and complaint of frequent pain in the wrist, shoulder, waist, and back. This empirical evidence is in accordance with the literature reviewed and confirmed that UEW interpreters are suffering from physical health experiences (Adu-Gyamfi, 2023). These observation findings have raised further questions about how these physical health complaints are experienced and managed by interpreters at the University of Education, Winneba.

Without adequate rest, ergonomic policy, workload management, and institutional supporting policies. Sign language interpreters may experience poor physical health in

the long run, job dissatisfaction, as well as poor performance (Lisboa et al., 2020; Jimenez-Arberas & Diez, 2022). Such physical health experiences of interpreters are likewise a risk to the learning quality of deaf students who need quality education (Napier et al., 2015). Therefore, this study seeks to explore how physical health experiences of interpreters are impacted by working conditions and managing personal coping strategies, and institutional support systems at University of Education, Winneba.

1.3 Purpose of the Study

This study investigates the physical health and work conditions of sign language interpreters at the University of Education, Winneba, including how working conditions and institutional support influence their physical health and well-being. Finally, the study has been designed to understand the coping strategies interpreters use to mitigate physical health experiences.

1.4 Research Objectives

1. To investigate the physical health experiences of sign language interpreters at the University of Education, Winneba.
2. To ascertain sign language interpreters' perception of how working conditions at the University of Education, Winneba affect the physical health of sign language interpreters.
3. To identify coping strategies adopted by sign language interpreters in adapting to the physical demands of their job at the University of Education, Winneba.
4. To explore the institutional support available for managing physical health conditions of sign language interpreters at the University of Education, Winneba.

1.5 Research Questions

1. What are the physical health experiences of sign language interpreters at the University of Education, Winneba?
2. In what ways do the working conditions of sign language interpreters at the University of Education, Winneba impact on their experience of physical health?
3. What coping strategies do sign language interpreters use to maintain their physical health at the University of Education, Winneba?
4. What institutional support exists for managing physical health conditions of sign language interpreters at the University of Education, Winneba?

1.6 Significance of the Study

The importance of this study is to;

Shed light on the physical health experienced faced by sign language interpreters at the University of Education, Winneba. This would help us to understand the physical health of interpreters and how it influences their job performance, consequently, its impact on deaf and deaf-blind students' academic outcome.

Furthermore, although there is a growing awareness of the physical health demands placed on sign language interpreters in developed countries, little research has been done in Ghanaians about how working conditions impact on the physical health of sign language interpreters at UEW. This study helps to provide information to help inform working policies and practice regarding working conditions and physical health management for sign language interpreters.

The study reveals different coping and managing techniques employed by interpreters to deal with physical health challenges. This would help to sustain the physical abilities of sign language interpreters with regards to their work demand.

Again, the study provides recommendations on how institutional support can be enhanced to promote the physical health and wellbeing of sign language interpreters at University of Education, Winneba.

Lastly, this study contributes to the limited literature on sign language interpreters' physical health and working conditions within Ghanaian context.

1.7 Delimitation of the Study

The study focused on sign language interpreters of the University of Education, Winneba in Central region of Ghana. While the study concentrates on physical health and work conditions of sign language of interpreters at the University of Education, Winneba. The study included only fulltime sign language interpreters at the University of Education, Winneba (UEW). The sample side of participants was six. The sampling was determined by census population. Qualitative research was employed for the study with phenomenological design to derive in-depth lived experiences of sign language interpreters regarding physical health and work conditions at the University of Education, Winneba.

1.8 Operational Definition of Terms

- **Physical health:** physical health is state of being physically well with or without sickness or injuries to perform daily activities.
- **Sign language interpreters**: sign language interpreters are individuals that translate spoken language into sign language and vice versa.

- **Musculoskeletal disorder**: musculoskeletal disorder is a sickness that affects our muscles, bones, joints, tendons and nerves.
- **Repetitive strain injury**: Repetitive strain injury is sickness caused by frequent repetitive activities by body.
- **Good** ergonomic: Ergonomic is how well and neat our workplace is and can impact positively to physical health.
- **Workload:** Workload is excessive activities workers could face and affect workers physical health.
- **Mental fatigue:** Mental fatigue is when you overuse your mind, and it affects the body not to function well.
- **Physical health disorders:** Physical health disorders are the physical illness of the body because of not taking much rest, balanced diet, medications and exercise.
- **Poor ergonomics**: Ergonomic is how bad our workplace is and can impact negatively to physical health.
- **Burnout:** Burnout is when you overuse the body without taking enough rest and exercise.

1.9 Organisation of the Study

The study was organised into five main chapters. The first chapter covers the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, delimitation, operational definition of terms related to the study and organisation of the study. The second chapter was literature review, theory underpinning the study, discussing the relevant literature related to the study based on the themes of the research objectives. The third chapter was research methodology which discusses the methods, materials as well as the data

analysis applied in the study. The fourth chapter presents findings while fifth presents discussion. The sixth chapter discusses summary of findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter presents the relevant literature related to the study based on research questions. It primarily focuses on the gaps related to the findings, conclusions, and methodological issues of previous studies applicable to this study. This literature review discusses the existing research related to the physical health experience of sign language interpreters, how working conditions affect physical health status of sign language interpreters, institutional supports system and coping strategies used in maintaining the physical health of sign language interpreters and outlines the theoretical framework underpinning the study.

Demand-Control Theory

- Conceptual Framework
- Physical health experience of sign language interpreters
- Working conditions and its impact on physical health of sign language interpreters
- Coping strategies for managing physical health conditions among interpreters
- Institutional support system available for maintaining physical health and well-being among interpreters

2.1 Demand control theory

The theoretical framework underpinning this research is Demand-Control Theory (Karasek, 1979). This framework allows a comprehensive lens to analyse how the demands of sign language interpreting interact with resources to influence their physical health. The theory explains the relations among job demands, workplace control, and

the environmental influence on the physical well-being of sign language interpreters at the University of Education, Winneba. The demand-control theory postulates that workers' health and well-being relate to job demands, such as workload and long hours of work, and control over working conditions, such as access to breaks and availability of ergonomic support and institution support system (Mark et al., 2012). Sometimes, sign language interpreters are involved in long periods of mental concentration, translating oral speech to sign language, which is very repetitive activities using hands, arms, body movement and it is physically demanding (Jimenez-Arberas et al., 2022). However, interpreters sign long hours of keeping specific body postures, and frequently moving their hands could influence physical health disorders. The physical demands of interpretation can cause musculoskeletal problems, such as carpal tunnel syndrome, shoulder discomfort, and general fatigue (Baker, 2010).

Work demands, such as the physical demands of interpreting, may have negative health consequences if they are not adequately supported by effective job resources. Sign language interpretation involves the physical act of interpreting repetitive hand movements combined with mental focus that provides limited control over break schedules or poor ergonomics and often results in stress, burnout, and physical health problems (Chetty, 2021). However, the core strategies to improve working conditions and health consequences among sign language interpreters are institutional support in terms of ergonomic accommodation, job flexibility, access to mental health facilities, and professional development (Roman et al., 2023). The studies revealed that institutions offering high quality support structures, comprising physical therapy access, wellness programs, psychological counselling, work related policies would contribute less to adverse health effects of interpreting. Organisational resources like periodic breaks for interpretation, health policies, stress management workshops and

personal coping strategies like relaxation are highlighted (Woods and Lutfiya, 2011) to help interpreters cope with stress. These allow interpreters to ensure their physical health and well-being and burnout is prevented. A study by Bakker and Demerouti (2007) examined that job demands and resources can influence the physical health and mental well-being of sign language interpreters. They emphasised that, when there are high demands of work and there are also insufficient resources, employees are vulnerable to ill health. In contrast, adequate resources enable interpreters to manage high demand and improve well-being.

Dean and Pollard (2001) emphasise the importance of providing interpreters with professional development, ergonomic workspaces, and physical health and recovery policies in their studies. However, if institutional support systems are inadequate, physical demands can become worsened, leading to physical health conditions and burnout among interpreters.

2.1.1 The theory implications to the study

The Demand-Control Theory by Karasek (1979) provides a theoretical framework that best suits the understanding of the physical health and working conditions of sign language interpreters at the University of Education, Winneba. This theory postulates the interaction between job demands (workload, intensity) and job control (decision-making ability, scheduling), suggesting that when demands are high and control is low, workers are more likely to experience stress, burnout, and poor health outcomes.

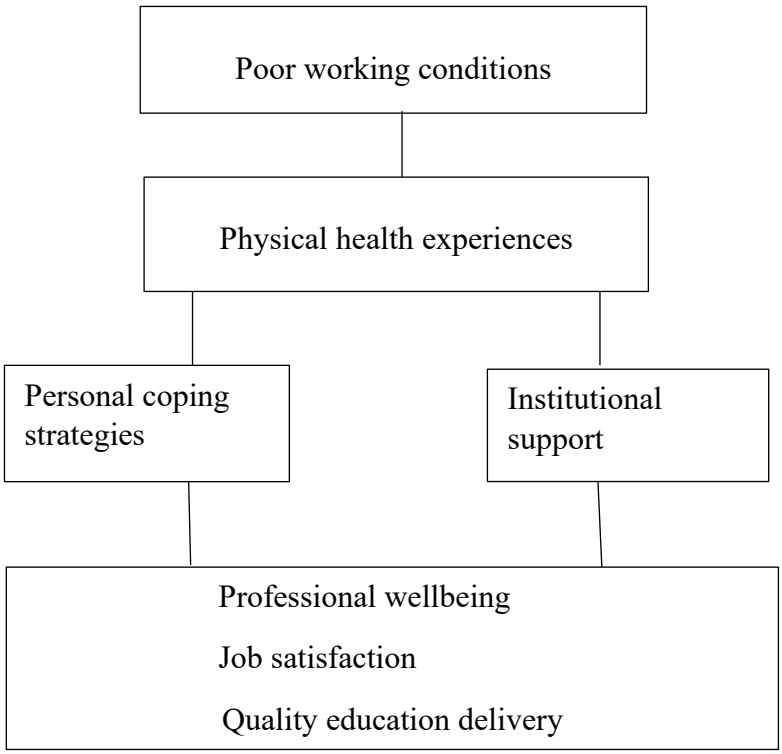
Job control is an important element in the wellbeing of interpreters. According to (Karasek, 1979), workers who have control over their schedule, environment, and strategies that they use to cope with stress exhibit lower levels of stress and better health. In this context, control may mean flexible working hours, breaks, and ergonomic

support for interpreters. It helps in minimising physical stress and emotional fatigue, as would happen when interpreters are scheduled to work for long stretches without rest. Enhancement of control mechanisms, therefore, can reduce physical health experiences of interpreters (Karasek, 1979). He emphasised that workers who are under high demands but with low control mechanisms can develop strategies of coping, such as physical therapy, stretching routines, and mindfulness practices to mitigate physical health experiences. These could be most effective when there are institutional mechanisms of control to support such strategies, like wellness programs and mental health resources. Without adequate support, these coping mechanisms may fall short in combating the physical health issues of interpreters.

2.2 Conceptual Framework of the Study

The conceptual framework of this study is presented in Figure 1. This framework indicates that working conditions significantly impact physical health of sign language interpreters. However, effective personal coping strategies and institutional support can help manage physical health experiences, enhance quality of education and job satisfaction with sign language interpreters.

Fig. 1:*Conceptual Framework of the Study*



Source: *Author's Concept*, 2025

2.2.1 Description of the Diagram

Working conditions include physical setup, ergonomic policy, work break policy, workload policy of the interpreter's working environment. These could impact interpreters' physical health experiences (musculoskeletal disorders such as waist pain , neck pain , shoulder pain, hands pains, and mental fatigue,) (Obrero 2022; Woodcock and Fischer 2008). For example, an uncomfortable seating cause back pain, while long hours interpretation without enough breaks lead to mental and physical fatigue (Lansing, et al. 2021).

Coping strategies such as regular exercise, breaks, appropriate training on ergonomics, and organisational support (like occupational health policies, break policies or workplace wellness programs) can manage the physical health experiences of sign language interpreters (Roman, et al. 2024). These strategies could help interpreters sustain their physical health and wellbeing.

Positive working conditions (such as adequate support, minimising workload, and recognition) can eradicate the negative effects of working conditions, leading to better mental and physical health among sign language interpreters (Barnay 2016). This implies that institutional support moderates positive working conditions, sign language interpreters can achieve quality of health, full job satisfaction and quality education for deaf students.

2.3. Physical Health Experiences of sign language Interpreters

Maintaining good physical health, one must practice a healthy lifestyle such as proper nutrition, physical therapy, physical activities, rest, and avoidance of substance abuse (Gheonea, et al. 2023, Skaliy, et al. 2024). However, sign language interpretation is generally physical demanding job because it requires the use of hands, arms, body movements, and facial expressions to convey messages in an articulate manner (Lisboa et al., 2020). Such continuous engagement along with long hours of work results in stress on the body. Sign language interpreters faced physical health experiences due to repetitive hand and arm motion, poor posture, and extended work hours, which often contribute to musculoskeletal disorders (Jackson, et al., 2018; Jimenez-Arberas et al., 2022). Frequent and sustained use of hands and wrists that intricate body gesture in sign languages lead to repetitive stress injury, such as tendinitis and carpal tunnel syndrome (McGuire, 2014). A study highlighted that physical health experiences are caused by continuously manipulating the hands and wrists in complicated, repetitive movements by interpreters (Obrero, 2022), and since interpreters often remain in one position for long time, they frequently suffer from work-related diseases such as neck, shoulder and back pain (Roman & Samar, 2015). Interpreting requires a lot of concentration, hence causing mental exhaustion, which in turn causes physical health experiences. This, however, puts more cognitive load on interpreters, increasing their risk of injury,

deteriorating their physical health (Napier, et al., 2015). Sign language interpreters reported significantly more physical health experiences than other practice professions, such as teaching, medicine (Dean et al., 2010). The mental and physical fatigue cause physical health experiences and burnout among interpreters, reduce productivity and impair physical health (Roman & Samar, 2015). Despite sign language interpreters' physical health experiences, these experiences are improved by regular exercise, a balanced diet, enough sleep, taking short breaks from long hours of activities, and maintenance of healthy weight status (Roman et al., 2024).

2.3.1 Musculoskeletal Disorders:

Musculoskeletal disorders are groups of conditions affecting muscles, bones, nerves and joints influenced by common ailments like arthritis, back pain, tendonitis, and repetitive strain injuries (Alhashim et al., 2025; Walker-Bone & Thomsen 2022)

They assert that musculoskeletal disorders are a consequence of many factors, which include age, genetics, physical activities, and occupational exposures. A study revealed that most interpreters experience musculoskeletal disorders caused by repetitive body motions, poor body postures, and long hours interpreting without rests (Jiménez-Arberas & Díez, 2022). Some studies also reported musculoskeletal disorders such as carpal tunnel syndrome or tendonitis affecting interpreters (Smith & Maroney, 2020; Swartz, 2017). Over the years, physical health conditions have been names as musculoskeletal disorders, cumulative trauma disorders, soft tissue disorders, occupational overuse syndrome, musculoskeletal injuries, overuse injuries, repetitive strain injuries, and repetitive motion injuries (Iqbal & Alghadir, 2017; Sahni et al., 2019). The nature of working conditions could impact the physical health of sign language interpreters and their work performance. Franklin et al. (1991) emphasised that those people who are into activities that demand more repetitive movements of

their wrists and hands are more prone to carpal tunnel syndrome. While some sports activities involve specific body movements like golfing, knitting, and gardening are likely to experience physical health (Hack et al., 2024). According to the World Health Organisation, musculoskeletal conditions rank among the major health problems worldwide, imposing consequences on the quality of life and huge economic costs due to lost productivity and healthcare costs (Cross et al., 2016). While musculoskeletal disorders are the most prevalent in the workplace due to repeated motions, sitting and standing for extended periods, and poor ergonomics exacerbate the physical health experiences of sign language interpreters (Lisboa et al., 2020; Shockey et al., 2018). A study by Osei-Akoto (2018), similarly revealed that interpreters at the tertiaries suffered from frequent pain in an environment which had spent much time interpreting without the requisite ergonomics support to its workers particularly sign language interpreters and deaf students. This has really impacted sign language interpreters' physical health statues and affected their work performance, deaf and deaf blind students' academic outcomes.

While one acknowledges the necessity for supporting sign language interpreters experiencing physical health conditions through ergonomic support and institutional policies, countries such as the United States and Europe have guidelines through the Registry of Interpreters for the Deaf and European Forum of Sign Language Interpreters (Jimenez-Arberas & Diez, 2022). However, the university of education, Winneba has limited institutional support system in place for maintaining sign language interpreters' physical health statues and effective instructional teaching (Fobi,2021).

2.3.2 Repetitive Strain Injuries among interpreters

Repetitive strain injury is another major occupation issue among sign language interpreters, as they have the tendency of working for several continuous hours without meaningful breaks (Franklin et al., 1991). These are the injuries that arise from continuous use of the same muscles group. This is characterised by inflammation and pain due to the continuous use of the same muscles group. According to Tawiah et al. (2025), interpreters in Ghana who worked more than six hours a day were twice as likely to report repetitive strain injuries as those with less workloads. They explained that the prevalence of repetitive strain injury among interpreters is exacerbated by the lack of ergonomic equipment and policies that advocate for regular breaks in the academic institutions in Sub-Saharan Africa. A study also showed that repetition, force, mechanical stress, posture, low temperature, and vibration are associated with the development of upper extremity disorders (Latko et al., 1999). However, Keir et al. (2921) disclosed that only repetition was related to upper extremity disorders when the other factors like awkward posture and repetitive motion were also taken into consideration. They highlighted that this does not only involve external force such as, tools or keyboard-potential exposure to external mechanical stressors, and exposure to vibration. Despite the institutional support system to control repetitive strain injuries affecting sign language interpreters' physical health in developed countries (Jimenez-Arberas & Diez, 2022), little is study in Ghana, particularly University of Education, Winneba about how to mitigate repetitive strain injury among sign language interpreters.

2.3.3 Mental Health and Cognitive Fatigues among interpreters

The mental demands of sign language interpreting usually led to mental fatigue and burnout (Daly & Chovaz, 2020). Interpreters are expected to process information at high speed and accurately convey it between languages (Dean and Pollard, 2011). In many instances, this can lead to mental fatigue, especially in highly demanding environments such as universities lectures and seminars.

One study stated clearly that the psychological effect on interpreters is caused by insufficient institutional support for their mental health and the emotional intensity of their work (Geiling et al., 2021). Mental fatigue and stress impact the physical health experience of sign language interpreters affecting their overall health and wellbeing (Lisboa et al., 2020). Studies have indicated that interpreters are at risk of mental health problems such as anxiety, depression, and burnout due to mental demands of their job, especially the need to interpret sensitive course content, which leads to stress and emotional fatigue (Pollard et al., 2021; De Meester et al., 2021**).**

Sign language interpreters experience burnout and mental stress due to prolong working hours and a poor work environment (Clarke & Radtke, 2017). Mental health is generally aggravated by a lack of support networks and recognition for their professional roles.

A study by (Qin et al. 2008) found that wrist movements while signing in interpreters' dominant hands were 1.3 to 1.5 times greater than the established high-risk industrial benchmarks. While interpreters' biomechanics could explain 30% of the variance in reported pain (Roman et al., 2021b), question remains about what account for the remaining 70%. Perhaps, these factors are related to the mental health concerns of interpreters.

Studies have shown that, mental health of sign language interpreters has been growing; particularly, the report of stress (Rochester Institute of Technology, 2005; Fisher et al., 2012; Qin et al., 2008; Dean et al., 2001; Schwenke, 2014; Pollard, 2021), burnout (Schwenke, 2014), mental and psychosocial fatigue (Jimenez-Arberas & Diez, 2022), and secondary traumatic stress. The prevalence of interpreters reporting moderate perceived stress, burnout, and secondary traumatic stress ranged from 41% to 76% (Jimenez-Arberas & Diez, 2022).

Furthermore, it was found that stress increased the velocity and acceleration of the non-dominant wrist in interpreters (Qin et al., 2008). Interpreters with chronic stress have demonstrated dysregulated cortisol levels and such changes have been associated with negative long-term health consequences (Schwenke, 2014). His study revealed that interpreters are at high risk of exposure to traumatic events lacking the necessary preventive strategies and support systems**.**

Woodcock and Fisher, (2008) proposed a conceptual model of interpreter injury. They identified not only sign production and style, movement frequency, joint angle, and force but also elements of the interpreting situation and interpreters' characteristics as relevant attributes to injury-risk development. From this perspective, interpreting includes the psychosocial elements of the event and the interpreter's state of mind, while the interpreter's characteristics included physiology, behavior, physical tension, and fitness.

Fisher et al. (2012a) also proposed a conceptual model of musculoskeletal disorder development based on findings from a systematic review. They identified mechanical exposure, which includes increased postural deviations and sign velocity or acceleration, along with the speaker's pace as a contributor to movement rate. However,

they also recognised the role of psychosocial and environmental stress as a non-mechanical contributor to musculoskeletal pathology (Fisher et al., 2012a).

According to Qin et al. (2014), "psychological distress and physical stressors influence the interpreting process by reducing the emotional and physical stability, as well as cognitive and linguistic abilities in sign language interpreters". As Kumar (2018) indicated, the major causes of burnout among highly skilled and in demand workers are time pressure, mismatch between training and working condition and work overloads. A study by Swartz (2017) revealed a link between job satisfaction, level of workload and burnout among interpreters employed full-time. Interpreters with higher work satisfaction had significantly manageable and comfortable workload (Swartz, 2017).

While sign language interpreters practicing mindfulness or relaxation techniques can deal with stress and mental fatigue (Pollard, 2009), there is still a need for context-specific research into how interpreters in Ghana, and more specifically at University Education, Winneba, cope with the physical demands of their work. However, little has been studied on factors that trigger mental health conditions that influence sign language interpreters' physical health and wellbeing at UEW. The present study investigated how sign language interpreters' physical health experiences affect their mental health and aimed to establish strategies for managing mental fatigue and stress (Napier et al., 2015).

2.4 Working Conditions and its Impact on Physical Health of Interpreter

Working conditions are both the environment and the circumstances in which people perform their jobs activities. These include the workplace, ergonomics, workload, and exposure to toxic agents in general (Santoso, 2023). Poor working conditions may result in the prevalence of physical health disorders. The higher the repetition of movements,

heavy lifting and awkward postures a worker is subjected to their job, the higher the chances of developing physical health conditions (Anwer et al., 2021; Ramanandi, & Desai, 2021; Mishra & Kiran, 2023). These issues are then viciously cyclical with the psychological stressors, such as long hours and excessive demands, each feeding into the other to decrease productivity and health of sign language interpreters (Omokunmi, 2024). Effect of working conditions on the health of Sign language interpreters is significant as they play important role in facilitation between deaf and hearing individuals (Fobi, 2021).

One of the most prevalent health issues related to sign language interpreters are the predominance of musculoskeletal disorders arising from continuous signing and repetitive motion (Jiménez-Arberas & Díez, 2022). A study by Möller (2016) highlights that sign language interpreters are more prone to shoulder, neck, and back pain, possibly due to changes of maintaining continuous signing in unconducive environment and uncomfortable positions. Repetitive motion can result in tendinitis and carpal tunnel syndrome associated with the process of sign language interpretation (Feuerstein & Fitzgerald, 1992).

These conditions are exacerbated by poorly designed ergonomic workspaces and by working for extended periods without appropriate breaks (Jones & Carr, 2019). It emphasised in their study that physical injury related to stress is most evident when interpreters are forced into high-pressure working environments and perform for extended periods without sufficient rest.

While numerous studies have researched occupational health risks and the prevalence of physical health conditions in various professions (Feuerstein & Fitzgerald, 1992), there is limited research on physical health experiences of sign language interpreters at

University of Education, Winneba and how working conditions influence their physical health.

2.4.1 Workload and its Impact on Interpreter Physical health

Workload is a critical factor that affects the health and wellbeing of sign language interpreters. For example, workloads are usually high in educational settings, which could lead to mental and physical fatigue among sign language interpreters (Roman et al., 2024; Zafirah et al., 2020). Interpreters working for extended period without adequate break and rest are likely to experience musculoskeletal pains, fatigue and burnout (Cropley et al., 2022). Moreover. Osei-Akoto (2018) reported that Ghanaian interpreters working for more than 40 hours a week are significantly more likely to experience physical and mental health condition. Shealy, et al. (1991) emphasised that physical health disorders are caused by high frequency body movements such as the fingers and wrist, awkward movements, poor posture, short rest periods and swelling of the nerves due to wrist sprains or fractures could increase the risk of carpal tunnel syndrome (Pollard, et al., 2016). Similarly, Woodcock and Fisher, (2008) mentioned that vibrations of fingers caused by interpretation along with forceful and stressful movements of the hand and wrist, can also cause physical health conditions among sign language interpreters.

Although Swartz (2017) concluded that heavy workloads, especially within academic settings, lead to bodily and psychological stress of sign language interpreters. Smith and Maroney (2020) confirmed that interpreters working long hours without proper break times are most affected by musculoskeletal pain, exhaustion, and burnout.

Despite the health risk, sign language interpreting fosters participation and involvement in class, interpreters are often overwhelmed when resources are limited (Berge, 2018).

However, little research has been conducted at the University of Education, Winneba, on how the workload of sign language interpreters affects interpreter physical health and well-being.

2.4.2 Effect of Ergonomic furniture in the Workplace

Ergonomic furniture plays a crucial role in maintaining the physical health of sign language interpreters. A study by Roman and Samar (2015) found out that improved ergonomics knowledge, postural awareness, and workstation setup reduced interpreters' reports of musculoskeletal disorders. Despite the, many interpreters in developing countries like Ghana work in environments that lack basic ergonomic tools (Mantey, 2020), little is studied about poor or insufficient ergonomics affect interpreters' physical health.

Although poor ergonomics design features at workstations can influence "micro" rest breaks, muscle tension, hand and wrist deviations from neutral, ballistic signing (unnecessary abruptness and forceful movement) (Rochester Institute of Technology, 2005; Feuerstein & Fitzgerald, 1992). Hoe et al. (2018) noted that improved ergonomic design features, such as adjustable chairs and desks for easy viewing of the working area, accompanied by wrist supports that offer protection against strains of the body, help avoid conditions such as musculoskeletal disorders and repetitive strain injuries.

However, in many developing countries especially like Ghana such ergonomic tools are not available. Poor chair, desk, and lighting design may promote physical health challenges for sign language interpreters working in static positions for extended periods affecting their physical health and wellbeing (Hall et al., 2015). Asare and Awini, (2021) reported that 68% of workers from tertiaries institutions had musculoskeletal pains due to poorly equipped working spaces. Issues that have been

identified in the workplace, and which are affecting the health status of sign language interpreters in several settings, include long hours, lack of support, and poor working conditions.

Additionally, factors such as long working hours, poor working environment, and lack of support further compound the physical health experiences of sign language interpreters. For example, a study by Svartholm (2020), shows that interpreters working in under-resourced environments were most likely to present physical and mental problems. Similarly, Johnson and Skelton (2022) revealed that interpreters working without the proper equipment, supportive staff, and opportunities for professional development reported overall poor health and job satisfaction. They emphasised that those who were endowed with these conditions were found to be generally healthy and satisfied with their jobs.

A study by Sio et al. (2018) identified static postures during work as a major risk factor for musculoskeletal disorders among many working professionals. Prevention, they suggested, is strongly associated with the use of a modern workstation and its ergonomic support to manage work related conditions (Seidu et al., 2024). Without ergonomic support, interpreters are at risk of developing musculoskeletal disorders such as carpal tunnel syndrome, tendinitis, and repetitive strain wounds of the wrist and the arm sections (Shrestha, 2018).

To mitigate these conditions, studies by Shrestha, (2018) and Stewart and McKay (2017) recommended the need to create environments that are friendly to ergonomic demands, adjusting chairs, desks, and proper lighting to reduce the physical strain and discomfort during the work session and providing regular breaks to enhance health potential of the interpreters. Similarly, interpreters working with better ergonomic

equipment, including adjustable chairs and wrist supports, tend to report less physical pain and are at a lower risk of long-term musculoskeletal problems (Lee et al., 2020). A study by Jansen et al. (2018) listed some mediators of poor working conditions; availability of ergonomic instruments, continuing education, and work-rest schedule. They emphasised that such issues should be resolved through multiple approaches: ergonomic interventions, enhanced support at workplaces, and mental health resources. Sign language interpreters contribute to inclusive communication of deaf and hearing individuals; hence, there is a need to give priority to improving working conditions that will ensure the long-term health and sustainability of sign language interpreters. Despite the significance of the fore-mentioned ergonomic challenges, little research has been conducted on how poor ergonomic conditions affect the physical health of interpreters at the University of Education, Winneba.

2.5 Coping Strategies for Manage Physical Health Experiences among Interpreters

The availability and effectiveness of coping strategies for managing physical health conditions among sign language interpreters can vary significantly depending on the resources and support systems in place within their working environment. In developed countries like U.S.A. and Cannada Sign language interpreters benefit from access to better health resources, ergonomic training, and support networks (Kaufmann & Kusters, 2010; Jimenez-Arberas & Díez, 2022).

However, interpreters in Ghana, particularly at UEW, face challenges in accessing these resources. This limitation necessitates the use of alternative cope strategies to manage with the physical demands of their profession job.

Addressing physical health conditions experienced by sign language interpreters requires a more holistic approach that incorporating the various factors that impact their physical and mental wellbeing. National Institute for Occupational Safety and Health at the Centres for Disease Control and Prevention in 2011, Total Worker Health (TWH) offers an excellent integrated framework for addressing the occupational health concerns of sign language interpreters. TWH is demonstrated by research, practice, policy, and capacity building that combines protection from work-related hazards with injury and illness prevention to advance worker well-being. It expands the traditional delivery of occupational safety and health to the delivery of occupational safety, health, and well-being (Schill et al., 2013; Chari et al., 2018; Chosewood et al., 2024). TWH has five defining elements: (1) demonstrate leadership commitment to worker safety and health at all levels of the organisation, (2) design work to eliminate or reduce safety and health hazards and promote worker well-being, (3) promote and support worker engagement throughout program design and implementation, (4) ensure confidentiality and privacy of workers, and (5) integrate relevant systems to advance worker well-being (Roman et al., 2024). Developed to decrease the fragmentation of occupational health services offered to workers, TWH is a approach that aims to address primary and secondary health conditions, having safe and healthful working conditions is a fundamental principle of TWH (Chosewood et al., 2024). In other words, when workers feel physically and emotionally or psychologically safe at work, they are healthier to impact.

2.5.1 Ergonomic Tools and Equipment to Improve Physical Health

Ergonomic equipment such as adjustable chairs, standing desks, and wrist supports play a key role in preventing musculoskeletal disorders among the interpreters of sign language (Edwards & Lee, 2020). Research indicates that interpreters who use

ergonomics tools experience fewer physical health conditions and are more likely to remain in the profession longer periods (Roman et al., 2024; Smith & Maroney, 2020).

While many studies highlighted the physical health experiences of sign language interpreters, Roman et al. (2023) mentioned that the core strategies to improve working conditions and health consequences among sign language interpreters are institutional support such as ergonomic accommodation, job flexibility, access to mental health facilities, and professional development. A study also revealed that institutions offering high-quality support structures, such as physical therapy access, wellness programs, psychological counselling, would contribute less to adverse health effects of interpreting (Roman et al., 2023). For example, the University of California, Berkeley conducted ergonomic assessments with provision of interpreters with the right office furniture and technologies that could assist in interventions (Snodgrass et al., 2022). Such interventions target minimising the physical demands of interpreting. However, this seems to be absent in most Ghanaian institutions where interpreters are left in the mercies of long-term health problems (Mantey, 2020). Despite the great impact ergonomic tools influenced sign language interpreters' physical health, little is discovered in the University of Education, Winneba.

2.5.2 Maintaining Good Body Posture and Body Alignment

Good body posture and alignment are overall health maintainers techniques that help in keeping the body aligned and in proper position, thereby reducing back pain, stress, and blood pressure burden on muscles and joints (Nix et al., 2023). Good posture means maintaining a body position that sustains natural curves of the spine, neck in line with the spine, promoting flexibility, energy, and keeping limbs comfortable (Chien, 2025). However, maintaining the physical well-being of sign language interpreters, organisational strategies such as regular breaks, work control, and maintenance of

appropriate posture are necessarily considered (Napier, 2021). In this regard, a study shows that sign language interpreters can reduce the strain on their bodies through stretching, ergonomic adjustments, or exercises (Napier et al., 2015). However, sign language interpreting is a physically demanding profession that requires interpreters to be in optimal physical health to manage the mental and physical demands of the job, including prolonged standing, repetitive hand movements, and intense cognitive load (Dean & Pollard, 2013). The demanding nature of interpreter's job, psychological coping strategies, such as mindfulness or relaxation techniques, can help interpreters manage stress and mental fatigue (Pollard, 2009). Psychologically, interpreters practice mindfulness or relaxation techniques to deal with stress and mental fatigue (Pollard, 2009). However, mental fatigue and stress can influence physical health disorders of sign language interpreters and therefore affect interpreters' health and wellbeing (Lisboa et al., 2020). Although the literature has shown an increasing number of studies on how to maintain physical health of sign language interpreters in developed countries (Jiménez-Arberas & Díez, 2022).

2.5.3 Physical Therapy and Rehabilitation

One of the most effective ways to prevent physical health experiences among sign language interpreters is through regular physical therapy. Studies have shown that interpreters who engage in physical therapy report lower prevalence of chronic pain and achieve greater job satisfaction compared to those who do not (Robinson & Singleton, 2020). Ashworth (2010) strongly advocated that physical therapists can assist with special exercises to make wrists and hands stronger. He mentioned other benefits interventions such as massage, yoga, ultrasound, chiropractic manipulation, and acupuncture are options found helpful in improving physical health and relieving symptoms. Hanada (2003) outlined the use of acupuncture as a potential remedy to

manage physical health conditions among sign language interpreters. He emphasised that acupuncture may be effective in the reduction of pain associated with knee osteoarthritis and low back pain, though it may not be as beneficial for individuals with rheumatoid arthritis.

Though there were serious physical health challenges faced by sign language interpreters, (Akbari et al., 2024) in their studies found that patients suffering from prolonged musculoskeletal disorders (mostly back, neck or shoulder pain), who were classified as being highly motivated, used 30 more active and successful coping strategies, applied an internal locus of control, had improved level of self-focus, and better postural control than those that were classified as moderately motivated or latently motivated. Moderately motivated people were described as those "who expect medical treatment to reduce their difficulties" while latently motivated were defined as those "who can only see impediments" to treatment.

Massage therapy has been shown to support physical health of interpreters. The massage treatment involves moderate stroking techniques that extend from the fingertips to the elbow follow by wringing motions along the forearm known as petrissage technique (Erzincanlı & Kasar, 2021). They emphasised that circular back and forth stroking with thumb and forefinger to the whole forearm and hand the skin is to be rolled between the thumb and the forefinger along the hand and both sides of the forearm with stroking to relax the body and conclude the treatment. Despite the physical therapy benefitting physical health of sign language interpreters, little is revealed in the university of Education, Winneba on how physical therapy can enhance the physical wellbeing of sign language interpreters.

2.5.4 Managing Emotional Disturbance and Occupational Stress Interpreters

Addressing emotional disturbance, sign language interpreters must adopt coping strategies. A study by Australian community interpreters reported the use of alcohol, oversleeping, disengaging socially, and wishful thinking to distract themselves from emotional issues of their interpretations (Lai & Costello, 2021), while others chose more engaging positive strategies such as meditation, using hydrotherapy, physical therapy and massage (Lai & Costello, 2021; Russell et al., 2023).

According to Korpal and Mellinger (2022) professional community interpreters in their study adopted various self-care strategies such as physical exercises and social support to mitigate work-related stress. Whiles (Crezee & Lai, 2022; Roman et al., 2023) suggest psycho-social self-care measures, including turning down assignments, getting rest, spending personal time on hobbies and with friends and family, practicing mindfulness, having a healthy and balanced diet, and doing regular exercises to help interpreters overcome occupational burnout and stress. There is limited research on coping strategies to manage physical health experiences among sign language interpreters at UEW.

This study, therefore, investigates the coping strategies interpreters adopt to manage physical health conditions at the University of Education, Winneba.

2.6 Institutional Support System

Institutional support plays a crucial role in ensuring the physical health and overall wellbeing of sign language interpreters. is crucial to ensure good health among sign language interpreters. Support systems that encompass regular breaks, flexible working hours, access to health services, and ergonomic training significantly reduce injury rates among interpreters (Robinson & Singleton, 2020). However, most interpreters in many

educational institutions in Ghana, record a lack of institutional support to guarantee physical health conditions measures. This implies that interpreters are at times compelled to work for long hours with minimal breaks and limited health care services, leading to a higher level of injury and burnout (Swartz, 2017; Adams & Ofori-Danso, 2019).

While Ghanaian society enacted various work-related policies to support employee, these policies often fall short when it comes to addressing the physical health needs of sign language interpreters. Evidence from developed countries show that has shown interpreters who benefit from institutional support such as regular breaks, have access to health services, and professional development opportunities tend to experience higher job satisfaction (Flores, 2005). Conversely, most institutions in Africa have poor policies and are lacking in resources to support the physical health of sign language interpreters (Mugisha et al., 2017). Even though the significant impact of institutional support services affecting sign language interpreters' physical health is mostly reported in developed countries. However, in Ghana, particularly at the University of Education, Winneba, institutional support service is insufficient, the quality of health and well-being of sign language interpreters' is eminence (Asare et al., 2023; Bunbun et al., 2023; Boamah, 2021).

Institutions that ensure clear policies are in place regarding work-life balance, mental health support, and providing interpreters with opportunities for regular breaks to maintain a low-stress lifestyle through stress management programs have better physical and mental health outcomes (Baidoo & Adomako, 2020). In contrast, University of Education, Winneba do not have enough policies and end up failing to appreciate the physical health consequences of interpreting on their staff including high turnover rates and a whole array of chronic problems for sign language interpreters

(Fobi, 2021). While physical health conditions have been studied in developed countries, little studied in educational institutions of Sub-Saharan Africa, particularly the University of Education, Winneba, where institutional support structures are less advanced. This study, therefore, seeks to explore institutional support services such as workload management policies and availability of ergonomic resources for interpreters at the University of Education, Winneba. This will help the researcher make the necessary recommendations for conducive working environment to enhance physical health of interpreters.

2.6.1 The Ghana Labour Act

The Ghana Labour Act (Act 651, 2003) section 118 specifies that "every employer must ensure that every worker employed by him or her works under satisfactory, safe, and healthy conditions. Without limiting the scope of the Act, an employer shall;

- Provide and maintain at the workplace, plant and system of work that are safe and without risk to health.
- Ensure the safety and absence of risks to health in connection with use, storage and transport of articles and substances.
- Provide the necessary information, instructions, training and supervision having regard to the age, literacy level, and other circumstances of the worker to ensure, so far as it is reasonably practicable, the health and safety at work of those other workers engaged in the work.
- Supply and maintain at no cost adequate safety appliances, suitable fire-fighting equipment, personal protective equipment, and instruct the workers in the use of the appliances or equipment.

- Prevent accidents and injury to health arising out of, connected with, or occurring during, work by minimising the causes of hazards inherent in the working environment".

An employer who, without reasonable excuse, fails to discharge any of the obligations under Ghana Labour act of section 118 commits an offence and is liable on summary conviction to a fine not exceeding 1000 penalty units or to imprisonment for a term not exceeding 3 years or to both (The Ghana Labour Act 651, 2003).

2.6.2 The Ghana National Health Policy (2007)

The policy is themed "creating wealth through health." The basic reason for this policy is to increase the productivity level of workers, good health, and wellbeing in the country. Hence the mission of this policy to contribute to socio-economic development and wealth creation through promoting health and vitality, ensuring access to quality health, population and nutrition services for all people living in Ghana and promoting the development of a local health industry (Naah, 2016). Objectives of this policy are:

- To ensure that people live long, healthy, and productive lives and reproduce without risk of injury or death.
- To reduce the excessive risk and burden of morbidity, mortality, and disability, especially among the poor and marginalised.
- To reduce inequalities in access to health, populations and nutrition services and health outcomes.

This health policy therefore ensures that everybody regardless of your tribe, age, ethnic group or personality, health and safety assured and protected by this policy (Arshed, 2024). This health policy could be a guide for sign language interpreters' physical health and wellbeing at the University of Education, Winneba.

2.7 Summary of Literature Reviewed

The literature reviewed for this study highlighted the theoretical framework and empirical studies. The reviewed literature focused on physical health and work conditions of sign language interpreters in including coping strategies and institutional support system to improve interpreters' physical health and wellbeing.

Sign language Sign language interpreters are at risk of developing poor physical health conditions due to repetitive hand motions, awkward postures, and long hours with inadequate breaks from work that bring on musculoskeletal disorders, such as carpal tunnel syndrome, tendinitis, neck, shoulder, and back pains. There is also the risk of mental fatigue and burnout resulting from the high cognitive load emanating from decoding complicated information amidst the stressful environments characterising higher education institutions like the University of Education, Winneba. Poor ergonomic support in institutions contributes to this situation. Repetitive strain injuries, resulting from continuous use of muscles without rest, are common among sign language interpreters and exacerbated by a lack of ergonomic equipment and standardised work schedules.

These studies indicate that sign language interpreters in Ghana are highly vulnerable due to the absence of requisite support and exceptionally long working hours. Anxiety, depression, and emotional fatigue can be related to the high demand for their jobs emotionally and cognitively. Though guidelines at European countries like Canada and U.S.A offer support by attempting to alleviate physical and mental burdens, at UEW there is a wide gap in such practices. The physical health of sign language interpreters demonstrates fewer significant challenges that stem from prolonged workloads, poor ergonomics, and a lack of institutional support. Interpreters often work in high-pressure environments, resulting in musculoskeletal disorders, tendinitis, and carpal tunnel

syndrome, especially when proper ergonomic equipment like adjustable chairs and wrist supports are unavailable.

Poorly designed workspace is a factor contributing to physical strain and burning out. A literature reviewed shown that mental and physical fatigue found in educational interpreters, which might further deteriorate their health condition if they are forced to work for extended hours without adequate rest. Institutional protection may help mitigate such risks, but most institutions, particularly those in developing countries like Ghana, do not have the resources or policies regarding interpreter health. Examples include job flexibility, ergonomic adjustments, and access to physical therapy and wellness programs. Limited research focuses on physical health experiences of sign language interpreters at the University of Education, Winneba. Therefore, there is a need to explore sign language interpreters' experiences on their physical health, working conditions, strategies aimed at mitigating poor health conditions, and institutional support to enhance their physical health and wellbeing of sign language interpreters.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter describes the methods and materials used in the study. The following sub-topics were covered in this chapter: interpretivism paradigm, research approach, research design, study population, sampling techniques, data collection instruments, trial testing of instrument, data collection procedure, trustworthiness, and ethical considerations.

3.1 Interpretivism Paradigm

The study used interpretivism paradigm, exploring deeper understanding and experiences of sign language interpreters' physical health at University of Education, Winneba. Interpretivism paradigm focuses on understanding human experiences from the people's viewpoint (Matta, 2015).

3.2 Research Approach

The study employed a qualitative research approach to explore physical health experiences of sign language interpreters at the University of Education Winneba (UEW). Creswell (2013) defines qualitative research as an enquiry useful for exploring and understanding a central phenomenon. Creswell (2012) emphasised that qualitative data are useful within the research because sign language interpreters will freely express their thoughts, perceptions and views in more detail concerning research questions. Moreover, interpreters' behaviour, working conditions and physical movement were observed to confirm their personal experiences raised during the interview section.

3.3 Research Design

Descriptive phenomenology used in this research to derive an in-depth understanding of the physical health experiences, coping strategies and work conditions of sign language interpreters at the University of Education, Winneba. According to Simui (2018), phenomenology is concerned with human experience since it investigates people lived experiences to find meaning. Creswell (2018) and Mapp (2008) confirmed that phenomenological research is a design of examination concern about viewpoint and psychology of individuals experiences of a phenomenon. This method focused on describing and interpreting the core structures of the lived experience as well as identifying the experience's educational significance in psychology, sociology, and pedagogy. It goes deeper into an individual's significant constellation of feelings, reflections, culture, and bodily sensations (Carel, 2011; Creswell, 2014). The research sought to explore the personal meaning which the sign language interpreters gave to their physical health experience, with an emphasis on the inner subjectivity and the understanding that the sign language interpreters are part of the environment (Flood, 2010).

3.4 Study Population

The research involved six staff sign language interpreters from the University of Education, Winneba. In relation to the gender composition of the participants, four (4) of the participants were male, while two (2) were female, which shows that the male interpreters made up many of the participants. In relation to the educational background of the participants, five (5) of the interpreters had a bachelor's degree in special education, while one (1) of the participants had a master's degree in special education. This shows that all the participants had academic training in special education and sign language interpretation. In relation to the professional experience

of the participants, all the participants had extensive experience in sign language interpretation. The lowest level of work experience among the interpreters was five (5) years, which shows that the participants had sufficient experience in the field of sign language interpretation for deaf and deaf blind students. In statistics, a population refers to the complete set of individuals or elements that are the subject of a study, from which a sample is drawn to make inferences about the population (Casteel & Bridier, 2021). Creswell (2014) and Willie (2024) also said that population is the complete group of themes that fit specific characteristics defined by the research question. Understanding population is crucial because it confirms that the findings of the study are valid and related to the larger group from which the sample was taken from (Neuman, 2014). While another study also speculates that the total number of individuals, items, or events pertaining to a specific character that is under research is population (Willie, 2024).

3.5 Sample Size

The sample size for the study was six participants, comprising, four males and two females. They all hold bachelor's degree certificate in special education except one female who hold second degree in special education. The least amount of work experience among the participants is five years. They all specialised in education of hearing impairment (EHI) under special education. Because of their specialisation, all the participants were qualified for data collection.

Table 3.1: Sample Population

Participants	Males (%)	Females (%)	Total
Staff sign language interpreters	4(66.67)	2(33.33)	6 (100)

Source: *Field Data, April* (2025)

3.6 Sampling Technique

Due to the fact that the total population of the study was only six staff sign language interpreters, a census technique was employed to select participants for this study. All six participants were interviewed and observed in the study so that comprehensive coverage and absence of sampling error could be ensured. A census is the complete count of all individuals living in a defined area, typically conducted to gather demographic data, social data, and economic data (Philip, 2023).

3.7 Instrumentation

Semi structured interviews guide and non-participant observation were used to collect data from the participants. Research instrumentation refers to the tools and devices used to assess specific phenomena within a group of individuals (Lattal & Yoshioka, 2017). This ensured confirmability and credibility because of using semi structured interviews guide and non-participant observation. Collecting data using two or more different methods such as interviews and observations enhances the credibility and validity of study findings (Kern, 2018). In many fields, such as mental health, psychology, and behaviour analysis, instrumentation plays a significant role in precisely identifying and understanding different health conditions or behaviours of a certain group of people in a specified geographical area.

3.8 Semi-Structured One to One Interview

Data was collected about participants' experiences of physical health and working conditions at University of Education, Winneba. In-depth one on one interview was used to collect the participants' opinions and their experiences. Six participants were interviewed in the study. However, five participants were interviewed on the same day, and the other one was on subsequent day. Interview was conducted in the sign language

resource office. Each interview lasted for 35 to 41 minutes. Interviews are widely held to be a fundamental as a useful way to understand informants' beliefs, experiences and worlds (Mann 2016). Furthermore, it allows the participants to express their truthful view, opinions, beliefs, and understandings of tertiary inclusion for deaf students (Creswell, 2012, Mann, 2016). The interview questions were open-ended and flexible to participants (Young et al., 2015).

3.9 Non-Participant Observation

The work environment, behaviour and body postures of sign language interpreters were observed. These were done to confirm the actual state of ergonomic conditions and workload demands that can influence sign language interpreters' physical health and work performance. Unstructured observation was used to take field note what has been observed. Unstructured observation is a non-numerical research technique often used in naturalistic settings, where the observer does not follow a predetermined plan or checklist (Dissanayake, 2025). Interpreters were observed in their various assigned lectures and seminar halls. The researcher observation was done based on credit hours scheduled for each lecture. Since some of the interpreters were working as team, they rotate to take rest. However, their minute for interpretation varies because per the researcher observation, they did not have a fixed time to be rotated. The number of credit hours also varies because some lectures were two or three credit hours long. In comparison with their dairy activities, they appeared more stressed in the afternoon than in morning or evening. This emphasised the classrooms' ventilation with heat and noise. This was due to poor classroom ventilation, heat and excessive noise. Five lecture halls have non-functioning fans increasing more physical demand to interpret. Jotting Notes were taken and later developed into detailed field notes to discover what the researcher was aiming to investigate (Tjora, 2006). This observation was a valuable research

method, but access and field notes issues need further exploration to overcome (Stigen et al., 2020; Johnson & Majewska, 2022).

3.10 Pilot Testing

To test the feasibility of the study and shape the interview questions, the researcher conducted a pilot testing on March 17, 2025, at UNIPRA Inclusive school South, Winneba, with two females and one male. The sign language interpreters had taught for more than five years. Pilot testing was done to reframe and shape the interview guide for the main study. Pilot testing serves as a preliminary stage where researchers assess and improve their methods, instruments, and procedures to ensure their feasibility and effectiveness for collecting meaningful data (Bhalla et al., 2023; Julious, 2016). The Pilot testing involves examining the instruments for data collection and procedures before the actual research begins (Gani et al., 2020). The researcher assured that the approach is methodologically sound and will give meaningful results (Creswell, 2014). The researcher focused on three participants for the pilot testing. However, one female interpreter held a Bachelor's degree in sign language with five years of exposure to sign language interpretations. The other two interpreters who are male and female held a second degree with eight and eleven-year experiences respectively in sign language interpretation respectively. I selected these participants for the pretesting because they were involved in similar qualifications and the same job activities as those participants in the main study. To avoid deviation and inconsistencies in the main study, the researcher intended to do the pre-test from UNIPRA Inclusive School South Winneba. This really helped the researcher shape and break down some of the interview questions to enhance clarity. The interview guide was reviewed and accepted by my supervisor along with an approved letter authorising data collection. Permission was sought from the headmistress of the school to conduct the pilot testing. The participants were given

an information sheet outlining the study's purpose along with consent form and they agreed to participate in the study. They all agreed to sign the consent forms and they were interviewed. Actually, the pilot testing was in two forms. I had time to observe the interpreters while they signed in their classrooms. The purpose of the observation was to explore their physical environment, kind of chair used, body posture and number of hours spent interpreting. This was ascertaining how these factors impact interpreters' physical health experiences and work performance. This pretesting also gave me the chance of rephrasing and deleting interview questions that were ambiguous for the main study. However, it was clear that the data obtained from interview and observation revealed a similar pattern between the two instruments used. The field notes I had during observation corresponded to the data obtained from the interview conducted with participants. Due to the requirements of the main study, it was valuable to use methodological triangulation for data collection.

3.11 Trustworthiness of the Study

To ensure the quality and integrity of this study, the researcher applied the trustworthiness criteria (Lincoln & Guba, 1985). These criteria include credibility, dependability, transferability, and confirmability. The application of these criteria facilitates verification of the research process and enhancement of the believability and applicability of the findings in other comparable settings.

3.11.1 Credibility

It was through prolonged engagement and persistent observation that credibility in this study was achieved. Credibility refers to the belief in the truth of the findings and the extent to which data capture participants lived experience (Lincoln & Guba, 1985). There was sufficient time interaction with the participants such that repeated visits and

interactions took place for thorough knowledge of their experiences. Triangulation was also applied by making use of interviews and non-participant observation. This was used to verify findings through the application of multiple data points. Member checking was also employed by showing emerging findings to participants for verification and interpretation. This was used to ascertain that the participants' realities were being described effectively in the study.

3.11.2 Dependability

Dependability focuses on consistency and stability of results over time and under conditions (Guba & Lincoln, 1989). The research process, including decisions on data collection, analysis, and interpretation, was recorded in detail in the present study. Supervisor debriefing was utilised to further enhance dependability. Research supervisor reviewed the methodology and interpretations for ensuring consistency and logic in research process. The use of a well-designed interview guide and standardised observation checklist also assisted in maintaining methodological consistency.

3.11.3 Transferability

Transferability refers to the extent to which the research findings may be applied elsewhere or in other contexts (Lincoln & Guba, 1985). Thick description was employed in promoting transferability. Detailed contextual background information on the study setting (University of Education, Winneba), the research participants (sign language interpreters), and their setting was provided. This allows readers to determine the applicability of the findings to their own settings. Although qualitative research is not interested in generalisability, the in-depth descriptions allow for well-informed judgments about the transfer of knowing to similar settings.

3.11.4 Confirmability

Confirmability is the degree to which the findings are due to participants' responses rather than researcher bias or personal motivation (Lincoln & Guba, 1985). To increase confirmability, the researcher maintained a reflexive journal throughout the research**.** Secondly, data triangulation and use of direct quotations from participants also helped to guarantee that the findings were derived from actual participant experience.

3.12 Data Collection Procedure

Data collection was preceded by obtaining ethical clearance from University of Education, Winneba. Census method was used to collect data due to limited number of sign language interpreters at the University of Education, Winneba. Semi-structured interviews and non-participant observation were the main data collection methods used in the study. Interviews were conducted in a conversational manner, which allowed participants to provide detailed information regarding their physical health conditions and coping strategies. It was a one-on-one opened-ended interview at sign language resource centre. Participants were informed to be recorded after signing the consent form. Interview was conducted in spoken English language, and it was recorded with two recorders (Samsung A15) and Infinix 30i). The data was later transcribed verbatim. Observations were made in real-time interpreting sessions, and field notes in detail were taken on physical body movements, body position, signs of fatigue, and coping behaviour. Use of the integrated methods ensured the coverage of data across methods.

3.13. Data Analysis

Data analysis was conducted using thematic analysis, following Braun and Clarke's (2006) six stages: familiarising with data, initial generation of codes, searching for themes, reviewing the themes, defining and naming the themes, and writing the report.

Creswell (2014) asserts that thematic analysis is a method for identifying, investigating and consolidating themes across data. It simply organises your data set and then describes it in detail. Interview was transcript and field observation notes were thoroughly read and reread multiple times to get an in-depth understanding of the data. Initial codes were generated manually, and codes with similar meanings were identified as larger themes. NVivo software was used to code the data, and this allowed the researcher to intensively engage with the data. Themes were constructed inductively and tested against the original data to ascertain whether they indeed reflected participants' accounts. Thematic analysis maintained a rigorous and meaningful interpretation of the data through iterative approaches.

3.14 Ethical Considerations

This study adhered to established ethical standards to ensure the dignity, privacy, and rights of all participants were protected throughout the research process. The study was conducted at the Department of Special Education, University of Education, Winneba (UEW), with a pilot study carried out at the UNIPRA Inclusive School, South Winneba. Ethical procedures were carefully observed at both stages of the study. Prior to data collection, a formal permission letter was sought and submitted to the Department of Special Education at UEW to seek authorisation to conduct the study. Additionally, a detailed consent letter was prepared and shared with all participants. The consent letter clearly outlined the purpose of the study, the voluntary nature of participation, the methods of data collection, and the participants' right to withdraw from the study at any point without penalty. However, no participant was withdrawn from interview. Participants were assured that their identities would remain confidential and that the information provided would be used solely for academic purposes. Given the involvement of interpreters as participants, careful attention was paid to issues of

anonymity and confidentiality. All data collected were securely stored and accessible only to the researcher and his supervisor.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.0 Overview

This chapter presents the findings from the interviews and non-participant observation conducted with six participants to explore physical health and work conditions of sign language interpreters. The chapter is organised around the research questions raised to guide the study. The findings are organised into themes that emerged from the data analysed. Each theme is supported by direct quotes from participants and each participant observed. Demographic characteristics of the respondents are major areas captured in this study.

4.1 Demographic Characteristics of Sign language interpreters in the study

The demographic characteristics of the sign language interpreters who participated in the study presented below.

Table 4.1:Demographic Information of Sign language interpreters

Demographic	Male f(%)	Female f(%)	Total n(%)
Age (years)			
25-29	4(66.67)	-----	4(66.67)
30-34	----	2(33.33)	2(33.33)
Total	4(66.67)	2(33.33)	6(100)
Years of exposure to sign language			
5	3(50)	----	3(50)
6	1(16.67)	1(16.67)	2(33.34)
8	----	1(16.67)	1(16.67)
Total	4(66.67)	2(33.34)	6(100)
Academic qualification			
Bachelor in Special Education	4(66.67)	1(16.67)	5(83.34)
M.Phil. in Special Education	--	1(16.67)	1(16.67)

Note: f= frequency, n= number of units
Source: Field Data April 2025.

The table provides description of the demographic characteristics of sign language interpreters in the study. The respondents comprise of four males (66.67%) and two females (33.33%). This implies a male dominant sample in the study. However, both sexes brought variation of experiences and viewpoints to complete the study. The age structure shows that all participants are 25–34 years old with four participants (66.67%) in the 25–29 years range and two participants (33.34%) in the 30–34 years range. This balance reflects a cohort of early to mid-career professionals, and this means that the interpreters have gained sufficient exposure and experience in the field, but are sufficiently young, which may influence their physical flexibility and endurance. On the aspect of years exposed to sign language, all participants have been exposed for a minimum of five years, reflecting good grounding in the field. Three participants have five years of experience (50%), two have six years (33.34%), and one has eight years (16.67%). This range of experience adds credibility to their responses because it indicates participants are not novices but established professionals with a lot of exposure to the stresses of interpretation. Based on academic qualification, five out of the six participants (83.34%) hold a Bachelor's Degree in Special Education, while one participant (16.67%) holds an M.Phil. in Special Education. The high level of education ensures that participants have a sound theoretical foundation in special education and therefore are likely to be well-placed to handle complexities and nuances in sign language interpretation. The postgraduate degree (M.Phil.) adds more depth and may offer opinions with greater academic credibility. The incorporation of gender diversity, age range evenly spread, rich work experience, and strong educational foundation value the quality and comprehensiveness of data collected in this study.

4.2 Interview findings

4.2.1 Research Question 1 *What are the physical health experiences of sign language interpreters at the University of Education, Ghana?*

4.2.1.1 Probe 1: *What do you understand by physical health as an interpreter?*

Table 4.2: Themes and supporting quotes relate to;

Theme	Supporting Quote
Physical Readiness and Endurance	• "Physical health, to me, means having the energy, strength, and posture needed to interpret for long hours without experiencing pain, especially in the hands, shoulders, and back." (Respondent 1) • "It's having the endurance and physical readiness to handle long hour classes, movements over venues." (Respondent 5)
Free from Mental Fatigue and Stress	• "It's about being free from mental fatigue and physical strain that comes from standing, signing continuously, and moving around campus. My physical health is key to my performance." (Respondent 2)
Pain-Free Performance and Physical Safety in Interpretation	• "I define physical health as the ability to perform all interpreting tasks without discomfort or risk of injury especially avoiding body pains." (Respondent 3)
Fitness and Flexibility for Sustained Interpreters' Performance	• "Physical health involves maintaining proper fitness and flexibility to keep up with the demands of signing and expressing clearly without my body breaking down." (Respondent 4)
Maintaining Good Posture and Injury Prevention	• "For me, it's about posture, and injury prevention being physically prepared to meet the day-to-day demands of interpretation." (Respondent 6)

Source: Field Data April 2025

The study revealed several physical health experiences of sign language interpreters and raised themes that are critical to sign language interpreters' physical health. "Physical readiness and endurance" are of prime importance, since interpreters work long periods and move from one location to another, therefore requiring continuous energy and posture to ensure minimal stress and discomfort. Of equal concern is being "free from mental fatigue and stress", as permanent body aches resulting from standing and signing can negatively impact mental attention and performance, and it is considered a significant factor in supporting physical well-being of interpreters. The

need for "pain-free performance and physical safety" is also stressed by the respondents, pointing out that excellent interpretation must be carried out without pain or risk of injury to sensitive areas like the hands, waist, shoulder and back. "Maintaining fitness and flexibility" appears to be important to provide fulfilment of physical demands of expressive signing, keeping the interpreters efficient in specific time spans. Lastly, "good posture and injury prevention" are added as preventive measures for everyday preparedness and lifelong physical well-being. The above themes explained how physical well-being ensures interpreters' efficacy and the quality of communication with deaf and deafblind learners in inclusive environments.

4.2.1.2 Probe 2: What kind of physical health do you experience from your work as an interpreter?

Table 4.3: Themes and supporting quotes relate to;

Theme	Supporting Quote
Body Pain and Difficulty Concentrating	• "I get frequent waist and back pain, my shoulders also feel very tight, and I feel so weak and just physically tired and headache with no breaks." (Respondent 1) • I get muscle strain in my arms and hands… fingers hurt… migraines… backaches… pain makes me lose focus." (Respondent 2) • "Fingers and wrists hurt… pain is worse after long sessions… some days I can't sleep because my body just aches." (Respondent 5) • Pain in my wrists, waist, shoulders, and back… sometimes chest pain in the middle of interpreting… stress makes it hard to focus." (Respondent 4)
Eye strain and Headaches	• "My eyes pains… legs ache, knees start to give back locks up as a result of prolong standing, classroom noise gives me tension and headaches." (Respondent 3) • My eyes get strained… standing too long makes me really tired… interpreting involves a lot of movement which causes body and mental aches." (Respondent 6)

Source: Field Data April 2025

It was revealed from findings that physical health experiences sign language interpreters faced, the majority of which have consequences on their performance at work, and deaf and deafblind students learning outcome. "Frequent body pain and difficulty to concentrate" are common, interpreters complaining of long-standing back, shoulder, and hand pain due to standing and singing for long periods without breaks. Chronic physical limbs pain and loss of concentration impact on the health and wellbeing of interpreters, with chronic pain in shoulders, wrists, fingers, and backs often troubling sleep and affecting their mental focus while on duty. Such bodily effort tends to lead to headaches, sleeplessness, weakness, and reduced stamina, all of which can hinder efficient interpretation. “Eye strain and headaches" also emerge as dominant issues, caused by prolonged visual focus, standing, and environmental conditions like classroom noise. These can cause physical health problems among sign language interpreters. In educational setting, with its need for clear and consistent communication, the physical health problem not only affects the health of the interpreter but also the nature of services they provide to deaf and deafblind students. The findings established a strong need for improved working conditions, including ergonomically supported work environment, regular breaks, and wellness services to promote interpreter health and functioning.

4.2.2 Research Question 2: In what ways do the working conditions of sign language interpreters at the University of Education, Winneba shape their physical health experiences?

4.2.2.1 Probe 1*: How do your classroom environment and workload affect your health?*

Table 4.4: Themes and supporting quotes relate to;

Theme	Supporting Quote
Seating Habit and Classroom Arrangement	• "Plastic or student chairs we use for interpreting are causing us discomfort with body pains. Classrooms are very hot and sometimes no planned rest breaks. We sign right next to loudspeaker that gives me tension and headaches." (Respondent 1) • "Hot and noisy lecture halls and there is no chair for us to sit and interpret. Sometimes setup does not allow for movement because we are placed near speakers of which sound pressure adds to our stress." (Respondent 2)
Classroom Noise, and Long Sessions for Interpretation	• "Sometimes we confine at sound system area, poor chair usage and lecture hall is very noisy. I do long interpreting without a switch especially when we are short-staffed." (Respondent 3)
Workload and Uncomfortable Furniture for Interpreting	• "The chairs are not comfortable to sit and the lecture Hall too is noisy with poor lighting. I sometime interpret 9 credit hours instead of 3 credit hours, mentally exhausting." (Respondent 4) • "Sometimes no chair at all to sit and interpret. Sometimes you interpret more than what you are supposed to do because of my team mate does not know much about course concept to interpret". (Respondent 5)
Inadequate Light in the Class and Mental Fatigue	• "Chairs are few… lighting is poor… noisy… if I don't understand the subject, it gets mentally tiring… this affects my health." (Respondent 6)

Source: Field Data April 2025

The findings revealed major physical health experiences of sign language interpreters. Theme "poor classroom and seating arrangement" is a problem identified, with hard plastic chairs or no chairs at all for the interpreters to sit on. Discomfort and headaches from sitting near loudspeakers in hot classrooms without breaks were reported by one of the respondents, proving how poor arrangement of classroom leads to frequent fatigue and stress. Also, "classroom noise and long sessions for interpretation" are

significant factors that can influence physical health problems. The interpreters mentioned being seated near sound systems and working extended hours with no break from switching, especially during times of understaffing, which makes one tired and lack focus. The theme, "workload and uncomfortable furniture for interpreting" also demonstrates the pressure interpreters must face, with one explaining interpreting for up to 9 credit hours instead of 3, in noisy halls with poor lighting. Other respondents stress that they interpret more due to their teammates' lack of comprehension of the course material, causing severe mental and physical stress. "Inadequate light in the classroom and mental fatigue" defines how poor lighting, poor seating, and auditory distractions make interpreting more cognitively challenging. This usually happens when the interpreters have no knowledge of the course area. These findings outline the urgent need for better interpreters' welfare, such as ergonomic seating arrangements, well-planned classroom layouts, reasonable workloads, and proper lighting to enhance both interpreters' health and work performance.

4.2.3 Research Question 3: What coping strategies do sign language interpreters use to maintain their physical health at the University of Education?

4.2.3.1 Probe 1. *What routines do you use to manage your physical health conditions caused by interpreting?*

Table 4.5: Themes and supporting quotes relate to;

Theme	Supporting Quote
Physical Exercise and Massage.	• "I take breaks when I can… change posture… stretch myself, go for walks, go for a massage and sleep well during weekend. If it is in class, sometimes I just tell the deaf students, 'I need some minutes to relax." (Respondent 1) • I go for walks, gym, and relax at home… take water breaks." (Respondent 5)

Theme	Supporting Quote
	• "I go to swim on weekend and attend to massage centre for body exercise." (Respondent 3) • (I stretch myself and sometimes go to swim after work and rest more during weekend." (Respondent 6) • "I go for walk and massage on weekends." (Respondent 4)
Taking Breaks, and Summarising Signing Concept.	• "Take short breaks… summary signs… light workouts… sleep enough… we switch every 20 or 25 minutes to reduce stress." (Respondent 2) • "We rotate among team members to reduce stress" (Respondent 6) • "I switch every 30 minutes with my signing partner to rest small." (Respondent 5) • "I take breaks when I have signing team". (Respondent 1) • we switch every 15–25 minutes if we can." (Respondent 3) • "I take breaks every 30 to 60 minutes" (Respondent 4)
Taking Medication	• "I take painkillers to manage my body pains" (Respondent 2) • "Medication has really helped my joints pains when I take it." (Respondent 3)
Water Break and Practicing Breathing Exercise	• "I drink a lot of water within the day and do breathing exercise to energise myself." (Respondent 4) • "I usually take deep breathing exercise and drink water to relieve my stress." (Respondent 6)

Source: Field Data April 2025

The findings revealed approaches sign language interpreters used to manage physical health experiences related to their work. The theme "taking medication, taking breaks and physical exercise." This theme explained the methods and routines interpreters practice to manage their physical health both at workplace and home. Some of the respondents mentioned walking, swimming, stretching, and attending massages as methods to mitigate their physical health conditions. One interpreter disclosed, I do take breaks whenever possible… stretch myself, walk around, go for massage and sleep well over weekend. These methods help to manage physical stress and facilitate recovery. Another key strategy "taking breaks and role rotation". Interpreters reported switching roles every 15 to 30 minutes, summarising signs, and taking short rest breaks to avoid stress and mental fatigue. As one participant explained, we switch every 20 to 25

minutes to reduce stress. This collaboration serves to alleviate both physical fatigue and mental focus during long interpreting sessions.

Some sign language interpreters employ "medication" for pain, one noting, I take painkillers to relieve my body aches. Others employ "hydration and breathing exercises", like water consumption and breathing exercise to alleviate stress and conserve energy during interpreting. These findings highlighted the necessity for sustained self-care and formalised support to preserve interpreters' physical health and performance, especially in special education where their work is inherent to student access and success.

4.2.4. Research Question 4**: What institutional supports exist for managing physical health conditions of sign language interpreters at the University of Education, Winneba?**

4.2.4.1 Probe 1: *What kind of support does the university provide to help you maintain your physical health as an interpreter?*

Table 4.6: Themes and supporting quotes relate to;

Theme	Supporting quotes
Lack of Formal Health Policy & Recognition	• "No specific health policy… talk to lecturers to understand about our work…" (Respondent 1) • "No proper policy… we need serious investment… recognition that our work affects wellbeing." (Respondent 3)
Limited Health Services & Infrastructure	• "Clinic has no physiotherapy…" (Respondent 1) • "We can go to the clinic… but no therapy or rehab…" (Respondent 2) "Access to clinic, but no physio…" (Respondent 3) • "Need transport support… health allowance or massage… regular health checks would help." (Respondent 5)

Theme	Supporting quotes
Ergonomic & Environmental Challenges	• "Better classroom setup." (Respondent 1) • "Redesigned furniture, classroom layout improved." (Respondent 2) • "Need better chairs… quieter, well-lit rooms…" (Respondent 4) • "Need ergonomic chairs…" (Respondent 6)
Staff Shortage & Heavy Workload	• "They should hire more interpreters…" (Respondent 1) • "More interpreters so we're not stress." (Respondent 4) • "We're too overloaded…" (Respondent 6)
Break Policy	• "Enforce time management…" (Respondent 5) • "There's a 15-minute break policy, but we're too overloaded…" (Respondent 6)
Informal Peer Support	• "We help each other among our team by rotating during signing period." (Respondent 1) • "There's a 15-minute break policy to manage workload and s…" (Respondent 6)
Need for Training & Awareness	• "Talk to lecturers to understand about our work because of them are making our work too difficult for us…" (Respondent 1) • "Health isn't discussed on regular based for interpreters… we need more advocacy…" (Respondent 2) • "The University should organise workshops for lecturers and educating them about the roles of interpreters…" (Respondent 4) • "Lecturer training to understand sign language interpreters' duties…" (Respondent 6)
Need for Financial Support	• "Need transport support… health allowance…" (Respondent 5)

Source: Field Data April 2025

Sign language interpreters face countless issues that directly affect their physical health and wellbeing, most of which stem from systematic neglect and institutional failure. One of the most notable themes identified is "Lack of formal health policy and recognition" interpreters are not included under specific occupational health policy, so

they do not receive coverage for their physical and mental health needs. This lack of policy is one aspect of a broader under appreciation of their work and harms them and the quality of service provided to deaf and deafblind students. "Limited health services and infrastructure". There is University clinic, but they typically lack needed care like physiotherapy, massage, or rehabilitation services interpreters frequently need because of repetitive strain and physical fatigue. The physical workplace of interpreters also makes it difficult for such challenges, which have been categorised as "Environmental and ergonomics problems". Inadequate seating, classroom setup, and improper posture result in long-term discomfort and potential musculoskeletal injury. The physical environment of such spaces is not conducive to physical demands of interpreting work. The second critical problem is "Personnel shortage and heavy workload." At present staff must work under high workloads, with a shortage of trained interpreters, and long hours are frequently worked without rest. This not only causes burnout, but there is minimal opportunity for recovery, and this takes an enormous toll on health outcomes. Although there is a "Break policy" providing 15-minute breaks it is not followed. Heavy workloads and tight duties render effectively impossible implementation, making what is meant to be a preventative health practice an impossible ideal. Without the options, interpreters are forced to employ "Informal peer support". They assist one another through cyclical duties and emotional support. While this is showing strong peer solidarity, it also illustrates institution failure to establish in-depth wellness or backup programs. A key impediment to advancement is the "Need for training and awareness" of teaching staff, with the majority lacking an understanding of the interpreter's role. Such ignorance can lead to unmerited demands and coordination issues. Training initiatives could encourage better working relationships and reduce physical and emotional stress among interpreters. Finally, participants expressed the "Need for

financial assistance", attributing the ensuing out-of-pocket cost of healthcare and transportation. The latter adds to another source of pressure, again reasserting the need for institutional support in the form of health allowance or a reimbursement scheme to preserve interpreters' well-being.

4.3 Observation findings

4.3.1 Research Question 1: What are the physical health experiences of sign language interpreters at the University of Education, Winneba?

4.3.1.1 Probe 1: *What physical health-related behaviours and conditions can be observed among sign language interpreters during their work?*

Table 4.7: Themes and observation statements relate to;

Theme	Observed Statements
Body Pains	• Massaged her wrist and stretched arms (Interpreter A) • Wore a wrist bandage which shows sign of pain (Interpreter F). • Applied balm to her shoulder after taking break. (Interpreter C)
Physical Stress	• He rested with his head down after class (Interpreter D). • Appeared very tired after signing up for two-hour lecture alone (Interpreter A).
Postural Discomfort	• Pressed his neck and stretched body during sessions (Interpreter B). • Maintained a static posture in plastic chair throughout the signing process (Interpreter A).

Source: Field Data April 2025

The findings under the three themes "Body Pains", "Physical Stress", and "Postural Discomfort" collectively revealed the truth about the high physical demands on sign language interpreters. Under "Body Pains", the interpreters displayed open signs of discomfort, such as massaging their wrists, having bandages on their wrists, and applying balm on painful shoulders. These signs point towards repetitive strain injuries due to long hours of signing with insufficient breaks or ergonomic support. The

"Physical Stress" theme is expressed with further tension, with interpreters seen resting their heads after class and appearing extremely exhausted after lengthy lectures. This reveals not only physical exhaustion but also mental fatigue due to the intense concentration required. In the "Postural Discomfort" theme, interpreters were seen stretching their necks and remaining static in hard plastic chairs, reporting a lack of adequate seating and movement within sessions. The findings indicated the necessity for working environment changes like ergonomic furniture, regular breaks, and workload control to mitigate the physical and mental strain in the long run for interpreters.

4.3.2 Research Question 2*:* In what ways do the working conditions of sign language interpreters at the University of Education, Winneba shape their experience of physical health?

4.3.2.1. Probe: *In what ways do work conditions shape interpreters' physical health?*

Table 4.8: Themes and observation statements relate to;

Theme	Observed Statements
Fixed and Non-adjustable Chairs:	• Used a plastic chair with no lumbar support. (Interpreter A) • Sat in a fixed chair that did not allow posture adjustments. (Interpreter D)
Lack of Breaks or Rotation	• Interpreted a two-hour lecture without any scheduled breaks. (Interpreter A) • Interpreted a full day… without rotation. (Interpreter F)
Poor lighting and Ventilation	• Worked in a room with poor lighting and minimal air circulation. (Interpreter B)

Source: Field Data April 2025

The findings revealed some themes that are particularly related to work conditions of interpreters. In the "Fixed and Non-adjustable Chairs", interpreters were observed working with plastic chairs that lacked lumbar support and fixed seating that could not be adjusted in terms of posture. These can contribute to physical distress and musculoskeletal issues, especially given the sedentary and stressful nature of interpreting work. The "Lack of Breaks or Rotation" theme reflects a disregard for basic occupational health principles in the sense that interpreters were made to interpret through lengthy sessions a two-hour lecture, or even whole-day events without scheduled breaks or team rotation. Lack of rest increases the rate of physical and mental fatigue, which has direct implications on interpreting quality. Finally, theme "Poor Lighting and Ventilation" brings out environmental problems, in which interpreters work in poorly ventilated rooms with inadequate lighting. These elements add to physical health problems among sign language interpreters. These findings determined the reasons behind physical health problems and the need to improve working standards to support the performance and well-being of sign language interpreters.

4.3.3. Research Question 3: What coping strategies do sign language interpreters use to maintain their physical health at the University of Education, Winneba?

4.3.3.1 Probe 1: *What coping strategies do interpreters use to manage their physical health problems?*

Table 4.9: Themes and observation statements relate to;

Theme	Observed Statements
Stretching & Relaxation Exercise	• Frequently stretched his fingers between breaks in signing. (Interpreter B) • Leaned back and placed both hands behind his head in a stretch. (Interpreter F)
Use of Personal Aids	• Carried a small cushion" for back support. (Interpreter E) • Wore a wrist bandage. (Interpreter F)
Personal Pain Management	• Discreetly applied balm to her shoulder. (Interpreter C) • Stretched, massaging and rotated shoulders and fingers during and after class. (Interpreter A)

Source: Field Data April 2025

Under the themes, the findings show how everyone interprets to cope with physical discomfort in the absence of formal ergonomic support. Under "Stretching & Relaxation Exercise," self-initiated stretching by interpreters in the form of finger stretching during breaks and overall stretches like leaning backward with hands at the back of the head was observed. These behaviours denote a conscious effort to release tension and maintain flexibility, particularly in the hands and upper body, which are heavily involved during interpreting. The theme "Use of Personal Aids" also illustrates how interpreters bring along personal Aids such as a cushion for back support and a wrist bandage to manage bodily discomfort. This indicates that interpreters find themselves needing to be individually responsible for their bodily welfare due to the insufficient institutional provision. Lastly, the theme "Personal Pain Management" shows interpreters actively making efforts to handle recurrent pain or discomfort through imperceptible self-management strategies such as the application of ointment and massage of sore spots. These acts, done while interpreting or post-interpreting sessions. Collectively, these findings recorded reliance on personal coping strategies to moderate bodily stress and distress, and they identify an immediate necessity for systematic ergonomic interventions and wellness support in interpreter work environments.

4.3.4. Research Question 4: What institutional supports exist for managing physical health conditions of sign language interpreters at the University of Education, Winneba?

4.3.4.1 Probe: *What institutional support exists for managing physical health conditions of interpreters?*

Table 4.10: Themes and observation statements relate to;

Theme	Observed Statements
Lack of Institutional Support for Interpreter Well-beings	• Worked long sessions without breaks or substitutes. (Interpreter A and F) • sought health advice through a health pamphlet, not institutional resources. (Interpreter E)
Proactive Self-Care	• All observed strategies (e.g., cushion, balm, stretching) were interpreter-driven, with no mention of institutional provision.
Absence of Institutional Ergonomic Support	• No interpreters used institution-provided ergonomic furniture or tools.

Source: Field Data April 2025

The findings revealed a systemic insufficient institutional responsibility to the physical well-being of sign language interpreters. Under theme "Lack of Institutional Support for Interpreter Well-beings," interpreters were observed working long hours with some of them no breaks or replacements, making emphasis on insufficient scheduling policies that prioritise break and rest. The "Proactive Self-Care" theme points out that all noted wellness practices such as, bandaging, balm treatments, and stretching exercise were independently self-directed by the interpreters. This is a reactive approach to health management, where the interpreters were forced to rely on personal resources rather than institutional support. Lastly, the theme "Insufficient Institutional Ergonomic Support" notes that no ergonomic tools or adapted chairs for interpreters existed in the

institutions. These have highlighted the lack of investment in ensuring safe and supportive workplaces for interpreters.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Overview

This chapter discusses the findings from the interviews and non-participant observation of six sign language interpreters in the University of Education, Winneba. The discussion is structured according to the four research questions guiding the study. The findings are critically examined based on the literature covered. The findings are discussed under the following research questions: What are the physical health experiences of sign language interpreters at the University of Education, Winneba? In what ways do the work conditions of sign language interpreters at the University of Education, Winneba shape their experience of physical health? What coping strategies do sign language interpreters use to maintain their physical health at the University of Education? And What institutional support exists for managing physical health conditions of sign language interpreters at the University of Education, Winneba?

5.1 Research Question 1: What are the physical health experiences of sign language interpreters at the University of Education, Winneba?

The study revealed that the sign language interpreters of the University of Education, Winneba, generally experience a range of physical health issues, including frequent body pain, fatigue, and musculoskeletal aches. The most common experienced health issues were expressed in the wrists, shoulders, back, and fingers, which are heavily involved in the manual and repetitive nature of sign language interpreting. Some interpreters also reported insomnia, migraines, and chest pains due to excessive stress and physical exertion. These findings align with the work of Robinson and Singleton (2020) that the lack of institutional tools, namely, ergonomic support and frequent

breaks lead to injury and burnout for interpreters. Swartz (2017) and Adams and Ofori-Danso (2019) further reported that too much work without proper health care or rest can further exacerbate physical stress and deterioration of health in educational contexts. The fatigue and pain exhibited by participants validate the physically demanding nature of interpreting, supporting previous claims that lack of good support systems results in poor interpreter well-being, which in turn affects their performance and students' results.

5.2 Research Question 2: In what ways do the work conditions of sign language interpreters at the University of Education, Winneba shape their experience of physical health?

Working environments within the university also have a severe impact on the physical wellbeing of the interpreters. Respondents consistently mentioned insufficient seating, poor ventilation, long working hours without rotation, and noisy classrooms as determinants of their health problems. Observational findings also supported the same, with interpreters working in non-ergonomic plastic chairs, interpreting whole lectures without a break, and working in poorly ventilated and lit classrooms. These findings strongly validate what Mugisha et al. (2017) also observed across other African contexts, where institutions often fail to have policy mechanisms and resources that facilitate the well-being of sign language interpreters. Winneba's situations correlate with more universal systemic problems identified by Asare et al. (2023), Boamah (2021), and Bunbun et al. (2023), who indicated institutional lack of investment in ergonomic facilities and workload management. Despite the presence of the Ghana Labour Act (2003), which enforces safe and healthy working conditions, the practice of enforcement remains poor, especially in educational institutions like UEW. Furthermore, Baidoo and Adomako (2020) underscored the need for work-life and

stress management policies in the work environment. Their absence in the university has resulted in overworking, insufficient resting periods, and overall disregard for the health of the interpreters' factors that have caused physical and mental exhaustion among employees.

5.3 Research Question 3: What are the coping strategies adopted by sign language interpreters to maintain their physical health at the University of Education, Winneba?

Interpreters also employed some self-developed strategies to manage their physical health challenges in the absence of institutional support. They involve physical activity such as walking, stretching, swimming, and massages. Some of the participants revealed that they rely on rotation and pause whenever possible. Others take painkillers or apply balm to relieve body aches, while others engage in breathing exercises and consume a lot of water to stay active over long hours.

The coping strategies depict a form of self-care proactiveness, since interpreters personally take charge of their well-being. Interpreters equally employed personal resources such as cushions and bandages for their wrists to assist with comfort, according to reports. Nevertheless, the excessive reliance on personal handling demonstrates the institutional inability to successfully apply formal health support systems, as reported in the Ghana National Health Policy (2007). While the policy encourages uniform access to wellness and health for all employees, this kind of perception is not being realised in the everyday life of the interpreters in UEW. Such reliance on informal peer solidarity and individual routines rings true to the arguments of Flores (2005), who argued that interpreters lacking institutional backing burn out earlier, while those with regular breaks and wellness centres maintain work longer in

the field. Without regime transformation, such coping mechanisms will be but short-term relief, not long-term resolutions.

5.4 Research Question 4: Institutional support for maintaining the physical health needs of sign language interpreters at the University of Education, Winneba?

Evidence from observation and interviews revealed that institutional support for well-being among sign language interpreters is weak and largely informal. Interpreters gripped that there was no formal health policy specifically for their roles. Although there is a university clinic, it does not have services like physiotherapy or rehabilitation that are required for interpreters who have repetitive strain injuries. Classroom settings fail to accommodate the ergonomic needs of interpreters, and work break policy or workload allocation policy either is not practiced or is not adopted for their working needs. This lack of protection is at odds with one of Ghana's Labour Act (Act 651, 2003), which mandates employers to provide safe and healthy working conditions. This interpreters' practice continues to operate in physically demanding environments with no or little institutional acknowledgement of their health risks. Moreover, as noted by Naah (2016), the national policy also targets reducing health inequalities and enjoying safe, productive lives for all who work. However, the policy gap compared to implementation takes root in the interpreters' everyday life. In addition, interpreters foresaw training and sensitisation of lecturers so that they can well understand the interpreter's role as well as physical efforts involved. The participants said that workshops on professional development could enhance cooperation among academic staff and sign language interpreters by reducing stress and mismanagement of workload.

5.5 Summary of Findings

The findings from the study revealed that sign language interpreters at the University of Education, Winneba, are prone to physical health conditions, including body pains, mental fatigue, musculoskeletal disorders, and stress-related symptoms such as sleeplessness and migraine. These conditions are due to the physical demands of their work and are further compounded by poor working conditions, which consist of working for extended periods of time without resting, incorrect sitting, insufficient air circulation, and inadequate ergonomic support. Interpreters have developed individual coping strategies like stretching, walking, massage, and the use of painkillers and personal devices, where there is no institutional support. Institutional support was ineffective, informal, and weak with no characteristic health policies or facilities that are tailored to the demands of sign language interpreters. Despite national labour and health policies for safe working conditions, they are not implemented effectively. Sign language interpreters requested formal health policies, ergonomic resources, and health training programs to improve their physical health and to create a healthier, more cooperative work environment.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of findings, conclusions and recommendations for the study.

6.1 Summary of Findings

The findings of this current study, consistent with the research questions underpinning the study are presented as follows:

6.1.1 Physical health Experiences of Sign Language Interpreters at the University of Education, Winneba

Sign language interpreters who work at the University of Education, Winneba, were exposed to many physical health conditions that may be attributed to the nature of interpreting. Some respondents reported physical tiredness, and pains in the shoulders, wrists, back, and fingers which could have been caused by physical demand of their work. Some respondents also mentioned insomnia, chest pain, and migraines which could have been caused by stress and prolonged durations of interpreting work.

6.1.2 What Working Conditions of Sign Language Interpreters at the University of Education, Winneba Shape their Physical Health Experiences.

The physical health experiences faced by interpreters at the University of Education, Winneba, were mostly poor working conditions. Some respondents mentioned the use of plastic chairs, poorly ventilated classrooms, and inadequate lighting. Other respondents also stated inability to take regular breaks because of workload. The researcher's observation also confirmed the respondents' responses when work environment, body posture, behaviour was observed during the data collection period.

They were observed in unconducive classrooms such as poor ventilation, using plastic chairs, excessive noise and poor lighting.

Respondents reported that poor working conditions directly resulted in physical stress and fatigue. Some respondents also stated that although policies on safe and healthy working conditions are available. However, these policies are not effectively applied within their university setting. It was clear from the researcher's observations that physical setup of the classrooms and the prolonged hours of interpreting without breaks, may be the cause of physical health conditions of sign language interpreters.

6.1.3 Coping Strategies Sign Language Interpreters use to manage their Physical Health Experiences at the University of Education, Winneba

Almost all the sign language interpreters adopted various self-help strategies to manage their physical health challenges. Most of the respondents stated stretching, regular breaks, swimming, walking, massaging, and the use of measures for relieving pain such as balm and painkillers. Other respondents also mentioned breathing exercise, taking water breaks, and utilising personal equipment such as cushions or wrist rests to reduce pain while working. These personal coping mechanisms reflect a strong sense of personal commitment to physical health. These coping mechanisms might bring temporary alleviation but not in the form of long-term solutions. This highlights a clear necessity for formal institutional support healthcare geared toward the specific work-related needs of the interpreters.

6.1.4 Institutional Supports in Managing Physical Health Experiences of Sign Language Interpreters at the University of Education, Winneba

Some respondents reported that although there is a clinic within the university, it is not equipped with specialist services such as physiotherapy required for the management of the types of repetitive strain injuries incurred by interpreters. Other respondents also were of the view that there are no set health policies and procedures that consider the specific physical health needs of sign language interpreters at the University.

6.2 Conclusion

While sign language interpreters work under physically challenging conditions with insufficient institutional support, ergonomic services and health policies tailored to the physical health needs of interpreters. Controlled rest breaks could contribute significantly to interpreters' physical health and wellbeing. Furthermore, despite the interpreters having developed personal coping strategies to maintain their physical health and wellbeing, their coping strategies are insufficient to ensure long-term health and well-being and sustainability in their professional careers. Finally, there was critical difference between National Labour Act and Health Policy and how it is practically exercised in work environment, UEW interpreters managed their own physical health conditions, which may lead to burnout and less efficient work outcome. Lacking meaningful institutional intervention may be at risk of long-term deterioration in interpreters' physical health and supportive services to deaf and deafblind students.

6.3 Recommendations

Based on the findings and discussions of this study, the following recommendations were made to mitigate the physical health challenges experienced by sign language interpreters at the University of Education, Winneba (UEW) as well as explore ways to

manage physical health conditions and to improve sign language interpreters' working conditions.

The findings showed that many sign language interpreters were subjected to inadequate working conditions, and this has caused a lot of physical health experiences to sign language interpreters at University of Education, Winneba. Based on this, sign language interpreters should adhere to and actively utilise scheduled break periods during interpreting sessions to promote their physical health and overall wellbeing.

Secondly, ergonomics provision is critical in reducing physical health problems and improving the well-being of interpreters. The sign language interpreters should be provided with well-designed equipment such as adjustable desk levels and chairs with wrist rests. Lecture theatre and lecture halls also need to be renovated and modified to satisfy the physical health experiences of sign language interpreters so that they can work efficiently and safely.

The findings indicated insufficient institutional support system to sign language interpreters at the University of Education, Winneba, the researcher recommended that Sign language interpreters should encourage team interpreting, to help reduce workload and physical fatigue. These services would act as preventive measures and early interventions to reduce long-term physical health complications among the interpreters. The findings revealed that Sign language interpreters should participate in health and wellness training programs that enhance their knowledge and skills in physical health management and injury prevention. It was observed that some lecturers and university authorities demonstrated limited understanding of the role of sign language interpreters. This lack of awareness has contributed to the interpreters' physical health experiences, making it more difficult for them to perform their duties effectively. The researcher

therefore recommends sensitisation workshops for academic staff to improve awareness and cooperation. This will clarify the functions of sign language interpreters in inclusive education. Such initiative might enhance the physical health and well-being of interpreters, reduce work-related stress, and create a more supportive working environment.

6.4 Limitations of the Study

The following limitations were identified.

The Demand-Control Theory propounded by Karasek (1979) guided the current study. This theory was developed based on the physical demand of interpreters' work. It also describes job demands and coping mechanisms interaction notwithstanding, application of the theory also has a weakness. The study did not capture cultural factors that could have influenced physical health experiences of sign language interpreters in Ghana. Considering the findings, sign language interpreters' physical health problems were influenced by their working conditions, job demand and institutional support.

Furthermore, only full-time staff sign language interpreters were selected for the study. The study limits generalisability of the findings to other universities. While this allowed for location-specific inquiry, the unique working context, university rules, and support mechanisms, UEW may differ immensely from other university settings. The findings, thus, could not reflect the complete picture of the overall population of sign language interpreters in Ghana. The sample size was only six participants. Although this represents a high percentage of the interpreters at UEW, the number is confined in scope representing the diversity of the experiences. A bigger sample would have added richness to the depth of the data and made it more transferable to other contexts.

The participants could have unknowingly over-emphasised or under-emphasised their physical health experiences due to memory fatigue and social desirability. observation data were timed and limited, which may have affected the participants' normal conduct and observation validity. Despite these limitations, this current research provides a valuable starting point on the physical health challenges of sign language interpreters at university level. Bigger than a single institution, theoretical framework should be employed by future studies so that these findings could build and extend the physical health and well-being of interpreters across various educational settings.

6.5 Suggestions for Future Research

In the current study, the physical health challenges faced interpreters at University of Education Winneba, were primarily attributed to poor ergonomic conditions, high job demand, inadequate rest breaks and insufficient institutional support. However, the study was limited to only sign language interpreters at University of Education, Winneba. Future research should broaden the scope by assessing similar occupational health conditions in other Ghanaian universities, facilitating broader generalisation and comparison. Assessing occupational health conditions and their effects on the physical health of sign language interpreters in Ghanaian Universities is relevant because it addresses a national gap in knowledge about the physical health conditions interpreters face in other academic settings. The findings could inform the development of national occupational health policy for sign language interpreters, ensuring ergonomic working practices, institutional support and improving interpreters' long-term physical health and well-being in Ghanaian institutions.

It was revealed in the study that interpreters relied on their own coping strategies to manage with physical health conditions due to insufficient institutional support and

clear workload policies. The study revealed most interpreters experiencing physical health challenges related to burnout and stress, but these were only examined in UEW. Future research should examine the impact of institutional support and workload on the physical health of sign language interpreters in Ghana. This will ensure more structured research design across multiple institutions. This will provide policymakers and universities with a means to ensure the reasonable workload and support structures in preventing burnout and physical health conditions among interpreters.

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APPENDICES

APPENDIX A

Semi-structured Interview Guide for Physical Health and Working Conditions of Sign Language Interpreters at the University of Education, Winneba.

I am Nyabire Emmanuel, a Master of Philosophy student at University of Education, Winneba. Thank you for agreeing to participate in this study. I am conducting research on physical health and working conditions of sign language interpreters at the University of Education, Winneba. The study is for academic purposes, and your responses are privately assured as there is no name/identity contained. I will be grateful if you spend few minutes of your schedule to assist me in the interview.

Thank you.

SECTION 1. Demographic data form for interpreters

Please tell me your;

- Age
- Gender
- Level of academic qualification in sign language interpreting
- Years of exposure to sign language interpretation

INTERVIEW GUIDE

Research Question 1: What are the physical health experiences of sign language interpreters at the University of Education, Ghana?

Please, what is your understanding of physical health?

1. **Can you describe any physical health experiences you have faced as a sign language interpreter at the University of Education?**
    - Probe: How have these experiences affected your daily life or your work performance?
2. **Do you experience any specific physical discomfort, pain, or injuries related to your work?**
    - Probe: Are there any parts of your body (e.g., hands, back, neck) that are more affected by your role?
3. **How would you describe the impact of interpreting on your overall physical well-being?**
    - Probe: Do you notice any changes in your health (positive or negative) over time because of interpreting?
4. **Have you ever had to take time off work due to physical health issues? If so, what led to that decision?**

- Probe: How often does this occur, and what kind of health issues tend to keep you from working?

5. **How do you manage physical health conditions or strain that comes with interpreting?**
    - What do you do immediately after a session to alleviate strain or what practices you've adopted to prevent physical strain?

Research Question 2: How do the work conditions influence sign language interpreters' physical health status at the University of Education, Ghana?

1. **How would you describe the physical setup of the interpreting environment at the university?**
    - Probe: Do you feel that the current space is designed in a way that supports your physical health?
    - Briefly discuss with me the nature of the classroom (temperature, noise)?
    - How do you feel when sitting or standing to interpret?
    - What specific changes would you suggest for improving the physical setup?
2. **Do you feel that the workload is manageable in terms of physical demand required?**
    - Probe: Are there times when the workload feels overwhelming or physically demanding?
    - How manageable do you find your workload in general?
3. **In your opinion, does the seat setup of the workstations affect your physical health?**
    - What type of seating arrangement or workstation adjustments would you recommend to better support your physical health?
4. **How does the frequency and duration of interpreting sessions influence your physical health?**
    - Please tell me any specific sessions that were physically demanding.
5. **Are there any aspects of your work environment or workload that you feel should be improved to better support your physical health?**
    - Probe: How would these changes help with reducing any physical strain or discomfort?
    - Are there any policies or practices that could help improve your physical health?

Research Question 3: What coping strategies do sign language interpreters use to maintain their physical health at the University of Education, Ghana?

1. **What personal strategies do you use to manage physical discomfort after interpreting sessions?**
    - Probe: Do you stretch, take breaks, or engage in any activities to reduce stress?
    - Which of these strategies do you find most effective in reducing physical discomfort?
2. **Have you adopted any specific habits or routines outside of work to maintain your physical health?**
    - Probe: please tell me, do you participate in exercise or other physical activities to support your body?
    - How often do you engage in physical activities outside of work and which ones do you find most beneficial?
3. **How do you manage physical stress that builds up during the workday or week?**
    - Probe: How do you handle fatigue immediately after a session and over the course of a busy week?
4. **Do you make any adjustments to your posture or work habits during interpreting sessions?**
    - How frequently do you consciously adjust your posture or habits during a session?
5. **Have you sought any professional advice or treatment (e.g., physiotherapy, resting, massage therapy) to manage your physical health?**
    - Probe: How effective have these treatments been in helping you manage your physical health, and how often do you seek them?

Research Question 4: What institutional supports exist for managing physical health conditions of sign language interpreters at the University of Education, Winneba?

1. **What kind of institutional support or resources does the university provide for your physical health?**
    - Probe: What kind of support would you like the university to provide to improve your physical health?
2. **Is there any formal or informal support network at the university to help interpreters manage physical health issues?**
    - Probe: How do you and your colleagues support each other in managing physical health issues?
    - How accessible is this support, and how effective has it been for you?

3. **Are there health policies at the university that are applicable to interpreters' physical health?**
    - Probe: How do these policies affect your physical health?
4. **Do you feel that the university is proactive in addressing the physical health needs of interpreters?**
    - Probe: What improvements or additional support do you think the university could provide to help improve interpreters' physical health?
5. **Have you ever been involved in any discussions or initiatives at the university aimed at improving the physical well-being of interpreters?**
    - Probe: If yes, what outcomes or changes were made as a result?

Any comments or suggestions?

APPENDIX B

Unstructured Observational Checklist

Unstructured Observational Checklist for Physical Health and Working Conditions of Sign Language Interpreters at the University of Education, Winneba.

1. Date:……
2. Location:…….
3. Deaf students present:……
4. Activities/event:……..

Observation categories

These are the concern area considered to be observed

1. **Physical environment**

Note anything related to the interpreter's environment that could influence their physical health experiences:

- **Seating and ergonomics:**
    - Are they adjusting their chair, legs, or arms to alleviate discomfort?
    - Is there enough space for the interpreter to move?
    - Are they shifting positions regularly, or do they seem stuck in one posture?
- **Lighting:**
    - Is the lighting right for interpreters' sight?
    - Are there any issues with poor visibility?
- **Temperature:**
    - Is the room too hot or cold?
    - Are there fans, air conditioning, or windows?
- **Noise and distractions:**
    - Are there any distracting noises?
    - Is the room quiet enough to focus?

2. **Sign Language Interpreter's physical behaviour**

Observe and describe any physical actions or cues indicating strain, comfort, or discomfort:

- **Posture:**
    - Is the interpreter sit or stand with proper posture?
    - Are they leaning or otherwise contorting their body in awkward positions?
- **Sign of physical health experiences:**
    - Do interpreters appear to be massaging or stretching their hands, wrists, neck, or shoulders frequently?
    - Any visible signs of exhaustion (e.g., yawning, rubbing eyes)?

3. **Work demands**

- **Duration of Session:**
    - How long has the interpreter been working? Is the session one continuous or has breaks?
    - Are there any periods of extended activity without breaks?
- **Content complexity:**
    - Is the conversation fast-paced, technical, or difficult to interpret?
    - Is the interpreter using a lot of fingerspelling?
    - Does the interpreter seem to be struggling with fast speech or difficult signs?
- **Level of engagement:**
    - Does the interpreter appear to be mentally or physically engaged (e.g., focused, alert, energetic)?
    - Are there any moments when they seem overwhelmed or distracted?

4. **Breaks and recovery**
    - Are there any scheduled breaks? How often and how long?
    - Does the interpreter ask for breaks, or do they take them on their own initiative?

- **Break activities:**
    - If breaks are taken, what does the interpreter do during them? (e.g., drink water, stretch, relax, check phone)

APPENDIX C

UNIVERSITY OF EDUCATION, WINNEBA
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DEPARTMENT OF SPECIAL EDUCATION
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7th April, 2025

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER OF INTRODUCTION: MR. EMMANUEL NYABIRE

I write to introduce to you, **Mr. Emmanuel Nyabire** an M.Phil. student of the Department of Special Education with index number 8240150028.

he is currently working on his thesis on the topic: **"Physical Health and Work Conditions of Sign Language Interpreters at University of Education, Winneba (UEW)."** He will conduct interview and observation in your Institution.

I would be grateful if you could give him the needed assistance.

Thank you for the consideration and assistance.

Yours faithfully,

UNIVERSITY OF EDUCATION WINN.
DEPARTMENT OF SPECIAL EDUCATION
UEW

.....

MR. EMMANUEL K. ACHEAMPONG
for: (Ag. Head of Department)