

**SCHOOL OF PUBLIC HEALTH**

**COLLEGE OF HEALTH SCIENCES**

**UNIVERSITY OF GHANA**

**LEVEL OF KNOWLEDGE AND PREVALENCE OF COMPUTER VISION  
SYNDROME IN ACCRA; A SURVEY OF BANK WORKERS, UNIVERSITY  
LECTURERS AND STUDENTS, AND CLINICIANS.**

**BY**


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## DECLARATION

“I, Cobby Owusu Bamfo declare that except for other people’s investigations which have been duly acknowledged, this work is the result of my own original research, and that this dissertation, either in whole or in part has not been presented elsewhere for another degree. Also, I have wholly undertaken the study reported herein under the supervision of Dr. Alexander Manu.”



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DATE: 18<sup>TH</sup> OCTOBER, 2019

## **DEDICATION**

“This dissertation is dedicated to God, my family and citizens of this blessed nation.”

## **ACKNOWLEDGEMENTS**

“I would like to first of all acknowledge the almighty God for the gift of life and the ability He gave me to complete this dissertation. Secondly, I would like to thank my supervisor for the patience and diligence he exercised to enable me complete this dissertation. Not only these but also, I would like to express my gratitude to the head of department and entire staff (teaching and non-teaching) of the department of Epidemiology and Disease Control for their tireless efforts and support throughout the duration of the study. Last but not least, I would like to appreciate my family without whom the completion of this dissertation would not have been possible.”

## ABSTRACT

**Introduction:** According to the American Optometric Association, Computer Vision Syndrome (CVS) which is also termed digital eyestrain is defined as a group of eye or vision-related problems arising from prolonged exposure to and use of digital devices such as desktop or laptop computers, tablets, smart phones, etc. Some symptoms include burning sensation on the eyes, pain in the eyes, low back pain, headaches, etc. Globally, nearly sixty million people are suffering from CVS and approximately a million new cases occur every year. The general inference from studies is that there is a gap in knowledge and a high prevalence of CVS among the computer-using population. There is little representative information available concerning prevalence of CVS and any association with knowledge level in Sub-Saharan Africa, especially among the Ghanaian population. There is therefore a great need for this study. This study sought to measure the prevalence and knowledge level of CVS among the target population, as well as determine any association between knowledge level and prevalence. **Methodology:** This study was a descriptive cross-sectional study. The study was carried out in Accra, the commercial capital and seat of government of Ghana. The estimated sample size required in this study was a minimum of 324. This study involved respondents across four domains or categories namely bank workers, university lectures and students, and clinicians who were sampled randomly and purposively. Pre-tested semi-structured questionnaires were used to elicit responses from participants. Logistic Regression and Chi-square analyses were run. Ethical clearance was sought from GHS-ERC. **Results:** 181 out of 329 respondents showed inadequate knowledge of CVS (55.0%). Prevalence of CVS in the sample population was 77.5%, representing 255 out of 329 respondents. There was no significant association between knowledge level and presence or absence of CVS ( $p=0.413$ ) at 5% significance level. Presence or absence of CVS may be influenced by sex, breaks, spectacle wear time and job type. **Conclusion:** Prevalence of CVS is high in the population, while majority of the population have inadequate knowledge of CVS.

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## **LIST OF ABBREVIATIONS**

CVS: COMPUTER VISION SYNDROME

VDT: VISUAL DISPLAY TERMINAL

AOA: AMERICAN OPTOMETRIC ASSOCIATION

IT: INFORMATION TECHNOLOGY

UAE: UNITED ARAB EMIRATES

LED: LIGHT EMITTING DIODE