Correlation between Mental Health Education and Effective Implementation of the Fifth Industrial Revolution among Educated Adolescents in Oyo

By

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Abstract

Public understanding of health and mental issues is still inadequate. This study examined the correlation between mental health education and the effective implementation of the Fifth Industrial Revolution (5IR). Five 500 hundred educated adolescents aged 18 to 45 years were used. A questionnaire with a reliability coefficient of 0.69 was used for data collection. Pearson product-moment correlation was used to ascertain the degree of relationship existing between mental health education and effective implementation of the fifth industrial revolution (5IR). Multiple regression analysis was used to confirm the amount of contribution that mental health education made to the variance in the implementation of 5IR. The two hypotheses formulated were rejected. Mental health education was found to have contributed 65.4% to the variance of effectiveness in the implementation of 5IR. Recommendations made emphasized that mental health education should be taught in all the tertiary institutions to make our adolescents aware of the need to be mentally healthy always. They should be mentally prepared to endure the rigour of combining human with machine efforts to achieve the goal of mental health. 5IR.

Keywords: Fifth industrial revolution, industry, mental health, and mental health education,

Introduction

Knowledge of health and mental issues is inadequate because people are poorly informed about relatively common mental and physical health conditions. Mental health education on both human and machine operation can improve human understanding of emotions and behaviours for more intuitive and effective human-machine interactions. It can potentially inform the development of more human-like machine interactions. Education can promote self-awareness, coping, and social skills, leading to better mental health and performance.

Pan American Health Organization (2024), Medical News Today (2024), and World Health Organization (2022) defined mental health as a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well, and work well. They also contribute to their community. Substance Abuse and Mental Health Administration (2024) described mental health as our emotional, psychological, and social well-being. It affects how one thinks, feels, and acts. It also helps determine how one handles stress, relates with others, and makes choices. Good mental health positively affects our lives and enables us to meet life's responsibilities and find happiness and meaning.

Mount Vernon Nazarene University Communications (2023) described mental health education as a process of raising awareness around mental health issues, informing people about common challenges and conditions, coping strategies, and resources available to help. Patient Information Forum (2024) supported that a better understanding of various mental health conditions can be achieved by teaching individuals how to manage their mental health, recognize early signs of mental illness. This can remove the stigma and help the beneficiaries to seek appropriate support in managing struggles like depression and anxiety. IGL Global (2025) described mental health education as both formal educational programmes and informal strategies for mental health promotion. It aims at promoting psychosocial competencies and building psychological resilience, contributing to ensuring positive, healthy, and safe work environments and reinforcing positive behaviours and decision-making.

Regenesys (2020) revealed that the fifth industrial revolution (5TR) is all about humans and machines working together. It highlights teamwork, ethical practices, and sustainable production. Marata Manufacturing Co.Ltd (2023) and Regenesys (2020) revealed that 5TR incorporates concepts such as sustainability, human-centredness, and concern for a more personalized and friendly work environment, in addition to the transformation of the industrial structure through the utilization of AI, IoT, and big data to boost what humans can do. Shibambu (2025) claimed that human factors involve the skill set, attitude, and behavior that should be processed when adopting the new technology. Ayabalan, Randavwar and Ralimat (2024) stated that holistic education helps to liberate mental health in 5IR by assisting individual to identify him/herself and needed connection with other to avoid depression, anxiety and other mental health problems. On how mental health education can helps the achievement of 5IR goals, Science Direct Com. (2025)

revealed that it can significantly influence the achievement of 5IR goals by fostering a more resilient and adaptable workforce, promoting innovation and enhancing human centered design. By addressing mental health challenges and promoting well being, organizations can create a more inclusive and supportive environment where individuals are better equipped to navigate the complexities of the digital age.

Statement of the Problem

Working together by human and machine can be highly injurious and unproductive if adequate measures are not put in place. Man needs to understand the language of machine as well as mental and emotional demand for positive interaction with machine to enhance sustainable production. The degree to which this understanding could be achieved depends on the individual's knowledge about mental health issues, strategies for promoting and managing mental health conditions which can only be achieved through health education. Ayabalan, Randavwar and Ralimat (2024) stated that holistic education helps to liberate mental health in 5IR by assisting individuals to identify him/herself and the need for connection with others to avoid depression, anxiety, and other mental health problems. For addressing mental health challenges and promoting well-being towards achieving the goals of 5IR, this study was therefore designed to examine the degree to which mental health education could be used as a tool for achieving the 5IH Industrial Revolution Goals. The intention is to make recommendations for effective implementation.

Purpose of the Study

This study examined the degree to which mental health education can impact: 1. human factors when adopting the new technology in the Fifth Industrial Revolution, and 2. the effectiveness of teamwork between humans and machines towards achieving the goals of the 5IR era.

Research Hypotheses;

The hypotheses formulated and tested were:

HO1: Mental health education would not have a significant relationship with human factors when adopting the new technology in the 5IR among educated adolescents in Oyo town.

HO2: Mental health education would not have a significant impact on the effectiveness of teamwork between humans and machines based on their degree of relationship towards achieving 5IR goals among educated adolescents in Oyo town.

Methodology

A survey research design was used for the study. The population for this study comprised people aged 18-60 years in Oyo town. Five hundred (500) respondents were used as samples. Gender equity of 50-50% was considered in selecting the samples. Two null hypotheses were formulated to carry out the study. Self-structured questionnaire validated by the Experts in test and measurement, with a reliability coefficient of 0.78 was used for data collection. The questionnaire forms were administered, filled and collected with the assistance of three trained research assistants. The filled questionnaire forms were sorted and analysed using frequency counts, while Pearson product moment correlation was used to determine: 1. the degree of impacts that mental health education made on human factors when adopting the new technology in the 5IR era, 2. the degree effectiveness of teamwork between human and machines towards achieving 5IR era goals. The two null hypotheses formulated were tested at the Alpha level of 0.05.

Results:

Ho 1: Mental health education would not have a significant correlation withhuman factors when adopting the new technology in the 5IR era among educated adolescents in Oyo town.

Table1: Pearson's (r) showing the degree of correlation between mental health education and human factors when adopting the new technology in the 5IR.

Variables	n	Calr-v	Df	Sign(2tailed)	Crit-v	Alpha	Decision
Mental Health Education and 5IR	500	0.464	0.499	0.075	0.117	0.05	Ho rejected

Table 1 reveals a calculated r-value of 0.464 and a significant probability value (p-value) of 0.075, computed at an alpha level of 0.05, greater than the critical value of 0.117. The null-hypothesis is rejected since the calculated value is greater than the critical value. This implies that health education had a significant relationship with human factors when adopting the new technology in the 5IR era among educated adolescents in Oyo town.

Ho 2: Mental health education would not have a significant correlation with the effective implementation of the Fifth Industrial Revolution (5IR) among educated adolescents in Oyo town.

Table 2: Pearson's (r) showing the degree of correlation between mental health education and effective implementation of the Fifth Industrial Revolution (5IR) among educated adolescents in Oyo town.

Variables	n	Calr-v	Df	Sign (2tailed)	Crit-v	Alpha	Decision
Mental Health Education and 5IR	500	0.645	0.499	0.072	0.117	0.05	Ho rejected

Table 2 states a calculated r-value of 0.645 and a significant probability value (p-value) of 0.072, computed at an alpha level of 0.05, greater than the critical value of 0.117. The null-hypothesis is rejected. By implication, it means that mental health education had a significant correlation effective implementation of the Fifth Industrial Revolution (5IR) among educated adolescents in Oyo town.

Discussion

Table 1 indicates a significant relationship between mental health education and human factors when adopting the new technology in the Fifth Industrial Revolution (5IR) by equipping human beings with a better understanding of mental health issues. This finding was supported by Ilan (2024), Patient Information Forum (2024), and Mount Vernon Nazarene University Communications (2023) that better understanding of various mental health conditions by teaching individuals how to manage their mental health, recognize early signs of mental illness can remove

the stigma and help the beneficiaries to seek appropriate support in managing struggles like depression and anxiety. Ayabalan, Randavwar and Ralimat (2024) stated that holistic education helps to liberate mental health in 5IR by assisting individuals to identify him/herself and the need for connection with others to avoid depression, anxiety, and other mental health problems.

Table 2 indicates a significant relationship between mental health education and effective implementation of the Fifth Industrial Revolution. This is in line with the claim of Shibambu (2025) that human factors involve the skill set, attitude, and behavior that should be processed when adopting the new technology. On how mental health education helps the achievement of 5IR goals, Science Direct Com. (2025) revealed that it can significantly influence the achievement of 5IR goals by fostering a more resilient and adaptable workforce, promoting innovation, and enhancing human-centered design.

Conclusion

The results obtained revealed that mental health education had a significant correlation, which allows humans to control and manage their mental health in line with the mental demands of the new technology in the 5IR era. This helps in the achievement of 5IR goals by fostering a more resilient and adaptable workforce, promoting innovation, and enhancing human-centered design.

Recommendations

Recommendations made emphasized that mental health education should be taught in all the tertiary institutions to make our adolescents aware of the need to be mentally healthy always. They should be mentally prepared to endure the rigour of combining human with machine efforts to achieve the goal of mental health. 5IR.

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