

Results

The majority (n=297, 85%) were females with a mean age of 32 ± 5.6 years. Most of them (n=246, 70%) had a basic nursing diploma, and 70% (n=244) were Grade III nurses. A majority (74%, n=259) were from urban areas, 19.4% (n=67) from semi-urban areas, and 6.6% (n=23) from rural areas while 77.4% (n=271) working in tertiary care, 17.7% (n=62) secondary care and 4.9% (n=17) primary care hospitals.

An association was determined between geographical area and knowledge ($p < 0.01$) while hospital categories were associated with digital health practice ($p < 0.01$). A significant association was noted between ICT training before ($p = 0.005$) and during ($p < 0.001$) nursing practice with knowledge. English language proficiency ($p = 0.02$), level of education ($p < 0.01$), experiences ($p = 0.001$), and utilization of digital health ($p = 0.01$) had significant associations with knowledge. Age has a strong negative correlation ($r = -0.765$) with knowledge while English language proficiency has a strong positive correlation ($r = 0.740$) with knowledge. Age has a moderate negative correlation ($r = -0.467$) with attitudes.

Conclusion

Overall, results indicate a significant influence of age, education level, geographic location, and English proficiency on nurses' digital health capacity. Strategies should be developed to ensure equitable distribution of digital health interventions nationwide, provide digital health training and education before and during nursing practice, offer age-specific training, and improve language proficiency while enhancing attitudes towards digital health.

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A CNN-LSTM Technique-Based Optimization Model for Estimating Obesity Level

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Background

The risk of obesity depends on individual factors, other demographic characteristics, community infrastructure, socioeconomic conditions, and environmental and other community-specific factors. In different countries, a person's level of obesity has been estimated by using a number of widely used deep learning algorithms. We have adopted LSTMs with CNN in a novel way to work around this issue as the modeling process is sensitive to different random weight initializations. It is essential to provide knowledge to

practicing healthcare providers with resources on how to screen for social and environmental aspects of clinical care. It made possible by the consequences of this study.

Objectives

To develop a hybrid model CNN-LSTM for the prediction of obesity levels based on some socio-demographic information, physical activity status, and different dietary habits.

Methods

The dataset selected from the UC Irvine Machine Learning Repository which include data for the estimation of obesity levels in individuals from the countries of Mexico, Peru and Colombia, based on their eating habits and physical condition. The structure of this design is developed by fusing CNN-LSTM networks, where CNN is utilized to retrieve intricate information and LSTM serves as the classifier. To train a CNN-LSTM network utilizing the lifestyle factors should be extracted from the individual's lifestyle data and used for the training.

Results

The findings indicated that accuracy level of proposed method is 86.75% at the initial level of implementation and there is a need for hyper parameter tuning and cross validation to impose the accuracy on top level. Therefore, the results demonstrated that the hybrid structure achieved improved results compared with the single modeling of LSTM and CNN in this context.

Conclusions

The proposed approach demonstrated that using an efficient classifier at the end of the hybrid modeling structure delivers the desired performance with a high accuracy in the assessment of obesity level in healthcare. In addition to this, finding potential significant pitfalls in the interpretation of the health status questionnaire subjectively has the social desirability bias between countries when considering the Sri Lankan context and which could be extended to future studies in Sri Lanka.

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eMental Health Literacy (eMHL), help-seeking behavior, and perceived barriers to mental health care among undergraduates in the Faculty of Allied Health Sciences, University of Sri Jayewardenepura

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