EFFECTIVE FACTORS IN ACCEPTANCE OF SMART PHONES BY PHYSICIANS: APPLICATION OF STRUCTURAL EQUATION MODELING IN THE LARGEST UNIVERSITY IN THE SOUTH OF IRAN

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The present study aimed to determine the attitudes towards and effective factors in acceptance of smart phones by physicians of Shiraz University of Medical Sciences, the largest University of Medical Sciences in the south of Iran. This cross-sectional study was performed using Structural Equation Modeling (SEM) in 2015. The study participants included 200 physicians working in the hospitals of Shiraz University of Medical Sciences selected through two-stage stratified sampling, but 185 participants completed the study. The study data were collected using a researcher-made questionnaire completed through a 5-point Likert scale. The validity of the questionnaire was confirmed by a panel of experts, its construct validity of confirmatory factor analysis, and its reliability by Cronbach's alpha of 0.802. All data analyses were performed using SPSS (version 22) and LISREL (version 8.8) software programs. The results showed that most of the physicians had a desirable attitude towards using smart phones. Besides, the results of SEM indicated a significant relationship between attitude and compatibility, observability, personal experience, Optional use, and perceived usefulness. Moreover, some important fitness indices revealed appropriate fitness of the study model (p=0.26, X2/df=1.35, RMR=0.070, GFI=0.77, AGFI=0.71, NNFI=0.93, CFI=0.94). Thus, compatibility, observability, personal experience, Optional use, and perceived usefulness were effective in the physician’s attitude towards using smart phones. By preparation of the required infrastructures, policymakers in the field of health technology can enhance the utilization of smart phones in hospitals.

SPECTROPHOTOMETRIC DATA IN THE INTERACTIONS BETWEEN HUMAN IMMUNODEFICIENCY VIRUS (HIV) AND BLOOD CELLS TREATED WITH ANTIRETROVIRAL DRUGS

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A synergy between engineers and biological researchers may obviously be needed so as to achieve a more reliable research result. The spectrophotometric data on the interactions between the Human immunodeficiency virus (HIV) and blood cells treated with antiretroviral drug were collected to be used to show the effects of antiretroviral drugs on the absorbent characteristics of HIV infected and uninfected blood. The methodology involved the serial dilution of the five different antiretroviral drugs (two HAART/FDC and three single drugs) and the subsequent incubation with the blood samples collected from ten HIV infected persons that had not yet commenced treatment with the antiretroviral drugs, ten HIV infected persons that had already commenced treatment with the antiretroviral drugs and ten HIV negative persons, for the absorbance measurements using a digital Ultraviolet Visible MetaSpecAE1405031Pro Spectrophotometer. The peak absorbance data for various interacting systems were measured. These were used to show that the antiretroviral drug has the effect of increasing the peak absorbance values of both the infected and uninfected blood components, i.e., the drugs are made able to increase the light absorption capacity of the blood cells. The use of the findings of this work in drug design by pharmaceutical industries may be expected to yield good results.