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User Acceptance of PACS in Radiology Personnel

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Introduction: Picture Archiving and Communication System (PACS) encompasses a broad range of technologies for storage, retrieval, distribution and display of images with increased efficiency in patient care and effectiveness of the Radiology department. However, knowledge regarding PACS approval by its users is still unclear. This is needed to ensure the optimum use of financial resources and to maximize PACS benefits.

Method: This study was conducted to determine user acceptance of PACS in the Radiology Department of Shoukat Khanam Memorial Cancer Hospital and Research Centre, Lahore, Pakistan. A Technology Acceptance Model (TAM) based questionnaire was used to collect data from 63 PACS users who graded their score against a five-point Likert scale. The questionnaire distributed comprised of questions regarding the demographic factors of users, perceived usefulness (PU), perceived ease of use (PEU), change and behaviour acceptance.

Findings: Among 62 participants, there were 34(54.8%) females and 28(45.2%) males, 30.6% with age below 25 years, 9.7% as consultant radiologist. Among acceptance score components, using PACS appropriately has smallest average score of 3.55±1.07, not bypassing PACS with largest average of 4.50±0.74. When compared, the acceptance was not different either between genders or between two experience groups with p-values 0.619 and 0.774 respectively. The acceptance score for technologists (3.63±0.59) was higher than residents (3.21±0.69) and consultants (2.72±0.73) significantly with p-value 0.012 and 0.002 respectively. In regression analysis (Adjusted R2=0.701), attitude towards use has a positive relation with acceptance while PEU had negative impact with p-values

Conclusion: Our study suggests that all Radiology personnel should be trained properly before PACS implementation by arranging workshops, regular feedback and peer to peer interactions aiming to cater the needs of all users especially residents and consultants. It will enhance user's productivity with achievement of potential benefits of implementing PACS.