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A Study on Application of Information and Communication Technologies In Medical Care Profession

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Abstract

Medical ICT enabled technology for knowledge management and its deployment as clinical support system for practices and its inclusion in educational methodologies shall be of immense utility world over, as savior of lives and resources. The policy makers are the key holders for implementing this wonderful option for added glory to the profession. Times should not leave profession wanting. This paper deals with application of ICT resources in health care profession. It outlines the areas of application and extent of application of ICT resource use behaviour on the part of the medical professionals in Tamil Nadu. This paper concludes with some interesting findings.

Keywords: Telemicroscopy, Anova, e- Medsys, Multi lingual, Medics elite

Introduction

Medical education has also undergone profound changes due to recent technological advancements (Harden, 2002; Davis and Harden, 2001). Medical schools, particularly in the developed countries, have invested heavily in Information and Communication Technologies (ICT), not only to deliver education, but also to improve the quality of services that health professionals provide. Developing countries like India, where a scarcity of human resources in the health sector is a serious problem, can be a particular beneficiary of ICT-mediated education. Lack of educational institutions and qualified medical educators, poor distribution of facilities and poor access to the latest educational infrastructure are some of the issues to be addressed to improve the quality of medical education in developing countries. Advanced technology can address at least some of these problems. In fact, international organizations such as the United Nations (UN) and the World Health Organization (WHO) have acknowledged ICT as a useful tool to address education in medical care sector in developing countries (WHO, 2005; Drury, 2005). United Nations Millennium

Development Goals have articulated the significance of the use of ICT to address education and health issues (UN Millennium Development Goal, 2004).

E-Health technologies empower patients to take more responsibility for their own health and quality of life, and they lead to better cost-efficiency in the health sector. The use of E-Health technologies allows a mutually beneficial collaboration and involvement of patients and medical professionals in the prevention and treatment of chronic diseases. Overall, ICT can be used to ensure the top-quality medical care of citizens.

The benefits of ICT in medicine are information is always available, cannot be lost, or left sitting on a desk, information is available to users in different locations, such as doctor in clinic, nurse in ward or radiologist in x-ray department, information can be easily read, results from tests in hospital can be added to a patient's record as soon as the test is complete, which will be available immediately to the doctor, ICT can be used to perform life saving operations via robots!!!!For example if someone had a bad heart condition and needed a vital operation and the health professional was unable to perform it then a robot could perform the operation by the commands of another surgeon elsewhere, some hospitals are now experimenting with smart cards, smart cards are electronic cards which the patient keeps with them and contains all of their medical records, these cards will have to be taken every time they visit a doctor, dentist, pharmacist or hospital and the smart card can store a complete medical history and can be updated at the end of each visit.

Methods and Materials

This study deals with medical professionals ICT resource use pattern among the medical professionals in Tamil Nadu. This study has been conducted in the premier institutions relating to Corporate hospitals, Medical colleges, District hand quarters hospital, Government hospitals and Private nursing homes. The relevant data are collected from the health professionals from these institutions. From each group fifty health professionals are selected under random sampling method. The collected data are classified and tabulated with the help of computer programming. The data analysis is done with the help of 5 point rating scale relating to very high level use, high level use, moderate level use, low level use and not use. The data interpretation is done with the help of average and anova two way analysis.

Results and Discussions

This section deals with health professional level of information communication technology use level. It can be assessed with the help of 29 factors on a 5 point rating scale. These include X-rays, Video transmission of medical information, sending and receiving medical information through email, Application of PHP version, ECG, electronic medical records software (EMR), registries of patients and specific diseases, phone calls in connection with medical information, document scanning, Electronic faxing in connection medical information , telemicroscopy, Monitor application in medical service, physicians quality reporting initiative (PQRI), patient

education software application, Speakers use in connection medical information, electronic medical record, Electronic consultation in medical service, microphones use in health information exchange, videoconferencing in connection with medical service, Web server in connection with medical information exchange, multi lingual user interface in connection with medical service, medical manager software, e prescribing, web interface application in connection with medical information, e laboratory use in medical testing, peripherals to capture clinical information, DAQ billing, medics elite software use and e- Medsys software use in medical information.

Table 1: Institutions Wise Respondents ICT Resource in Medical care Profession

Variables	**Corporate hospital**	**Medical colleges**	**District hand quarters hospital**	**Govern-ment hospitals**	**Private nursing homes**	**Mean**
sending and receiving medical information through email	3.87	3.95	3.35	3.45	3.60	3.64
electronic medical record	3.26	2.73	3.61	2.92	3.07	3.11
e prescribing	2.45	2.61	2.44	2.17	2.64	2.65
document scanning	3.53	3.04	3.41	3.21	3.31	3.36
phone calls in connection with medical information	3.43	3.14	3.87	3.11	3.34	3.40
X-rays	3.87	3.95	3.65	3.7	3.71	3.75
Speakers use in connection medical information	3.26	2.73	3.61	2.92	3.12	3.14
Application of PHP version	3.87	3.95	3.15	3.45	3.58	3.60
web interface application in connection with medical information	2.27	2.19	2.55	2.35	2.59	2.58
Electronic consultation in medical service	3.01	2.97	3.15	2.72	3.05	3.07
Electronic faxing in connection medical information	3.66	3.80	2.54	3.26	3.33	3.31
e laboratory use in medical testing	2.38	3.44	2.15	2.11	2.54	2.52
Video transmission of medical information	3.87	3.95	3.31	3.65	3.71	3.70
peripherals to capture clinical information	3.77	3.04	3.82	3.25	2.49	2.47
videoconferencing in connection with medical service	3.52	2.49	3.28	2.59	2.98	2.97
Telemicroscopy	3.15	3.79	2.45	3.69	3.28	3.27
ECG	3.64	3.95	3.15	3.45	3.52	3.54
medical manager software	2.88	2.18	3.44	2.42	2.75	2.73
registries of patients and specific diseases	3.68	3.04	3.87	3.25	3.48	3.46
microphones use in health information exchange	3.38	2.77	3.15	2.72	3.30	3.01

Monitor application in medical service	3.65	3.8	2.52	2.95	3.25	3.23
Web server in connection with medical information exchange	3.37	2.63	3.54	2.12	2.95	2.93
multi lingual user interface in connection with medical service	3.49	2.16	3.58	2.31	2.90	2.88
electronic medical records software (EMR)	3.66	3.88	3.01	3.45	3.52	3.50
physicians quality reporting initiative (PQRI)	2.72	3.74	2.56	3.66	3.20	3.18
patient education software application	3.35	3.20	3.17	3.00	3.18	3.16
e- Medsys software use in medical information	2.60	2.44	2.13	2.08	2.21	2.29
DAQ billing	2.88	2.66	2.16	2.08	2.31	2.42
medics elite software use	2.71	2.59	2.26	2.13	2.16	2.37
Average	3.35	3.14	3.05	2.88	3.10	3.08

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*F crit*
Rows	26.20654	28	0.935948	7.18357	1.576943
Columns	2.168354	4	0.542089	4.160629	2.452716
Error	14.59249	112	0.13029		
Total	42.96738	144			

Table 1 presents data on the Institutions Wise Respondents ICT Resource in Medical care Profession. It could be noted that out of the total 29 ICT resource use, the respondents use X- rays their first order use and it is evident from their secured mean score of 3.75 on a 5 point rating scale. Video transmission of medical information of medical information is rated at second order utility in medical profession as per the respondents 'secured mean score of 3.70 on a 5 point rating scale. The respondents rank the sending and receiving medical information through sending and receiving medical information through email as their third order utility as per the respondents' secured mean score of 3.64 on a 5 point rating scale. The respondents rate the application of Application of PHP version as their fourth order application of ICT in medical profession as per the respondents' secured mean score of 3.60 on a 5 point rating scale. ECG utility is rated at fifth order priority in medical application as per the respondents' secured mean score of 3.54 on a 5 point rating scale.

The respondents 'rate the electronic medical records software as their sixth order use and it is evident from their secured mean score of 3.50 on a 5 point rating scale. Registries of patients and specific diseases is rated at seventh order utility in medical profession as per the respondents' secured mean score of 3.46 on a 5 point rating scale. The respondents rank the phone calls in connection with medical information in connection with medical information as their eighth order utility as per the

respondents' secured mean score of 3.40 on a 5 point rating scale. The respondents rate the document scanning as their ninth order application of ICT in medical profession as per the respondents' secured mean score of 3.36 on a 5 point rating scale. Electronic faxing in connection medical information is rated at tenth order priority in medical application as per the respondents' secured mean score of 3.31 on a 5 point rating scale.

The respondents' rate the telemicroscopy as their eleventh order use and it is evident from their secured mean score of 3.27 on a 5 point rating scale. Monitor application in medical service is rated at twelfth order utility in medical profession as per the respondents' secured mean score of 3.23 on a 5 point rating scale. The respondents rank the physicians quality reporting initiative as their thirteenth order utility as per the respondents' secured mean score of 3.18 on a 5 point rating scale. The respondents rate the patient education software application as their fourteenth order application of ICT in medical profession as per the respondents' secured mean score of 3.16 on a 5 point rating scale. Speakers use in connection medical information use in connection medical information is rated at fifteenth order priority in medical application as per the respondents' secured mean score of 3.14 on a 5 point rating scale.

The respondents' rate the electronic medical record as their sixteenth order use and it is evident from their secured mean score of 3.11 on a 5 point rating scale. Electronic consultation in medical service in medical service is rated at seventeenth order utility in medical profession as per the respondents' secured mean score of 3.07 on a 5 point rating scale. The respondents rank the microphones use in health information exchange as their eighteenth order utility as per the respondents' secured mean score of 3.01 on a 5 point rating scale. The respondents rate the videoconferencing in connection with medical service as their nineteenth order application of ICT in medical profession as per the respondents' secured mean score of 2.97 on a 5 point rating scale. Web server in connection with medical information exchange is rated at twentieth order priority in medical application as per the respondents' secured mean score of 2.93 on a 5 point rating scale.

The respondents' rate the multi lingual user interface in connection with medical service as their twenty first order use and it is evident from their secured mean score of 2.88 on a 5 point rating scale. Medical manager software is rated at twenty second order utility in medical profession as per the respondents' secured mean score of 2.73 on a 5 point rating scale. The respondents rank the e prescribing as their twenty third order utility as per the respondents' secured mean score of 2.65 on a 5 point rating scale. The respondents rate the web interface application in connection with medical information as their twenty fourth order application of ICT in medical profession as per the respondents' secured mean score of 2.58 on a 5 point rating scale. elaboratory use in medical testing is rated at twenty fifth order priority in medical application as per the respondents' secured mean score of 2.52 on a 5 point rating scale.

The respondents' rate the peripherals to capture clinical information as their twenty sixth order use and it is evident from their secured mean score of 2.47 on a 5 point rating scale. DAQ billing is rated at twenty seventh order utility in medical profession as per the respondents' secured mean score of 2.42 on a 5 point rating scale. The

respondents rank the medics elite software use as their twenty eighth order utility as per the respondents' secured mean score of 2.37 on a 5 point rating scale. The respondents rate the e- Medsys software use in medical information as their twenty ninth order application of ICT in medical profession as per the respondents' secured mean score of 2.29 on a 5 point rating scale.

The medical professional of corporate hospitals rank the first position in their overall application of ICT health resources as per their secured mean score of 3.35 on a 5 point rating scale. The respondents of medical colleges occupy the second position in their overall application of ICT health resources as per their secured mean score of 3.14 on a 5 point rating scale. The medical professional of private nursing homes take the third position in their overall application of ICT health resources as per their secured mean score of 3.10 on a 5 point rating scale. The respondents of district hand quarters hospitals stand at the fourth position in their overall application of ICT health resources as per their secured mean score of 3.10 on a 5 point rating scale. The respondents of government hospitals stand slip down to the last position in their overall application of ICT health resources as per their secured mean score of 3.10 on a 5 point rating scale.

The anova two way model is applied for further discussion. At one point, the computed anova value 7.18 is greater than its tabulated value at 5 per cent level significance. Hence the variation among the ICT tools application in medical profession is statistically identified as significant. In another point the computed anova value 4.16 is greater than its tabulated value at 5 per cent level significance. Hence the variation among the institutions is statistically identified as significant with respect to respondents' ICT tools application in medical profession.

Table 2 presents data on the Qualification Wise Respondents ICT Resource in Medical care Profession. The M.S level educated respondents rank the first position in their overall application of ICT health resources as per their secured mean score of 3.52 on a 5 point rating scale. The M.D level educated respondents occupy the second position in their overall application of ICT health resources as per their secured mean score of 3.21 on a 5 point rating scale. The M.B.B.S level educated respondents take the third position in their overall application of ICT health resources as per their secured mean score of 3.10 on a 5 point rating scale. The M.Pharm level educated respondents stand at the fourth position in their overall application of ICT health resources as per their secured mean score of 2.95 on a 5 point rating scale. The B.Pharm level educated respondents stand slip down to the last position in their overall application of ICT health resources as per their secured mean score of 2.85 on a 5 point rating scale.

Table 2: Qualification Wise Respondents ICT Resource in Medical care Profession

Variables	**M.S**	**M.D**	**M.B.B.S**	**M. Pharm**	**B. Pharm**	**Mean**
sending and receiving medical information through email	3.91	3.67	3.87	3.01	3.75	3.64
electronic medical record	3.68	3.55	3.09	2.75	2.46	3.11
e prescribing	3.07	2.27	2.25	2.54	3.08	2.65
document scanning	3.31	3.35	3.25	3.21	3.66	3.36
phone calls in connection with medical information	3.56	3.30	3.20	3.27	3.60	3.40
Xrays	3.91	3.67	3.75	3.56	3.88	3.75
Speakers use in connection medical information	3.68	3.55	3.09	3.75	2.42	3.14
Application of PHP version	3.91	3.67	3.75	3.14	3.54	3.60
web interface application in connection with medical information	3.07	2.56	2.72	2.22	2.33	2.58
Electronic consultation in medical service	3.37	3.34	3.10	3.07	2.82	3.07
Electronic faxing in connection medical information	3.85	3.80	3.24	3.17	2.75	3.31
e laboratory use in medical testing	3.11	2.21	2.15	2.86	2.25	2.52
Video transmission of medical information	3.97	3.71	3.88	3.22	3.68	3.70
peripherals to capture clinical information	2.45	2.56	2.15	2.94	2.26	2.47
videoconferencing in connection with medical service	3.05	3.06	2.97	3.28	2.61	2.97
telemicroscopy	3.85	3.36	3.24	3.17	2.75	3.27
ECG	3.91	3.47	3.75	3.14	3.44	3.54
medical manager software	3.26	2.27	2.4	2.54	3.19	2.73
registries of patients and specific diseases	3.74	3.44	3.54	3.14	3.45	3.46
microphones use in health information exchange	3.66	3.43	3.51	3.18	2.18	3.01
Monitor application in medical service	3.54	3.41	3.4	3.04	2.77	3.23
Web server in connection with medical information exchange	2.75	2.97	3.19	3.15	3.21	2.93
multi lingual user interface in connection with medical service	3.14	3.41	3.36	2.40	2.49	2.88
electronic medical records software (EMR)	3.81	3.47	3.75	3.14	3.34	3.50
physicians quality reporting initiative (PQRI)	3.74	3.65	2.8	3.04	2.75	3.18
patient education software application	3.49	3.25	3.18	3.04	2.99	3.16
e- Medsys software use in medical information	2.54	2.42	2.16	2.10	2.24	2.29
DAQ billing	2.80	2.68	2.18	2.11	2.32	2.42
medics elite software use	2.67	2.60	2.27	2.14	2.17	2.37
Average	3.52	3.21	3.10	2.95	2.85	3.08

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*F crit*
Rows	25.88504	28	0.924466	10.62084	1.576943
Columns	4.689106	4	1.172277	13.46784	2.452716
Error	9.748774	112	0.087043		
Total	40.32292	144			

The anova two way model is applied for further discussion. At one point, the computed anova value 10.62 is greater than its tabulated value at 5 per cent level significance. Hence the variation among the ICT tools application in medical profession is statistically identified as significant. In another point the computed anova value 13.46 is greater than its tabulated value at 5 per cent level significance. Hence the variation among the educational qualification of the respondents is statistically identified as significant with respect to respondents' ICT tools application in medical profession.

Table 3 presents data on the age wise Respondents ICT Resource in Medical care Profession. The respondents in the age group 20-30 years rank the first position in their overall application of ICT health resources as per their secured mean score of 3.41 on a 5 point rating scale. The respondents in the age group 30-40 years occupy the second position in their overall application of ICT health resources as per their secured mean score of 3.22 on a 5 point rating scale. The respondents in the age group 40-50 years take the third position in their overall application of ICT health resources as per their secured mean score of 3.11 on a 5 point rating scale. The respondents in the age group 50-60 years stand slip down to the last position in their overall application of ICT health resources as per their secured mean score of 2.81 on a 5 point rating scale.

Table 3: Age Wise Respondents ICT Resource in Medical care Profession

Variables	**20-30**	**30-40**	**40-50**	**50-60**	**Mean**
sending and receiving medical information through email	3.81	3.69	3.89	3.78	3.64
electronic medical record	3.58	3.56	3.14	2.48	3.11
e prescribing	3.01	2.28	2.27	3.09	2.65
document scanning	3.36	3.40	3.27	3.56	3.36
phone calls in connection with medical information	3.56	3.30	3.20	3.60	3.40
Xrays	3.91	3.67	3.75	3.88	3.75
Speakers use in connection medical information	3.58	3.57	3.10	2.45	3.14
Application of PHP version	3.81	3.70	3.78	3.58	3.60
web interface application in connection with medical information	3.01	2.58	2.73	2.34	2.58
Electronic consultation in medical service	3.27	3.36	3.15	2.84	3.07
Electronic faxing in connection medical information	3.75	3.85	3.29	2.75	3.31
e laboratory use in medical testing	3.16	2.22	2.16	2.26	2.52
Video transmission of medical information	3.87	3.78	3.81	3.73	3.70
peripherals to capture clinical information	2.40	2.57	2.17	2.27	2.47
videoconferencing in connection with medical service	3.05	3.09	2.94	2.59	2.97
telemicroscopy	3.75	3.38	3.26	2.79	3.27
ECG	3.81	3.53	3.75	3.47	3.54
medical manager software	3.16	2.29	2.45	3.20	2.73
registries of patients and specific diseases	3.70	3.45	3.55	3.46	3.46
microphones use in health information exchange	3.56	3.46	3.51	2.21	3.01
Monitor application in medical service	3.50	3.44	3.41	2.77	3.23
Web server in connection with medical information exchange	2.79	2.97	3.09	3.23	2.93
multi lingual user interface in connection with medical	3.19	3.41	3.26	2.51	2.88

service					
electronic medical records software (EMR)	3.75	3.49	3.76	3.37	3.50
physicians quality reporting initiative (PQRI)	3.64	3.68	2.83	2.78	3.18
patient education software application	3.44	3.27	3.18	3.00	3.16
e- Medsys software use in medical information	2.56	2.37	2.17	2.12	2.29
DAQ billing	2.75	2.63	2.22	2.15	2.42
medics elite software use	2.70	2.50	2.31	2.17	2.37
Average	3.41	3.22	3.11	2.89	3.08

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*F crit*
Rows	23.93166	28	0.854702	11.10732	1.610415
Columns	3.078423	3	1.026141	13.33527	2.713227
Error	6.463752	84	0.076949		
Total	33.47383	115			

The anova two way model is applied for further discussion. At one point, the computed anova value 11.10 is greater than its tabulated value at 5 per cent level significance. Hence the variation among the ICT tools application in medical profession is statistically identified as significant. In another point the computed anova value 13.33 is greater than its tabulated value at 5 per cent level significance. Hence the variation among the age of the respondents is statistically identified as significant with respect to respondents' ICT tools application in medical profession.

Table 4: Caste Wise Respondents ICT Resource in Medical care Profession

Variables	**Forward caste**	**Backward caste**	**Most backward caste**	**Schedule caste**	**Mean**
sending and receiving medical information through email	3.89	3.75	3.72	3.24	3.64
electronic medical record	3.56	3.21	3.14	2.73	3.11
e prescribing	3.4	2.6	2.19	2.49	2.65
document scanning	3.95	3.35	3.25	3.04	3.36
phone calls in connection with medical information	3.85	3.77	3.35	3.09	3.40
X-rays	3.89	3.75	3.69	3.65	3.75
Speakers use in connection medical information	3.88	3.44	2.76	2.74	3.14
Application of PHP version	3.89	3.75	3.59	3.24	3.60
web interface application in connection with medical information	3.44	2.52	2.41	2.18	2.58
Electronic consultation in medical service	3.62	3.22	3.07	2.56	3.07
Electronic faxing in connection medical information	3.8	3.30	3.66	2.54	3.31
e laboratory use in medical testing	3.11	2.44	2.37	2.33	2.52
Video transmission of medical information	3.91	3.84	3.81	3.4	3.70
peripherals to capture clinical	3.37	2.24	2.19	2.19	2.47

information					
videoconferencing in connection with medical service	3.42	3.14	3.4	2.63	2.97
telemicroscopy	3.83	3.66	3.26	2.74	3.27
ECG	3.89	3.75	3.59	3.11	3.54
medical manager software	3.25	2.87	2.74	2.61	2.73
registries of patients and specific diseases	3.89	3.75	3.59	2.88	3.46
microphones use in health information exchange	3.71	3.04	3.6	2.14	3.01
Monitor application in medical service	3.95	3.65	3.2	2.52	3.23
Web server in connection with medical information exchange	3.47	3.37	3.48	2.13	2.93
multi lingual user interface in connection with medical service	3.49	3.38	3.13	2.16	2.88
electronic medical records software (EMR)	3.95	3.77	3.35	3.24	3.50
physicians quality reporting initiative (PQRI)	3.74	3.56	3.22	2.74	3.18
patient education software application	3.69	3.32	3.19	2.73	3.16
e- Medsys software use in medical information	2.64	2.25	2.19	2.14	2.29
DAQ billing	2.76	2.60	2.23	2.16	2.42
medics elite software use	2.67	2.51	2.32	2.18	2.37
Average	3.61	3.26	3.12	2.66	3.08

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*F crit*
Rows	20.57017	28	0.734649	13.84512	1.610415
Columns	12.32582	3	4.108608	77.43043	2.713227
Error	4.457202	84	0.053062		
Total	37.3532	115			

Table 4 presents data on the caste wise Respondents ICT Resource in Medical care Profession. The forward caste respondents rank the first position in their overall application of ICT health resources as per their secured mean score of 3.61 on a 5 point rating scale. The backward caste respondents occupy the second position in their overall application of ICT health resources as per their secured mean score of 3.26 on a 5 point rating scale. The most backward caste respondents take the third position in their overall application of ICT health resources as per their secured mean score of 3.12 on a 5 point rating scale. The scheduled caste respondents stand slip down to the last position in their overall application of ICT health resources as per their secured mean score of 2.66 on a 5 point rating scale.

The anova two way model is applied for further discussion. At one point, the computed anova value 13.84 is greater than its tabulated value at 5 per cent level significance. Hence the variation among the ICT tools application in medical profession is statistically identified as significant. In another point the computed anova value 77.43 is greater than its tabulated value at 5 per cent level significance.

Hence the variation among the caste of the respondents is statistically identified as significant with respect to respondents' ICT tools application in medical profession.

Table 5: Sex Wise Respondents ICT Resource in Medical care Profession

Variables	**Male**	**Female**	**Mean**
sending and receiving medical information through email	3.74	3.54	3.64
electronic medical record	3.32	2.9	3.11
e prescribing	2.84	2.45	2.65
document scanning	3.64	3.08	3.36
phone calls in connection with medical information	3.7	3.1	3.40
X-rays	3.95	3.55	3.75
Speakers use in connection medical information	3.24	3.04	3.14
Application of PHP version	3.68	3.52	3.60
web interface application in connection with medical information	2.68	2.48	2.58
Electronic consultation in medical service	3.21	2.93	3.07
Electronic faxing in connection medical information	3.56	3.06	3.31
e laboratory use in medical testing	2.68	2.36	2.52
Video transmission of medical information	3.85	3.54	3.70
peripherals to capture clinical information	2.64	2.3	2.47
videoconferencing in connection with medical service	3.29	2.65	2.97
telemicroscopy	3.52	3.01	3.27
ECG	3.58	3.5	3.54
medical manager software	2.82	2.64	2.73
registries of patients and specific diseases	3.64	3.28	3.46
microphones use in health information exchange	3.2	2.82	3.01
Monitor application in medical service	3.36	3.1	3.23
Web server in connection with medical information exchange	3.13	2.73	2.93
multi lingual user interface in connection with medical service	2.78	2.98	2.88
electronic medical records software (EMR)	3.45	3.55	3.50
physicians quality reporting initiative (PQRI)	3.34	3.02	3.18
patient education software application	3.3	3.02	3.16
e- Medsys software use in medical information	2.42	2.15	2.29
DAQ billing	2.58	2.25	2.42
medics elite software use	2.42	2.31	2.37
Average	3.24	2.91	3.08

T-Stat-8.66, Df-28 T-Critical 1.70

Table 5 presents data on the sex wise Respondents ICT Resource in Medical care Profession. The male respondents rank the first position in their overall application of ICT health resources as per their secured mean score of 3.24 on a 5 point rating scale. The female respondents occupy the second position in their overall application of ICT health resources as per their secured mean score of 2.91 on a 5 point rating scale.

The T test is applied for further discussion. The computed T value 8.66 is greater than its tabulated value at 5 per cent level significance. Hence there is a significant difference between male respondents and female respondents in their ICT use level in medical profession.

Conclusion

It could be seen clearly from the above discussion that the respondents rank the high level application of ICT tools in their medical profession with respect to X rays, Video transmission of medical information, sending and receiving medical information through email, Application of PHP version, ECG, electronic medical records software (EMR), registries of patients and specific diseases, phone calls in connection with medical information, document scanning, Electronic faxing in connection medical information, telemicroscopy, Monitor application in medical service, physicians quality reporting initiative (PQRI), patient education software application, Speakers use in connection medical information, electronic medical record, Electronic consultation in medical service and microphones use in health information exchange. The respondents rank the moderate level application of ICT tools in their medical profession with respect to videoconferencing in connection with medical service, Web server in connection with medical information exchange, multi lingual user interface in connection with medical service, medical manager software, e prescribing, web interface application in connection with medical information and e laboratory use in medical testing. The respondents rank the low level application of ICT tools in their medical profession with respect to peripherals to capture clinical information, DAQ billing medics elite software use and e- Medsys software use in medical information.

It is observed from the result of educational qualification wise analysis that the M.S. level educated respondents rank the first position in their overall application of ICT tools application in medical profession, M.D. level educated respondents the second, M.B.B.S level educated respondents the third, M. Pharm level educated respondents the fourth and B. Pharm level educated respondents the last. It is observed from the result of the age wise analysis that the respondents in the age group 20-30 years rank the first position in their overall application of ICT tools application in medical profession, respondents in the age group 30-40 years the second, respondents in the age group 40-50 years the third and respondents in the age group 50-60 years the last. It is observed from the result of the caste wise analysis that the forward caste respondents rank the first position in their overall application of ICT tools application in medical profession, backward caste respondents the second, most backward caste respondents the third and scheduled caste respondents the last. It is observed from the result of the sex wise analysis that the male respondents rank the first position in their overall application of ICT tools application in medical profession, and female respondents lag behind them.

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