**Table 1. Characteristics of the participants (n=967)**

|  |  |  |
| --- | --- | --- |
| Characteristic | N | % |
| Age Mean (SD): 19.55 ± 1.48 | | |
| Gender | | |
| Female | 759 | 78.5 |
| Male | 208 | 21.5 |
| Major | | |
| Nursing | 337 | 34.9 |
| Pharmacy | 162 | 16.8 |
| Medicine | 160 | 16.5 |
| Medical Laboratory Technology | 142 | 14.7 |
| Rehabilitation | 100 | 10.3 |
| Medical Image Technology | 59 | 6.1 |
| Public health | 7 | 0.7 |
| University year | | |
| First year | 335 | 34.6 |
| Second year | 255 | 26.4 |
| Third year | 134 | 13.9 |
| Fourth year | 183 | 18.9 |
| Fifth year | 36 | 3.7 |
| Sixth year | 24 | 2.5 |
| Grade Point Average | | |
| Excellent | 51 | 5.3 |
| Good | 209 | 21.6 |
| Fair | 551 | 57.0 |
| Average | 143 | 14.8 |
| Weak | 13 | 1.3 |
| Self-assessment of IT skills | | |
| Excellent | 14 | 1.4 |
| Good | 183 | 18.9 |
| Fair | 535 | 55.4 |
| Average | 221 | 22.9 |
| Poor | 14 | 1.4 |
| Heard of or taken any webinars/courses on AI | | |
| Yes | 396 | 41.0 |
| No | 571 | 59.0 |
| Internet usage time per day (hours) Mean (SD): 7.48 ± 4.26 | | |

**Table 2. Perceptions of healthcare students regarding AI adoption in healthcare (n=967)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **Strongly disagree % (N)** | **Disagree % (N)** | **Neutral % (N)** | **Agree % (N)** | **Strongly agree**  **% (N)** | **Mean** ± **SD** | **Range** |
| **Individual patient care** | | | | | | **36.99** ± **7.61** | **11 – 55** |
| AI provides patients with preventative health recommendations. | 1.8  (17) | 3.3  (32) | 29.9  (289) | 51.7  (500) | 13.3  (129) | 3.72 ± 0.80 | 1-5 |
| AI monitors patient compliance to prescribed medications, exercise and dietary recommendations. | 2.7  (26) | 11.4  (110) | 29.4  (285) | 42.4  (410) | 14.1  (136) | 3.54 ± 0.96 | 1-5 |
| AI reads and interprets diagnostic imaging. | 2.9  (28) | 10.2  (98) | 34.7  (336) | 42.7  (413) | 9.5  (92) | 3.46 ± 0.90 | 1-5 |
| AI analyzes patient information to reach diagnoses. | 2.6  (25) | 12.1  (117) | 38.3  (371) | 38.7  (374) | 8.3  (80) | 3.38 ± 0.89 | 1-5 |
| AI formulates personalized treatment plans for patients. | 2.9  (28) | 13.5  (131) | 35.8  (346) | 38.1  (368) | 9.7  (94) | 3.38 ± 0.94 | 1-5 |
| AI evaluates when to refer patients to other healthcare professionals. | 2.5  (24) | 13.1  (127) | 37.7  (365) | 38.5  (372) | 8.2  (79) | 3.37 ± 0.90 | 1-5 |
| AI provides psychiatric/personal counselling. | 3.7  (36) | 14.4  (139) | 33.7  (326) | 39.0  (377) | 9.2  (89) | 3.36 ± 0.96 | 1-5 |
| AI analyzes patient information to establish prognoses. | 2.5  (24) | 14.9  (144) | 39.3  (380) | 36.2  (350) | 7.1  (69) | 3.31 ± 0.90 | 1-5 |
| AI provides empathetic care to patients. | 5.5  (53) | 13.8  (133) | 33.8  (328) | 38.2  (369) | 8.7  (84) | 3.31 ± 1.00 | 1-5 |
| AI formulates personalized medication prescriptions for patients. | 5.8  (56) | 20.0  (193) | 38.5  (373) | 29.0  (280) | 6.7  (65) | 3.11± 0.99 | 1-5 |
| AI performs surgery | 11.2  (108) | 16.2  (157) | 34.0  (329) | 30.8  (298) | 7.8  (75) | 3.08 ± 1.11 | 1-5 |
| **Healthcare system** | | | | | | **10.88** ± **2.23** | **3 – 15** |
| AI provides documentation about patients. | 1.3  (13) | 6.9  (67) | 26.2  (253) | 48.5  (469) | 17.1  (165) | 3.73 ± 0.87 | 1-5 |
| AI assists hospitals in capacity planning and human resource management. | 0.9  (9) | 6.6  (64) | 31.7  (307) | 46.4  (449) | 14.4  (138) | 3.66 ± 0.84 | 1-5 |
| AI provides recommendations for quality improvement in practices/hospitals. | 1.8  (17) | 9.2  (89) | 38.0  (367) | 40.7  (394) | 10.3  (100) | 3.49 ± 0.86 | 1-5 |
| **Population health** | | | | | | **6.93** ± **1.55** | **2 – 10** |
| AI conducts population health surveillance and outbreak prevention. | 1.6  (15) | 10.3  (100) | 33.6  (325) | 43.8  (424) | 10.7  (103) | 3.52 ± 8.87 | 1-5 |
| AI selects the best population health interventions. | 2.3  (22) | 9.8  (96) | 41.0  (396) | 38.2  (369) | 8.7  (84) | 3.41 ± 0.87 | 1-5 |
| **Total perception score** | | | | | | **54.80** ± **10.20** | **27– 80** |

**Table 3. Attitudes of healthcare students regarding AI adoption in healthcare (n=967)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **Strongly disagree % (N)** | **Disagree % (N)** | **Neutral % (N)** | **Agree % (N)** | **Strongly agree**  **% (N)** | **Mean** ± **SD** | **Range** |
| New AI developments make medicine more exciting. | 0.8  (8) | 5.9  (57) | 28.4 (275) | 51.5 (498) | 13.4  (129) | 3.71 ± 0.80 | 1-5 |
| Knowledge of AI will benefit healthcare workers’ career. | 1.0  (9) | 6.5  (63) | 31.2  (302) | 48.8  (472) | 12.5  (121) | 3.65 ± 0.81 | 1-5 |
| AI will improve some aspects of healthcare. | 1.0  (10) | 6.8  (66) | 30.4  (294) | 51.1  (494) | 10.7  (103) | 3.63 ± 0.80 | 1-5 |
| Medical training should include training on AI competencies. | 1.3  (13) | 7.7  (74) | 35.8  (346) | 42.7  (413) | 12.5  (121) | 3.57 ± 0.85 | 1-5 |
| AI will reduce the number of jobs available to healthcare workers. | 2.6  (25) | 9.2  (89) | 30.6  (296) | 45.8  (443) | 11.8  (114) | 3.55 ± 0.91 | 1-5 |
| AI in medicine will raise new ethical challenges. | 2.3  (22) | 9.4  (91) | 34.3  (332) | 40.6  (393) | 13.4  (129) | 3.53 ± 0.92 | 1-5 |
| Healthcare student should be required to receive training in AI competencies. | 1.4  (14) | 10.5  (101) | 36.5  (353) | 40.7  (394) | 10.9  (105) | 3.49 ± 0.87 | 1-5 |
| AI in medicine will raise new social challenges. | 3.3  (32) | 9.7  (94) | 34.4  (333) | 41.8  (404) | 10.8  (104) | 3.47 ± 0.93 | 1-5 |
| Your medical education is adequately preparing me for working alongside AI tools. | 1.7  (16) | 8.6  (83) | 40.2  (389) | 39.8  (385) | 9.7  (94) | 3.47 ± 0.85 | 1-5 |
| AI in medicine will raise new challenges around health equity | 3.6  (35) | 10.2  (98) | 35.8  (346) | 40.7  (394) | 9.7  (94) | 3.43 ± 0.93 | 1-5 |
| The Vietnam healthcare system is currently well prepared to deal with challenges having to do with AI. | 2.1  (20) | 9.3  (90) | 41.8  (404) | 37.4  (362) | 9.4  (91) | 3.43 ± 0.86 | 1-5 |
| AI can replace healthcare workers in providing patients with preventative health recommendations. | 4.0  (39) | 10.8  (104) | 35.7  (345) | 40.2  (389) | 9.3  (90) | 3.40 ± 0.94 | 1-5 |
| AI will revolutionize medical practice. | 2.8  (27) | 14.4 (139) | 39.8 (385) | 35.0 (339) | 8.0  (77) | 3.31 ± 0.91 | 1-5 |
| Some human healthcare workers will be replaced by AI in the foreseeable future. | 5.2  (50) | 16.3  (158) | 35.2  (340) | 34.4  (333) | 8.9  (86) | 3.26 ± 1.00 | 1-5 |
| AI technology does threaten your career. | 6.2  (60) | 17.6  (171) | 35.2  (340) | 32.8  (317) | 8.2  (79) | 3.19 ± 1.02 | 1-5 |
| AI technology developments frighten you. | 6.9  (67) | 17.7  (171) | 37.5  (363) | 30.1  (291) | 7.8  (75) | 3.14 ± 1.02 | 1-5 |
| **Total attitude score** | | | | | | **55.24** ± **10.22** | **28 – 80** |
| Positive attitude - N (%) | | | | | | 459 (47.5%) | |
| Negative attitude - N (%) | | | | | | 508 (52.5%) | |

**Table 4.** **Association between perceptions and attitudes of healthcare students regarding AI adoption in healthcare (n=967)**

|  |  |  |
| --- | --- | --- |
| **Contents** | **Attitudes of AI in healthcare** | |
| **r** | **p** |
| **Perceptions of AI in healthcare** | **0.724** | **0.000** |
| Individual patient care | 0.684 | 0.000 |
| Healthcare system | 0.563 | 0.000 |
| Population health | 0.592 | 0.000 |