**Tables**

**Table 1: Frequency distribution of patients’ knowledge and practice on breast cancer**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Variables | Frequency | Percentage (%) |
| K1 | **Do you know the symptoms of breast cancer?** |  |  |
|  | Yes | 118 | 35.33 |
|  | No | 216 | 64.67 |
| P1 | **Did you usually check your breasts for any symptoms?** |  |  |
|  | Yes | 37 | 11.11 |
|  | No | 296 | 88.89 |
| P2 | **After noticing any symptoms, do you go to the doctor immediately?** |  |  |
|  | Yes | 38 | 11.21 |
|  | No | 301 | 88.79 |
| P3 | **Before this health problem, did a doctor or nurse check your breasts?** |  |  |
|  | Yes | 16 | 4.79 |
|  | No | 318 | 95.21 |
| K2 | **Before your breast problem have you heard of mammography or mammogram?** |  |  |
|  | Yes | 20 | 6.01 |
|  | No | 313 | 93.99 |
| K3 | **Do you know someone close to you who had or has cancer?** |  |  |
|  | Yes | 55 | 27.92 |
|  | No | 142 | 72.08 |
|  | **Did you know about breast cancer before?** |  |  |
|  | Yes | 26 | 16.46 |
|  | No | 132 | 83.54 |
| K4 | **Are you aware of a family history of breast cancer?** |  |  |
|  | Yes | 32 | 9.52 |
|  | No | 304 | 90.48 |
| Total | **Knowledge and Practice** |  |  |
|  | Good (mean>=1) | 190 | 53.52 |
|  | Low (mean<1) | 165 | 46.48 |

*K = knowledge, P = practice*

**Table 2: Prevalence of patient socioeconomic characteristics, medical history, and family support by knowledge and practice**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Knowledge and Practice | | | |
| Characteristics | Good | Poor | Total |  |
| n (%) | n (%) | n (%) | P-value |
| **Socioeconomic characteristics** |  |  |  |  |
| ***Age at presentation (years)*** |  |  |  |  |
| <40 | 63 (55.26) | 51 (44.74) | 114 (33.24) | 0.385 |
| 40-59 | 113 (56.78) | 86 (43.22) | 199 (58.02) |  |
| ≥60 | 13 (43.33) | 17 (56.67) | 30 (8.75) |  |
| ***Geographic location*** |  |  |  |  |
| Chittagong | 27 (51.92) | 25 (48.08) | 52 (15.34) | 0.819 |
| Dhaka | 81 (54.36) | 68 (45.64) | 149 (43.95) |  |
| Khulna | 23 (58.96) | 16 (41.03) | 39 (11.50) |  |
| Mymensingh | 18 (54.55) | 15 (45.45) | 33 (9.73) |  |
| Rajshahi | 12 (57.14) | 9 (42.86) | 21 (6.19) |  |
| Rangpur | 11 (78.57) | 3 (21.43) | 14 (4.13) |  |
| Sylhet | 3 (60.00) | 2 (40.00) | 5 (1.47) |  |
| Barisal | 14 (53.85) | 12 (46.15) | 26 (7.67) |  |
| ***Area of residence*** |  |  |  |  |
| Rural | 136 (54.18) | 115 (45.82) | 251 (72.75) | 0.715 |
| Urban | 53 (56.38) | 41 (43.62) | 94 (27.25) |  |
| ***Current marital status*** |  |  |  |  |
| Single | 35 (59.32) | 24 (40.68) | 59 (17.25) | 0.460 |
| Married | 153 (54.06) | 130 (45.94) | 283 (82.75) |  |
| ***Patient education level*** |  |  |  |  |
| Illiterate | 73 (49.66) | 74 (50.34) | 147 (42.86) | 0.214 |
| Primary | 68 (59.13) | 47 (40.87) | 115 (33.53) |  |
| Secondary/Higher | 48 (59.26) | 33 (40.74) | 81 (23.62) |  |
| ***Spouse education level*** |  |  |  |  |
| Illiterate | 53 (59.55) | 36 (40.45) | 89 (27.99) | 0.029 |
| Primary | 52 (44.07) | 66 (55.93) | 118 (37.11) |  |
| Secondary/Higher | 66 (59.46) | 45 (40.54) | 111 (34.91) |  |
| ***Household monthly income (BDT)*** |  |  |  |  |
| <5000 | 50 (44.25) | 63 (55.75) | 113 (34.88) | 0.005 |
| 5000-10000 | 56 (56.00) | 44 (44.00) | 100 (30.86) |  |
| 10001-20000 | 25 (56.82) | 19 (43.18) | 44 (13.58) |  |
| >20000 | 48 (71.64) | 19 (28.36) | 67 (20.68) |  |
| **Any portable electronic devices** |  |  |  |  |
| Yes | 177 (55.49) | 142 (44.51) | 319 (89.86) | 0.027 |
| No | 13 (36.11) | 23 (63.89) | 36 (10.14) |  |
| **Any mass media access** |  |  |  |  |
| Yes | 85 (59.03) | 59 (40.97) | 144 (40.56) | 0.086 |
| No | 105 (49.76) | 106 (50.24) | 211 (59.44) |  |
| **Medical history of the patients** |  |  |  |  |
| ***Any symptoms*** |  |  |  |  |
| Yes | 186 (56.88) | 141 (43.12) | 327 (92.11) | <0.001 |
| No | 4 (14.29) | 24 (85.71) | 28 (7.89) |  |
| ***Cancer stage*** |  |  |  |  |
| <=2 | 77 (57.46) | 57 (42.54) | 134 (52.76) | 0.234 |
| >2 | 60 (50.00) | 60 (50.00) | 120 (47.24) |  |
| ***First health facility visits after symptoms*** |  |  |  |  |
| General Govt. Hospital | 63 (48.46) | 67 (51.54) | 130 (38.81) | 0.065 |
| Private clinic/hospital | 116 (61.05) | 74 (38.95) | 190 (56.72) |  |
| Others | 7 (46.67) | 8 (53.33) | 15 (4.48) |  |
| ***Consume alternative remedy*** |  |  |  |  |
| Yes | 52 (47.71) | 57 (52.29) | 109 (33.13) | 0.028 |
| No | 133 (60.45) | 87 (39.55) | 220 (66.87) |  |
| ***Any diagnosis delay*** |  |  |  |  |
| Yes | 168 (57.73) | 123 (42.27) | 190 (55.72) | 0.017 |
| No | 21 (42.86) | 28 (57.14) | 151 (44.28) |  |
| ***Discomfort experience*** |  |  |  |  |
| Yes | 29 (24.58) | 30 (77.38) | 291 (85.59) | 0.043 |
| No | 50 (22.62) | 171 (77.38) | 49 (14.41) |  |
| **Family and Social Support** |  |  |  |  |
| ***The person you talked to first about your health problem*** |  |  |  |  |
| Husband | 99 (53.23) | 87 (46.77) | 186 (54.55) | 0.803 |
| Mother | 11 (61.11) | 7 (38.89) | 18 (5.28) |  |
| Neighbour | 8 (50.00) | 8 (50.00) | 16 (4.69) |  |
| Son or daughter | 38 (60.32) | 25 (71.43) | 63 (18.48) |  |
| Other | 34 (58.62) | 24 (41.38) | 58 (17.01) |  |
| ***Recommended you to consult with a doctor*** |  |  |  |  |
| Herself | 14 (70.00) | 6 (30.00) | 20 (5.88) | 0.716 |
| Husband | 76 (54.68) | 63 (45.32) | 139 (40.88) |  |
| Neighbour | 15 (53.57) | 13 (46.43) | 28 (8.24) |  |
| Son or daughter | 39 (58.57) | 28 (41.79) | 67 (19.71) |  |
| Other | 46 (53.49) | 40 (46.51) | 86 (25.29) |  |
| ***Fear or uncomfortable to talk about the problem to your spouse*** |  |  |  |  |
| Yes | 32 (59.26) | 22 (40.74) | 54 (18.95) | 0.046 |
| No | 127 (54.98) | 104 (45.02) | 231 (81.05) |  |
| ***Received support from spouse after diagnosis*** |  |  |  |  |
| Yes | 134 (57.02) | 101 (42.98) | 235 (83.63) | 0.025 |
| No | 22 (47.83) | 24 (52.17) | 46 (16.37) |  |
| ***Received support from social circles*** |  |  |  |  |
| Yes | 123 (53.71) | 106 (46.29) | 229 (70.46) | 0.014 |
| No | 60 (62.50) | 36 (37.50) | 96 (29.54) |  |

**Table 3: Association between patient socioeconomic characteristics, medical history, and family support by knowledge and practice**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Characteristics** | **Unadjusted model** | | **Adjusted model** | |
| **COR (95% CI)** | **P-value** | **AOR (95% CI)** | **P-value** |
| **Socioeconomic characteristics** |  |  |  |  |
| ***Age at presentation (years)*** |  |  |  |  |
| <40 | 1.62 (0.72-3.69) | 0.246 | 1.25 (0.31-5.23) | 0.759 |
| 40-59 | 1.72 (0.80-3.79) | 0.171 | 1.35 (0.36-5.30) | 0.654 |
| ≥60 |  |  |  |  |
| ***Geographic location*** |  |  |  |  |
| Chittagong | 0.93 (0.36-4.63) | 0.873 | 0.91 (0.24-3.49) | 0.894 |
| Dhaka | 1.02 (0.44-2.38) | 0.961 | 0.66 (0.20-2.11) | 0.485 |
| Khulna | 1.23 (0.45-2.36) | 0.683 | 2.01 (0.47-4.60) | 0.342 |
| Mymensingh | 1.03 (0.36-3.37) | 0.957 | 0.65 (0.15-2.80) | 0.567 |
| Rajshahi | 1.14 (0.36-2.90) | 0.821 | 0.88 (0.17-4.53) | 0.875 |
| Rangpur | 3.14 (0.77-6.37) | 0.132 | 4.05 (0.64-8.25) | 0.147 |
| Sylhet | 1.29 (0.18-7.02) | 0.800 | 1.01 (0.17-7.53) | 0.995 |
| Barisal | Reference |  | Reference |  |
| ***Area of residence*** |  |  |  |  |
| Rural | 0.91 (0.57-1.47) | 0.715 |  |  |
| Urban | Reference |  |  |  |
| ***Current marital status*** |  |  |  |  |
| Single | 1.24 (0.70-2.21) | 0.460 |  |  |
| Married | Reference |  |  |  |
| ***Patient education level*** |  |  |  |  |
| Illiterate | 0.68 (0.39-1.17) | 0.165 | 0.34 (0.12-0.97) | 0.046 |
| Primary | 0.99 (0.56-1.77) | 0.986 | 0.89 (0.37-2.17) | 0.801 |
| Secondary/Higher | Reference |  | Reference |  |
| ***Spouse education level*** |  |  |  |  |
| Illiterate | 0.54 (0.32-0.91) | 0.020 | 1.07 (1.22-1.91) | 0.023 |
| Primary | 1.01 (0.57-1.78) | 0.399 | 3.55 (0.47-2.45) | 0.879 |
| Secondary/Higher | Reference |  | Reference |  |
| ***Household monthly income (BDT)*** |  |  |  |  |
| <5000 | 0.71 (0.56-0.89) | <0.001 | 0.87 (0.46-0.94) | <0.001 |
| 5000-10000 | 0.50 (0.26-0.97) | 0.042 | 0.49 (0.20-1.17) | 0.114 |
| 10001-20000 | 0.52 (0.23-1.16) | 0.109 | 0.58 (0.35-1.63) | 0.298 |
| >20000 | Reference |  | Reference |  |
| **Any portable electronic devices** |  |  |  |  |
| Yes | 2.20 (1.09-4.62) | 0.027 | 1.11 (1.07-4.97) | 0.022 |
| No | Reference |  | Reference |  |
| **Any mass media access** |  |  |  |  |
| Yes | 1.45 (0.94-2.24) | 0.086 | 1.90 (0.44-2.84) | 0.081 |
| No | Reference |  | Reference |  |
| **Medical history of the patients** |  |  |  |  |
| ***Any symptoms*** |  |  |  |  |
| Yes | 6.60 (1.79-8.65) | <0.001 | 5.55 (1.04-5.33) | 0.041 |
| No | Reference |  | Reference |  |
| ***Cancer stage*** |  |  |  |  |
| <=2 | 1.35 (0.82-2.22) | 0.234 |  |  |
| >2 | Reference |  |  |  |
| ***First health facility visits after symptoms*** |  |  |  |  |
| General Govt. Hospital | 1.07 (0.37-3.23) | 0.895 | 1.15 (0.25-5.29) | 0.857 |
| Private clinic/hospital | 1.79 (0.82-5.31) | 0.179 | 1.99 (0.45-7.22) | 0.366 |
| Others | Reference |  | Reference |  |
| ***Consume alternative remedy*** |  |  |  |  |
| Yes | 0.60 (0.37-0.95) | 0.028 | 0.52 (0.26-0.94) | 0.043 |
| No | Reference |  | Reference |  |
| ***Any diagnosis delay*** |  |  |  |  |
| Yes | 0.59 (0.38-0.91) | 0.017 | 0.42 (0.22-0.79) | <0.001 |
| No | Reference |  | Reference |  |
| ***Discomfort experience*** |  |  |  |  |
| Yes | 1.82 (1.12-3.39) | 0.043 | 2.33 (1.01-5.57) | 0.039 |
| No | Reference |  | Reference |  |
| **Family a support** |  |  |  |  |
| ***The person you talked to first about your health problem*** |  |  |  |  |
| Husband | 0.80 (0.44-1.45) | 0.472 |  |  |
| Mother | 1.11 (0.38-3.40) | 0.851 |  |  |
| Neighbor | 0.71 (0.22-2.17) | 0.539 |  |  |
| Son or daughter | 1.07 (0.52-2.22) | 0.849 |  |  |
| Other | Reference |  |  |  |
| ***Recommended you to consult with a doctor*** |  |  |  |  |
| Herself | 2.03 (0.74-6.18) | 0.518 | 1.55 (0.33-7.85) | 0.584 |
| Husband | 1.05 (0.61-1.80) | 0.185 | 1.91 (0.85-4.36) | 0.120 |
| Neighbor | 1.01 (0.43-2.38) | 0.862 | 1.84 (0.45-7.62) | 0.396 |
| Son or daughter | 1.21 (0.64-2.32) | 0.560 | 1.42 (0.53-3.92) | 0.488 |
| Other | Reference |  | Reference |  |
| ***Fear or uncomfortable talking about the problem with your spouse*** |  |  |  |  |
| Yes | 1.19 (1.06-2.20) | 0.046 | 2.39 (1.03-4.79) | 0.046 |
| No | Reference |  | Reference |  |
| ***Receive support from spouse after diagnosis*** |  |  |  |  |
| Yes | 1.45 (1.17-2.74) | 0.025 | 1.21 (1.11-2.91) | 0.036 |
| No | Reference |  | Reference |  |
| **Receive support from social circle** |  |  |  |  |
| Yes | 0.70 (0.42-0.93) | 0.014 | 0.54 (0.26-0.89) | 0.009 |
| No | Reference |  | Reference |  |

**Table 4: Goodness of fit test and classification accuracy of the final models**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Hosmer and Lemeshow's goodness of fit test | | | Area Under Receiver Operating Characteristic Curve | | |
|  | X-squared | DF | P-value | AUC scores | 95% CI | P-value |
| Adjusted Model | 7.84 | 8 | 0.450 | 77.13% | 71.13%-83.13% | <0.001 |

**Figures**

**Figure 1: Regional variations in fear, spousal support, and social support among patients discussing breast cancer issues**



**Figure 2: Model evaluations using the receiver operating characteristic curve (ROC curve) for adjusted mode**

