



THE AWARENESS LEVEL REGARDING AWARENESS RIBBONS AMONG MEDICAL STUDENTS OF EITHER GENDER

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ABSTRACT

This cross-sectional study was conducted among 70 medical students who had enrolled for First Year MBBS Course at a Medical College in Maharashtra, India. Among the Medical students who participated in the study 37 males (52.86%) and 33 females(47.14%). Their age were 18 years (26%), 19 years (37%), 20 years(30%) and 21 years (7%). The questions asked regarding “awareness ribbons” main purpose [A] Generate awareness Yes (Male 52.86%, Female 47.14%), No (Male 0%, Female 0%). [B] Promote symbolic support Yes (Male 51.43%, Female 44.29%), No (Male 1.43%, Female 2.86%). [C] Raise funds Yes (Male 32.86%, Female 35.71%), No (Male 20%, Female 11.43%). Regarding the question “Please match the awareness ribbons with the disease they represent”. The percent of correct answers Male and Female together Green=10%, Pink=55.71%, Red=70%, Pink and blue=20%, Light Blue=31.43%, Peach=35.71%, Yellow and Red=15.71%, Gray=31.43%, Blue, Pink and Teal=21.43%, Burgundy and White=28.57%, Burgundy=21.43%, White or Pearl=32.86%, Purple=25.71%, Blue, Yellow and Purple=21.43%, White and Teal=30%.

KEYWORDS: Medical student, Awareness Ribbons, Awareness level.

INTRODUCTION

Awareness ribbons are symbol meant to show support or raise consciousness for a cause.^[1] Different colors and patterns are associated with different issue. The history of the first ribbons that were represented as meaningful objects in history were the tokens given to Knights during the middle ages in Europe. The yellow ribbon from the Puritan army during the English Civil War. From there, it spread to the Americans, where the army of United States become associated with it. In the early1970s the song “Tie a Yellow Ribbon Round the Ole Oak tree” was released. Based on this song a wife of a hostage in Iran was the first who used the ribbon as an awareness symbol. The purpose and usage of ribbons are that they can be used simply to raise awareness of a disease or condition. Ribbon colors are often associated with one or more conditions but there are several sources that defines what color relates to which condition. They also provide an outline of the dates in which the ribbon is significant.^[2] Ribbons are often promoted to signify the prevalence of a specific disease or condition. The significance of Awareness Ribbons is that it have the potential to bring a community of people together. For an example October is Breast cancer awareness month and is symbolized by the Pink ribbon.

MATERIALS AND METHODS

This cross-sectional study was conducted by administering a pre-tested and pre-validated questionnaire via Google forms to the medical students aged 18 years and above of either gender who had enrolled for the first-year of the Bachelor of Medicine, Bachelor of Surgery (MBBS) Course at the medical colleges in the state of Maharashtra, India. Informed consent was taken on the Google forms. The statistical calculation were adapted to Microsoft Excel spreadsheet.

RESULTS

Table 1: Demographic profile.

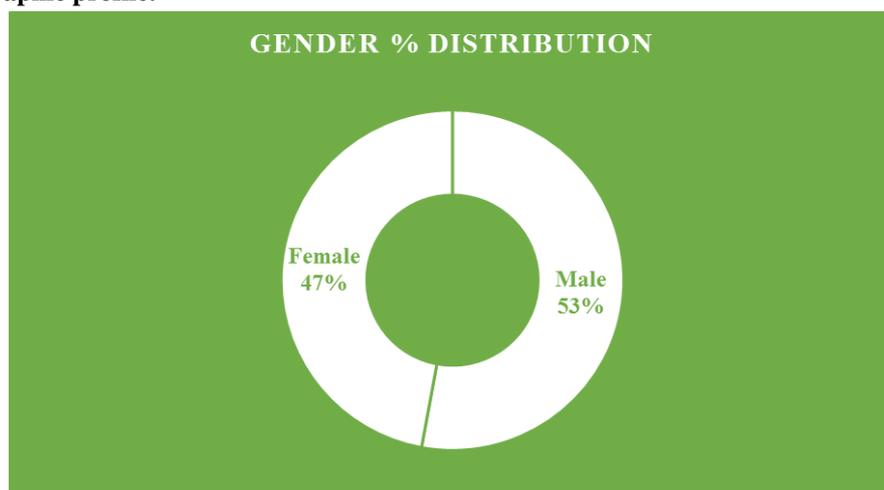


Table 2: Age % distribution.

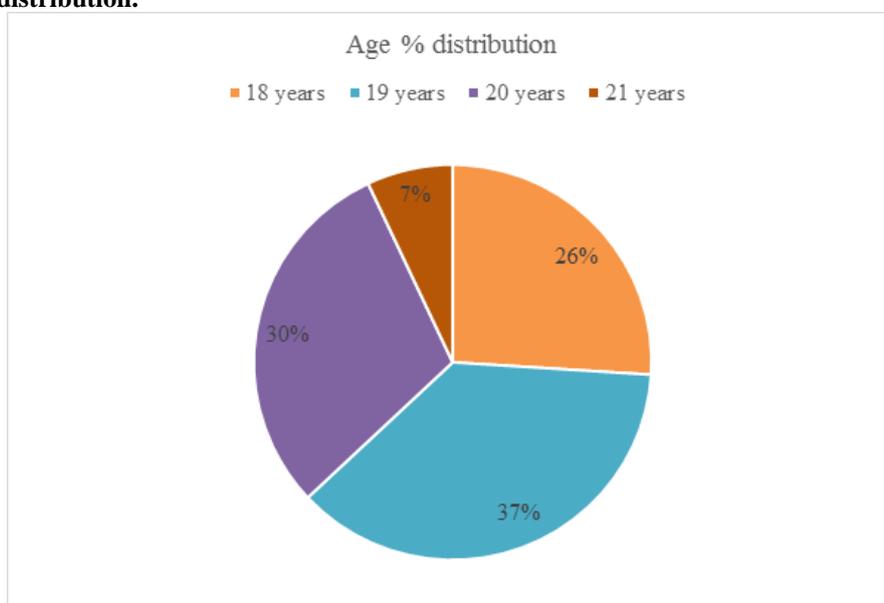


Table 3.

Purpose of awareness ribbons	Yes			No		
	Male	Female	Total	Male	Female	Total
Generate awareness	52.86%	47.14%	100%	0%	0%	0%
Promote symbolic support	51.43%	44.29%	95.71%	1.43%	2.86%	4.29%
Raise funds	32.86%	35.71%	68.57%	20%	11.43%	31.43%

Table 4.

Colors	% of correct answers		
	Male	Female	Total
Green	1.43%	8.57%	10.00%
Pink	28.57%	27.14%	55.71%
Red	35.71%	34.29%	70.00%
Pink & Blue	10.00%	10.00%	20.00%
Light Blue	20.00%	11.43%	31.43%
Peach	22.86%	12.86%	35.71%
Yellow & Red	10.00%	5.71%	15.71%
Gray	18.57%	12.86%	31.43%

Blue, Pink & Teal	11.43%	10.00%	21.43%
Burgundy & White	18.57%	10.00%	28.57%
Burgundy	12.86%	8.57%	21.43%
White or Pearl	20.00%	12.86%	32.86%
Purple	17.14%	8.57%	25.71%
Blue, Yellow & Purple	12.86%	8.57%	21.43%
White & Teal	14.29%	15.71%	30.00%

Table 5.

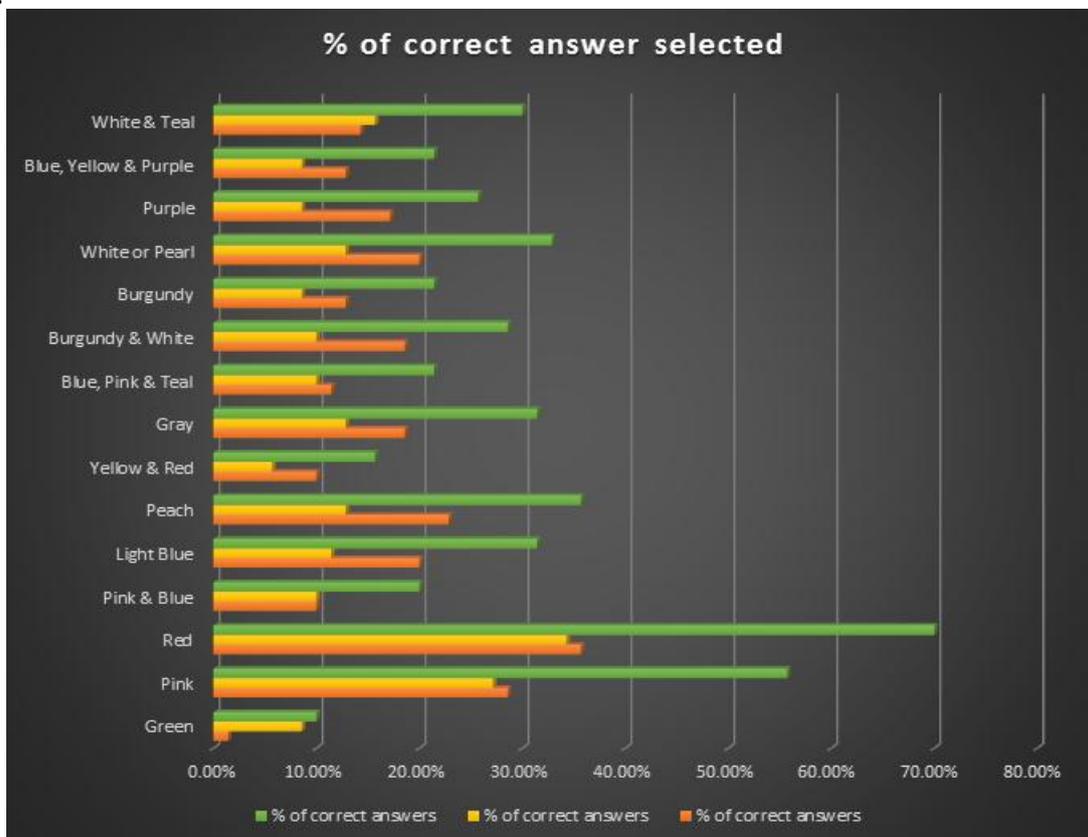


Table 6.

Color	Age	Male Z value	Male p value	Female Z value	Female p value
Green	18	0.12500	0.314	0.00000	0.048*
	19	0.00000		0.09231	
	20	0.00000		0.10083	
	21	0.00000		0.00000	
	Total	0.02703		0.04784	
Pink	18	0.18298	0.959	0.11239	0.195
	19	0.14391		0.09730	
	20	0.15076		0.11433	
	21	0.28868		0.00000	
	Total	0.08306		0.06130	
Red	18	0.16366	0.924	0.11239	0.184
	19	0.14044		0.09231	
	20	0.14213		0.07622	
	21	0.25000		0.00000	
	Total	0.07802		0.05524	
Pink & Blue	18	0.12500	0.438	0.06882	0.050*
	19	0.10415		0.09730	
	20	0.11237		0.07622	
	21	0.28868		0.00000	
	Total	0.06528		0.05071	

Light blue	18	0.18298	0.388	0.10513	0.362
	19	0.14044		0.09231	
	20	0.13056		0.07622	
	21	0.25000		0.00000	
	Total	0.08083		0.05316	
Peach	18	0.18898	0.877	0.09177	0.636
	19	0.14391		0.09231	
	20	0.14865		0.1143	
	21	0.25000		0.00000	
	Total	0.08257		0.05524	
Yellow and Red	18	0.16366	0.751	0.00000	0.115
	19	0.12163		0.08427	
	20	0.08333		0.07622	
	21	0.25000		0.00000	
	Total	0.06528		0.04048	
Gray	18	0.18298	0.922	0.10513	0.121
	19	0.13323		0.08427	
	20	0.14213		0.10083	
	21	0.28868		0.00000	
	Total	0.07957		0.05524	
Blue, pink & teal	18	0.16366	0.764	0.09177	0.394
	19	0.12163		0.09231	
	20	0.13056		0.07622	
	21	0.00000		0.00000	
	Total	0.06861		0.05071	
Burgundy & white	18	0.18298	0.724	0.06882	0.050*
	19	0.14391		0.09730	
	20	0.13056		0.07622	
	21	0.25000		0.00000	
	Total	0.07957		0.05071	
Burgundy	18	0.18298	0.021*	0.00000	0.048*
	19	0.12163		0.09231	
	20	0.08333		0.10083	
	21	0.00000		0.00000	
	Total	0.07151		0.04784	
White or pearl	18	0.18298	0.131	0.09177	0.251
	19	0.14391		0.08427	
	20	0.13056		0.12052	
	21	0.00000		0.00000	
	Total	0.08083		0.05524	
Purple	18	0.18898	0.408	0.09177	0.063
	19	0.13323		0.09231	
	20	0.11237		0.00000	
	21	0.28868		0.00000	
	Total	0.07802		0.04784	
Blue, yellow & purple	18	0.18298	0.173	0.09177	0.063
	19	0.14044		0.09231	
	20	0.08333		0.00000	
	21	0.00000		0.00000	
	Total	0.07151		0.04784	
White & teal	18	0.18298	0.912	0.10513	0.718
	19	0.12163		0.09730	
	20	0.13056		0.11433	
	21	0.25000		0.00000	
	Total	0.07402		0.05847	

Z = Standard mean error, *significant

RESULTS AND DISCUSSION

Total 70 medical students participated. Out of 70 students, male 37 (53%) and female 33 (47%) (Table 1). As per Table 2 the age of the medical students were 18, 19, 20 and 21 years. Among them 18 years (26%), 19 years (37%), 20 years (30%) and 21 years (7%).

Table 3 shows the purpose of awareness ribbons. Regarding the question Generate awareness all male and female participants answered correctly (Yes=100%). Regarding the option promote symbolic support Yes= Male 51.43%, Female 44.29% and Total Yes 95.71%. Regarding No option Male=1.43% and Female=2.86%. The answer regarding the Raise funds Yes= 32.86% (Male), 35.7% (Female) and Total Yes answer 68.57%. No option selected by 20% Male and 11.43% Female.

As per Table 5, following are the level of awareness among medical students.

Green (Eye cancer): In this study $p=0.041$. As per Isabella Aerts *et al*^[4] Retinoblastoma is a rare eye tumor of childhood that arises in retina. Alaa AlAli *et al*^[5] described the main therapeutic priority for Retinoblastoma is to first save the child's life through early detection. Abdulkabir A. and others^[6] informed that awareness of ocular cancers composed to other cancers is low.

Pink (Breast cancer Female): In this study the correct answer regarding awareness was $p=0.771$. Demah AlAyadhi and others^[7] described that cancer is the second most frequent cause of death worldwide. Early detection of cancer is a cornerstone of cancer survival. As per World Health organization (WHO)^[8], the cancer burden continues to grow globally. Syed Arman Rabbani and others^[9] study describes that Breast cancer is the most common cancer in females and is the leading cause of cancer death in females worldwide. Another study by Lalita S and others^[10] described that the overall awareness was moderate. Mammography is the most efficient way since it helps in diagnosing cancer. The study of Kajal S and others^[11] described the Breast self examination (BSE) is not difficult and not time consuming.

Red (HIV-AIDS): The present study shows the awareness level among the medical students p is 0.644 about Red ribbon. The study of B Khade *et al*^[12], AIDS has become an important public health problem. As per this study 98% students believe that prior-marriage HIV testing should be done. The work S M Biradar *et al*^[13] reported that 100% of students were aware about the availability of diagnostic test.

Pink and Blue (Breast cancer Male): The awareness level of students $p=0.814$ of this study. The study of Jonathan White and others^[14] described that although rates of male breast cancer are increasing, the cancer remains rare. The other study of Samia M *et al*^[15] found

that raising awareness about male breast is essential. As per the work of Truc S N and others^[16], male breast cancer requires much more research to develop guidelines and treatment pathways.

Light Blue (Prostate cancer): The present study shows the awareness level $p=0.224$. As per Necku *et al*^[17] study Prostate cancer less awareness level and knowledge regarding risk factors and signs of the disease.

Peach (Uterine cancer): Present study's awareness level about Peach color ribbon $p=0.166$. As per the study of Wan *et al*^[18], early detection will reduce the number of death of endometrial cancer patients. Preventive strategies focus on the weight reduction, educating women about the importance reported by Michelle L *et al*^[19].

Yellow and Red (Hepatitis C): From the data of present study p is 0.443 about the awareness of the students about yellow and red ribbon. The results of the survey by Ravinder G and others^[20], there is a need to work on raising HCV awareness among general public. Another study of Philip B *et al*^[21], describe that Hepatitis C virus is prevalent globally (67%) among the people who inject drugs (PWID).

Gray (Brain cancer): Present study shows the awareness level value $p=0.487$. The study of Margariet *et al*^[22], described that there is a need for tailored symptom care in glioma patients.

Blue, Pink and Teal (Thyroid cancer): Present study shows $p=0.967$ awareness level. The study of Juan J Diez and others^[23], Thyroid cancer patient self reported satisfaction with health care providers despite high proportion of treatment related side effects. Another study of Ayesha Iqbal and others^[24], describe that overall awareness of the students about predisposing factors, signs of cancer and prevention towards Thyroid were found to be poor.

Burgundy and White (Head and neck cancer): This study shows about awareness of Head and Neck cancer $p=0.200$. The study of Saleh Alqaryan and others^[25] revealed that there was a lack of knowledge and awareness about Head and Neck Cancer (HNC). Another study by Karine Ligier^[26], described that early detection of HNC would seem to be the most appropriate way.

Burgundy (Multiple Myeloma): The present shows awareness level $p=0.539$. Lee Smith *et al*^[27] revealed that Multiple Myeloma is the second most common hematologic cancer. Much more research is needed in all areas of Multiple Myeloma. The study of Sarah Anne *et al*^[28], revealed that a holistic approach needs to be employed beneficial for patients at all stages of their disease.

White or pearl (Lung cancer): This study shows $p=0.355$. The work of Ugochinyere I and others^[29], described there is an urgent need for the introduction of timely access to palliative care from diagnosis to end of life. The work of Mally G and others^[30] describe that level of knowledge and attitude towards risk factors of Lung Cancer has increased.

Purple (Alzheimer's disease): In this study the awareness response is $p=0.174$. Nan Sook et al^[31] described education on Alzheimer's and intervention efforts should be targeted social network and activity participation. It was pointed out by Alhazzani and others^[32], that because of the increasing prevalence of dementia in general and Alzheimer's disease in particular there is an urgent need to raise the public awareness about Alzheimer's disease.

Blue, Yellow and Purple (Bladder cancer): The awareness level of $p=0.539$. The study done by Neda M and others^[33], reported that the incidence of bladder cancer in developed countries were higher. Other work of Babatunde M D and others^[34], revealed that there is a direct-relationship between education levels, good knowledge on bladder cancer and good perception on vulnerability to bladder cancer.

White and Teal (Cervical cancer): Present study shows awareness level $p=0.573$. Yahya A et al^[35], described knowledge about cervical cancer and its screening method was poor among participants. The study of Alyse R et al^[36] revealed to create an awareness through community based education programme. The study of Aparna N and others^[37], revealed that there is good knowledge among medical students regarding Cervical cancer. More awareness to be created about HPV vaccine.

CONCLUSION

The primary purpose of this study was to evaluate the knowledge and level of awareness about different awareness ribbons color. Knowledge and level of awareness about the ribbons color can help in reducing the mortality rate. "Prevention is better than cure" so creating awareness can help in prevention and early diagnosis of diseases. Doctors play an important role in creating awareness to the public. So the medical students awareness about cancer will help to create awareness among lay public.

REFERENCES

1. <https://www.disabled-world.com/disability/awareness/ribbons.php>. Disabled World. Awareness Ribbons Chart: Color and Memory of Awareness Ribbon Causes, April, 2018; 1-12.
2. <http://www.bloomca.org/docs>. Ribbon color meanings. BloomCA.org. Bloomsburg University of Pennsylvania; 1-12.

3. <https://www.nationalbreastcancer.org>. NBCF Breast Cancer Awareness Month, 2018; 1-12.
4. Isabelle Aerts, Livia Lumbroso-Le Rouic et al. Retinoblastoma. *Orphanet J Rare Dis.*, 2006; 1: 31.
5. Alaa AlAli, Brenda Gallie. Retinoblastoma for pediatric ophthalmologists. *Asia-Pac J ophthalmol.*, 2018; 7: 160-168.
6. Abdulkabir A. Ayanniyi and others. Awareness and knowledge of ocular cancer in a resource- limited economy. *N Am J MedSci*, Nov, 2010; 2(11): 526-531.
7. Demah AlAyadhi, Ghadah Alyousif et al. Systematic Review: Awareness, Knowledge, Attitude and Practice of cancer screening program in the kingdom of Saudi Arabia. *Dr. Sulaiman Al Habib Medical Journal*, December, 2020; 2(4): 151-161.
8. <https://who.int/cancer/detection/en> accessed June 3, 2019
9. Syed Arman Rabbani and others. Awareness and Perception of Breast Cancer among the Future Healthcare Providers of Ras Al Khaimah, United Arab Emirates. *Journal of Applied Pharmaceutical Science*, 2017; 7(02): 142-146.
10. Lalita Subramanian, V U Salini et al. Breast Cancer awareness in South India. *International Journal of Scientific Study*, August, 2018; 6(5): 39-42.
11. Kajal Srivastava and others. Awareness of Breast Cancer Risk Factors and Practice of breast self-examination among nurses of Tertiary Care Hospital. *Indian J of Forensic and Community Medicine*, Apr-Jun, 2016; 3(2): 75-78.
12. Bipinchandra Khade et al. Assessment of awareness and knowledge regarding HIV/AIDS among first year MBBS students in a medical college in Maharashtra India. *Indian J of Clinical Anatomy and Physiology*, 2020; 7(2): 210- 218.
13. Santosh M Biradar and others. Study to assess awareness about HIV/AIDS among medical students. *Int J of Community Med and Pub Health*, Jan, 2016; 3(1): 62-64.
14. Jonathan White and others. Male Breast carcinoma: increased awareness needed. *Breast Cancer Research*, 2011; 13: 219.
15. Samia M Al- Amoudi et al. Knowledge about Breast Cancer among male medical students, Jeddah, 2011. *Life sci J.*, 2012; 9(3): 166-170.
16. Truc Sophia Nguyen and others. Living with male breast cancer: A qualitative study of Men's Experiences and Care Needs. *Breast Cancer (Basel)*, Feb, 2020; 15(1): 6-12.
17. Juliana Gyasi Necku and others. Prostate cancer awareness and attitude towards early detection among male soldiers in Ghana: a cross-sectional study. *Afr J Urol*, 2019; 25: 5.
18. Wan Adan Wan-Nor-Asyiken et al. Endometrial cancer in Hospital Universitatisains Malaysia. *Asian Pac J cancer Prev*, 2016; 17(6): 2867-2870.

19. Michelle L et al. Prevention strategies in Endometrial carcinoma. *Curr Oncol Rep*. 2018; 20(12): 101-113.
20. Garg Ravinder and others. Awareness and attitude appraisal toward Hepatitis-C among North West population of India- A cross sectional study. *British Journal of Med and Medical Research*, 2015; 10(5): 1-5.
21. Philip Bruggmann and Jason Grebely. Prevention, treatment and care of hepatitis-C virus among people who inject drugs. *International J of Drug policy*, 2015; 26: 22-26.
22. Margriet IJzerman-Korevaar and others. Prevalence of symptoms in glioma patients throughout the disease trajectory: a systematic review. *Journal of Neuro-oncology*, 2018; 140: 485-496.
23. Juan J. Diez and Juan C Galofre. Thyroid cancer patients satisfaction at the management outcome: an analysis of the results of a nationwide survey in 485 subjects. *BMC Health Services Research*, 2021; 21: 158-167.
24. Ayesha Iqbal and others. Thyroid cancer risk factors and Pakistani University students awareness towards it's preventive practice. *Journal of oncology pharmacy practice*, Apr, 2020; 1-9.
25. Saleh Alqaryan et al. Awareness of head and neck cancers in Saudi Arabia. *Saudi Med J.*, 2020; 41(4): 400-405.
26. Karine Ligier and others. Health professionals and the early detection of head and neck cancers: a population-based study in a high incidence area. *BMC Cancer*, 2016; 16: 456.
27. Lee Smith et al. Multiple Myeloma and physical activity: a scoping review. *BMJ Open*, 2015; 5: e009576.
28. Sarah Anne Bird and Kevin Boyd. Multiple myeloma: an overview of management. *Palliative care and social practice*, 2019; 13: 1-13.
29. Ugochinyere I. and others. Lung cancer awareness and palliative care interventions implemented in low- and middle- income countries: a scoping review. *BMC public health*, 2020; 20: 1466.
30. Mally G. Sholih et al. Knowledge, Attitudes and Practices of Lung Cancer Risk Factors in West Bandung Society. *J Pharm Bioallied Sci.*, Dec, 2019; 11(4): 574-579.
31. Nan Sook Park and others. Knowledge about Alzheimer's Disease and Awareness of Alzheimer's disease- Related services in older Korean Americans: The Role of social capital. *Journal of Applied Gerontology*, Feb, 2021; 40(2): 220-227.
32. Adel Ali Alhazzani et al. Public awareness, knowledge and attitude toward Alzheimer's disease in Aseer region, Saudi Arabia. *The Egyptian J of Neurology, Psychiatry and Neurosurgery*, 2020; 56: 81.
33. Neda MahdaviFar et al. Epidemiology, Incidence and Mortality of Bladder cancer and their Relationship with the development Index in the world. *Asian Pac J Cancer Prev*, 2016; 17(1): 381-386.
34. Babatunde M and others. Knowledge, perception and screening of local dye workers regarding Urinary bladder cancer in Ghana. *Afr J Urol*, 2020; 26: 59.
35. Yahya A, Mande A T. Awareness and knowledge of Cervical cancer and it's screening methods among women attending primary healthcare centers in Zaria, North-Western, Nigeria. *Trop J Obstet Gynaecol*, 2019; 36: 271-276.
36. Alyse Reichheld et al. Prevalence of Cervical cancer screening and awareness among women in an urban community in South India- A cross sectional study. *Ann Glob Health*, 2020; 86(1): 30.
37. Aparna Narayana Gollu et al. Knowledge, Awareness and Attitude of medical students regarding HPV infection and HPV vaccination. *Asian Pac J Cancer Care*, 2021; 6(1): 41-46.