MEDICAL ETHICS ISSUES - TAKING BREAST CANCER AND CERVICAL CANCER AS EXAMPLES

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Abstract - In today's society, the rate of cancer is increasing. Taiwan's social culture is constantly changing and discussion on medical ethics also becoming more and more diverse. Gene defects and surrogate motherhood have always been controversial topics, besides medical ethics Issues, this study also discuss the behavior of women undergoing free cancer screening and analyzing the relevance of performing screening tests. Cancer screening is a healthy behavior that uses personal attitudes and beliefs to explain and predict healthy behavior research, the questionnaires total recovery of 200. The result showed significant difference in health status has a major impact on ethical issues, and normal health conditions are willing to prevent surgery for longevity. ANOVA showed that gene deficiency, surrogate mother, and preventive surgery were significantly associated with differences in age and marital status. With the advancement of medical technology, cancer can be effectively cured once it is discovered early. With proper inspection and regular follow-up, even if the mutation gene is positive, it can maintain a good quality of life after preventive treatment.

Index terms - Medical ethics, Breast cancer, Cervical cancer.

I. INTRODUCTION

Recently the American actress Angelina Jolie has removed her breasts, revealing that she has disease inheritance. The BRCA1 gene is located on chromosome 17, while the BRCA2 gene is located on chromosome 13. When these two genes are defective, DNA damage may not be completely repaired, the result is breast cancer or cervical cancer. In recent years, doctors have reported that prophylactic mastectomy is common among women with unilateral breast cancer. They even decided to remove the other healthy breast at the same time (even if there were no genetic mutations that would increase the risk). It leads to related ethical issues, such as pre-excision of healthy organs to prevent cancer [1]. Therefore, the mainly analysis included screening tests for Pap smears, mammography, and other screening behaviors to explore the influence of age and marital status on Pap smear and mammography screening behavior. Therefore, the purpose of this study to address topics related to breast cancer and cervical cancer is as follows: 1. Understand the views of respondents on the ethical issues of cervical cancer and breast cancer. 2. Factors Influencing the Screening Behavior of Cervical Cancer and Breast Cancer by health Status. 3. The Influence of Personal background on the Screening Behavior of Cervical Cancer and Breast Cancer. 4. To explore the influence of other factors on Pap smear, mammography cognition and examination behavior.

II. LITERATUREREVIEW

Breast cancer is caused by the rapid growth and proliferation of abnormal breast cancer cells, destroying normal tissues and forming cancer tumors[2]. The risk factor for breast cancer is that the family had a history of breast cancer, especially mothers or sisters and other women who have direct bloodline affinity to breast cancer. Frequently occurs in women over 50 years old, early menstruation (below 12 years old) or later menopause (more than 50 years old), no fertility, first child born after age 30, not breastfeeding, obese (body mass index ≥30 kg/per m2), oral contraceptive pill or postmenopausal hormone supplement [3].

Mammography screening is an imaging examination using low-dose X-ray mammography. It can be used to detect the calcification of the breast or tiny tumors [4]. Asymptomatic zero stage breast cancer can be found. In order to obtain high-quality mammographic images, the radiologist may press the breasts to reduce the thickness of the breast evenly during the process. During the screening process, women's breast pain may be caused and the screening rate may be reduced [5]. According to the TNM staging system of the seventh edition of American Joint Committee on Cancer (AFCC),and the Union for International Cancer Control (UICC), the number of breast cancer stages is defined based on tumor size (T), metastasis of axillary lymph nodes (N), distant metastasis (M), and the number of breast cancer diagnosis stages is divided into five stages [6-7].

Cervical cancer

The literature indicates that sexual behavior is the main transmission route of HPV infection. Too early sexual activity, multiple sexual partners, have multiple sexual partners, is considered to be a higher risk of cervical cancer [8]. The peak of disease occurs in 35 to 45-year-old married women. It is about 5 to 15 years ago begins to have a previous cell lesions, which is about 20 to 40 years old [9]. Health and Welfare Ministry Death Statistics Data on Cervical Cancer Deaths 661 people in 2017, means 5.6 deaths per 100,000 people. From 1995 in Taiwan, women

aged 30 or above are given free screening tests for Pap smears every year.
The study found that with increasing age, the number of people who have performed breast self-examination increases, positively related to the health attitude and beliefs of breast self-examination. In addition, studies have pointed out that for self-paying health checkers, studies have shown that 73% are spontaneous. And age has a significant correlation with cancer family history and motivation. Some studies have found that young people are more likely to participate in mammography screening [10].

III. METHODS

The study Explore the behavior of women undergoing free cancer screening and analyzing the relevance of performing screening tests. Cancer screening is a healthy behavior that uses personal attitudes and beliefs to explain and predict healthy behavior research. The questionnaire was issued from July 1st to September 1st, 2017. A questionnaire was created through Google Forms. In addition, paper questionnaires were sent out and filled in to answer the questionnaire, total recovery of 200 questionnaires. The cancer screening intention and cancer screening impaired consciousness questionnaire refer to Hsiu-Min Han (2013) "The study of health promoting lifestyle and cancer screening intention among nurses from a regional hospital in southern Taiwan" [11]. Ethical issues cognitive refer to Zhang Jinjian (2013) "Breast Cancer BRCA1 and BRCA2 Genes from Angelina Jolie Event" as revised questionnaire [12]. The research framework as follows:

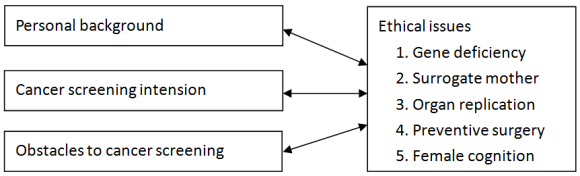


Figure 1Research framework

Personal background includes age, education level, marital status, child, health status and religion. Obstacles to cancer screening include job style and working stress. Ethical issues include:

1. Do you agree with Angelina Jolie's decision to remove both breasts and ovaries due to hereditary family (BRCA gene deficiency)?
2. Do you agree that you need to find a surrogate mother to have a child because of the removal of the ovary?
3. Do you agree that because of the removal of the ovary, you need to use a method of organ replication to get a good organ?
4. Do you agree that women need preventive surgery in order to live longer?
5. Do you agree that women are still called women after surgical removal of the breast and uterus?

IV. RESULT

The ages of the respondents were mostly 40 to 49 years old (37%, 74) and 50 to 59 years old (31.5%, 63). Education level was mostly high school (47%, 93) and bachelor (41.9%, 83). The percentage ofmarried is 77% (154), as table 1. Respondent had pap smears in the past four yearswas mostly 35% (70); Intention to accept a pap smear within the next year is 59.3% (118); No reluctanceto accept pap smears is 47.5% (95) , as table 2. Respondent had a mammography in the past two yearswas mostly 52.2% (82); Intention to accept mammography within the next three year is 60.1% (94); No reluctanceto accept mammography is 51.7% (77), as table 3.

Table 1 Frequency- Personal Background

	Classification	N	Percentage
Age	30-39 years old	40	20%
	40-49 years old	74	37%
	50-59 years old	63	31.5%
	over 60 years old	23	11.5%
Education level	high school	93	47%
	bachelor	83	41.9%
	master	22	11.1%
Marital status	unmarried	38	19%
	married	154	77%
	other	8	4%

Table 2 Frequency- Pap Smear Screening Intention

	Classification	N	Percentage
Have you had pap smears in the past four years?	0	70	35%
	1	62	31%
	2	34	17%
	3	34	17%
Intention to accept a pap smear within the next year is	very reluctant	7	3.5%
	reluctant	29	14.6%
	willing	118	59.3%
	very willing	45	22.6%
Unwilling to accept pap smears because	troublesome	16	8.1%
	have no time	23	11.6%
	own expenses	4	2%
	don't know the process	4	2%
	not necessary	6	3%
	uncomfortable process	45	22.5%
	no reluctance	95	47.5%

T test showed significant difference in health status has a major impact on ethical issues, and normal health conditions are willing to prevent surgery for longevity (table 4). ANOVA showed that gene deficiency, surrogate mother, and preventive surgery were significantly associated with differences in age and marital status.

In "Do you agree with Angelina Jolie's decision to remove both breasts and ovaries due to hereditary

family (BRCA gene deficiency)" and "Do you agree that women need preventive surgery in order to live longer", 30-39-year-old people who have a tendency to be significantly older than 50-59 or >60, as table 5. In "Do you agree with Angelina Jolie's decision to remove both breasts and ovaries due to hereditary family (BRCA gene deficiency)" and "Do you agree that you need to find a surrogate mother to have a child because of the removal of the ovary", Unmarried women are significantly higher than married, and married women are significantly higher than other, as table 6.

Table 3 Frequency- Mammography Screening Intention

	Classification	N	Percentage
Have you had a mammography in the past two years?	no	75	47.8%
	yes	82	52.2%
Intention to accept mammography within the next three years is	very reluctant	5	3.2%
	reluctant	26	16.5%
	willing	94	60.1%
	very willing	32	20.3%
Unwilling to accept mammography because	troublesome	11	7.4%
	have no time	23	15.4%
	own expenses	4	2.7%
	don't know the process	2	1.3%
	not necessary	1	0.7%
	uncomfortable process	31	20.8%
	no reluctance	77	51.7%

Table 4 T test- Overall health status to ethical issues

	Overall health status	N	Average	Standard deviation	t	P value
Preventive surgery	Normal	158	2.58	0.823	2.230	0.027*
	Good	31	2.23	0.762		

* P<0.05

Table 5 ANOVA test- Age to ethical issues

	Age	N	Average	Standard deviation	F	P	Scheffe post hoc
Gene deficiency	30-39	40	2.83	0.747	6.623	0.000	1>3 1>4
	40-49	74	2.49	0.895			
	50-59	63	2.19	0.715			
	>60	23	2.09	0.793			
Surrogate mother	30-39	40	2.45	0.846	2.598	0.054	
	40-49	74	2.35	0.835			
	50-59	63	2.21	0.744			
	>60	23	1.91	0.733			
Preventive surgery	30-39	40	2.85	0.770	5.000	0.002	1>3
	40-49	74	2.64	0.804			
	50-59	63	2.30	0.775			
	>60	23	2.30	0.822			

Note. 1 means 30-39 years old 2 means 40-49 years old
3 means 50-59 years old 4 means >60 years old

Table 6 ANOVA test- Marital status to ethical issues

	Marital status	N	Average	Standard deviation	F	P	Scheffe post hoc
Gene deficiency	unmarried	38	2.87	0.844			
	married	154	2.34	0.795	10.702	0.000	1>2 2>3
	other	8	1.63	0.518			
Surrogate mother	unmarried	38	2.61	0.887			
	married	154	2.23	0.765	7.52	0.001	1>2 2>3
	other	8	1.50	0.535			
Preventive surgery	unmarried	38	2.82	0.926			
	married	154	2.49	0.769	3.64	0.028	
	other	8	2.13	0.835			

Note. 1 means unmarried 2 means married 3 means other

DISCUSSION AND CONCLUSION

According to the analysis of ANOVA results in this study, young women are more receptive to the removal of female organs due to defects in the BRCA1 gene because of their novel concept. Unmarried women are more concerned with medical ethical issues than married women. The reason may be that they want more options, such as surrogate mother. In the analysis of t test results, the worse the health, the more will agree to remove both breasts and ovaries due to hereditary family (BRCA gene deficiency). They will hope to maintain their health through preventive surgery.

In today's society, the rate of cancer is increasing. According to the statistics of four cancer screening rates in 2016, cervical cancer screening rate reached 72%. Breast cancer screening rate is the lowest, only 39%[13]. The National Health Administration provides 45 to 69 years old women to have mammography once every two years. In 2016 is eligible for screening, and the number of unscreened screens as high as 1.6 million people; the highest number of cancers for women was breast cancer. With the advancement of medical technology, cancer can be effectively cured once it is discovered early. The data showed that the average five-year survival rate for all stages (zero to fourth period) of breast cancer was as high as 84%, and that for the fourth period was nearly 25%. With proper inspection and regular follow-up, even if the mutation gene is positive, it can maintain a good quality of life after preventive treatment.

Taiwan's social culture is constantly changing and discussion on medical ethics also becoming more and more diverse. Gene defects and surrogate motherhood have always been controversial topics. There are more and more people who can accept it. Although Angelina Jolie's move to remove organs in advance may be controversial, it is her own way of protecting herself. This method is more likely to motivate people to face their own genes, and early detection can also reduce the risk of cancer.

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