

## Review Article

## Health Issues in Taiwanese Women

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## Abstract

The world's population of women is currently estimated at 3.5 billion. In order to promote women's health and quality of life, understanding the current health status of women worldwide is an important global subject. The purposes of this paper are to review the statistical evidence and to describe the current status and prospects on the health of ethnic groups of women in Taiwan, with a focus on life expectancy, morbidity and health risk factors, causes of death, mental health, and violence against women. The aim of this paper is to emphasize the need to improve women's health and quality of life among different ethnicities. The information presented in this article can be used as a reference for women's health experts and policymakers to develop future plans and programs that promote effective health services and quality of life among different ethnic women.

**Keywords:** Women's health; Ethnicity

## Introduction

According to 2014 statistics, the world's population of women is currently estimated at 3.5 billion [1]. Promoting women's health is an important global objective to improve quality of life. Since the early 1970s, the United Nations has been highly concerned with women's health issues, designating 1975 as "International Women's Year" and proclaiming the period of 1976 to 1985 as the "World Decade for Women [1]." In 1995, the Fourth World Conference on Women convened in Beijing where representatives from 189 countries adopted the "Beijing Declaration" and proposed the "Beijing Platform for Action to increase consciousness of the issues of importance among women [1]." Meanwhile, the United Nations urged every country to focus on women's health issues and planned to publish *The World's Women: Trends and Statistics* every 5 years. The first edition of this report was published in 1991 and mainly included content on the following eight subjects: population and families, health, education, work, power and decision-making, violence against women, environment, and poverty [1]. The latest edition of the *The World's Women: Trends and Statistics* was published in 2010, and provided a brief analysis of international and national women's statistics and serving as a crucial reference for countries in planning women's health care.

Understanding the current health status and circumstances of women is an essential element to improve women's health care. Hence, the purpose of this paper is to review the statistical evidence and to describe the current status and prospects on health among ethnic groups of women in Taiwan. Specifically, this paper focuses on the presentation of life expectancy, morbidity and health risk factors, causes of death, mental health, and violence against women in different ethnic groups of women in Taiwan.

## Life Expectancy

Reported statistics indicate that women live longer than men. In the 1950s, the overall life expectancy in the world for females was 48 years, whereas for males it was approximately 45 years [1]. In 2013,

the overall life expectancy increased to 73 years for women and to approximately 68 years for men [1]. In recent years, the overall life expectancy for both women and men in many developed countries has been more than 70 years. The average life expectancy for females and males is about 83 and 78 years, respectively [1,2]. The highest life expectancy at birth for women worldwide is 83.5 years in Hong Kong, followed by 83.1 years in Japan and 82.9 years in Italy [1].

As presented in Table 1, the overall life expectancy of women and men in Asian countries differs between the region's national populations. The differences likely are due to a number of related factors such as living conditions, nutrition, medical treatments, and health-care services in each of the countries. Similar to worldwide statistics, in Asia women tend to live longer than men; the average life expectancy is 3–7 years longer for females than for males (Table 1). In Taiwan, life expectancy also differs between varied ethnic groups of women; for example, the average life expectancy at birth for Taiwanese women in general is 7.36 years longer than that of aboriginal women [3].

Although life expectancy is longer for females than for males, this does not mean that women live healthier than men. Belon, Lima and Barros (2014) claimed that the use of overall life expectancy statistics as a tool to understand and address women's health-care needs is insufficient; rather, the use of healthy life expectancy statistics is more appropriate as a basis [4]. The term *healthy life expectancy* refers to the adjusted average life expectancy that is calculated by deducting an estimated number of years of unhealthy status from the number of years of an individual's or population's original overall life expectancy at birth [5]. Statistics show that women's healthy life expectancy is at least 8 years shorter than their overall life expectancy, as indicated in Table 1 for women in China, Japan, and South Korea. As a result, elderly women might be more likely than other individuals to experience dependency, poverty, and social isolation, as well as physical and mental disabilities. Thus, healthy life expectancy should be taken into account while planning women's health-care needs and services.

**Table 1:** Overall life expectancy at birth and healthy life expectancy in Asian countries.

Country	Overall Life Expectancy in 2010 – In Years (Healthy Life Expectancy in 2009 – In Years)	
	Females	Males
Taiwan	82	76
China	75 (65)	71 (63)
Hong Kong	85	79
India	65	62
Indonesia	73	69
Japan (2010)	86 (78)	79 (72)
Philippines	74	70
South Korea	83 (71)	76 (65)
Thailand	72	66
Vietnam	76	72

Note: Adapted from [1].

## Morbidity and Health Risk Factors

In addition to social, cultural, economic, and environmental impacts on women's health, negative behavioral factors significantly affect women's disease types and morbidity. Smoking, alcohol consumption, and obesity are known health-risk factors that result in poor health status and outcomes. Acknowledging and understanding the frequency of these negative health behaviors among women may help health-care professionals and policymakers develop specific interventions to improve women's health-care needs.

## Smoking

It is well known that smoking increases the risk of the incidence of cancer and mortality rates due to cancer. Tobacco use is a key risk factor and causes 22% of worldwide deaths due to cancer and 71% of worldwide deaths due to lung cancer [6]. In a study of 1 million deaths in the Chinese population, lung cancer risk was two to four times higher among smokers compared to nonsmokers [6]. Based on data from the United States, 24% of smokers can expect to develop lung cancer during their lifetimes [6]. Among Danish women, smoking for more than 30 years was associated with a 60% higher risk of breast cancer and with an onset of breast cancer at an average of 8 years earlier when compared to nonsmokers [6]. In a study of Taiwanese participants, smoking was associated with cervical cancer in older women [7].

Although research has shown that smoking is a harmful behavior, tobacco use remains common among Taiwanese women, particularly those who are between 21 and 40 years old. According to results from a national survey conducted in Taiwan, the overall prevalent rate of women who smoke remained between the range of 4.10% and 4.75% in the past decade [8]. Based on current data from Taiwan Health Ministry, women aged 31–35 years old had the highest rate of smoking (6.41%), followed by women aged 36–40 years old (5.59%), women aged 26–30 years old (4.00%), and women aged 21–25 years old (1.59%) [8]. Women with an education level of high school or less exhibited a significantly higher rate of smoking (17%) than those with university and higher education levels (1.67%) [9]. Another interesting factor related to smoking behaviors is marital status. According to the national report, Taiwanese women who were divorced, separated,

or widowed had double the smoking rate (6.84%) compared to those who were married (3.39%) [8]. In a study of areas in eastern Taiwan, the smoking rate was up to 23% in aboriginal women [10].

The current statistics on smoking behaviors among young and adult women signal the need for increased efforts to develop programs for smoking cessation and prevention. Smoking behaviors among women might be associated with personal attributes such as age, ethnicity, education, and mental health, and with family and community factors such as financial status, intimate partners, number of children, and living areas [11]. However, researchers noted that women's smoking behaviors have not been fully explored and lack gender-specific analysis [12]. Without specificity to women's health-related needs, the goal of preventing women's smoking behaviors might not be achieved successfully. More efforts are needed to conduct women-based research on personal attributes and on smoking perceptions, attitudes, and behaviors in order to provide a stronger foundation for developing resources that encourage the prevention and cessation of smoking among women and promote women's health.

## Alcohol consumption

Alcohol consumption is the world's third largest risk factor for disease burden [1]. It is the leading health risk factor in the Western Pacific and the Americas and the second largest health risk factor in Europe [1]. The harmful use of alcohol results annually in 2.5 million deaths of individuals throughout the world [1].

The prevalent rate of alcohol consumption among women has increased in the past decade. The rate of Taiwanese women drinking alcohol increased from 10% in 2002 to 42% in 2010 [8,13]. Women with the highest rate of alcohol consumption are aged 18–29 years old (56.6%), followed by women who are 30–39 years old (48.7%) and 40–49 years old (44.2%) [8]. According to the United Nations (2010), 320,000 young people die annually from alcohol-related causes [1]. The growing rate of women who consume alcohol, especially young women, warrants increased attention of women's health-care providers and educators.

In Taiwan, the prevalence of alcohol consumption is much higher among aboriginal women compared to Taiwanese women in general. Yang (2002) reported that the rate of drinking behaviors is more than 28% among aboriginal women, whereas the rate is 10% among Taiwanese women in general. In studies conducted in Taiwanese rural areas, the rate of alcohol consumption ranged from 39% to 61% in female aborigines [10,14]. Up to 32% of aboriginal women reported binge drinking during pregnancy [15]. According to a national survey conducted in Taiwan in 2010, up to 75% of aboriginal women whose father or mother were aborigines reported drinking experiences during the past year [8]. The prevalence of drinking behaviors among particular ethnic groups of women such as aborigines is not only a women's health issue but also a public health concern. It is critical for researchers and health-care providers to devote more attention to the association of cultural norms and societal styles related to the high prevalence of alcohol consumption among ethnic women.

## Overweight and obesity

Adults with a body mass index of 25–29.9 kg/m<sup>2</sup> are defined as overweight, and adults with a body mass index of 30 kg/m<sup>2</sup> or higher

**Table 2:** Top 10 leading causes of death among women in high-income countries, the United States, and Taiwan.

	High-Income Countries (2004)	United States (2007)	Taiwanese (2010)	Aborigines in Taiwan (2010)
Ischemic heart disease	1	1	2	2
Stroke	2	3	4	3
Alzheimer's disease and other dementias	3	5	--	--
Lower respiratory infections	4	4	--	--
Breast cancer	5	--	--	--
Trachea, bronchus, lung cancers	6	--	--	--
Colon and rectum cancers	7	--	--	--
Chronic obstructive pulmonary disease	8	--	--	--
Diabetes mellitus	9	7	3	4
Hypertensive heart disease	10	--	6	8
Cancer	--	2	1	1
Unintentional injuries	--	6	8	5
Chronic liver disease, cirrhosis	--	--	--	6
Pneumonia	--	8	5	7
Chronic lower respiratory diseases	--	--	10	9
Septicemia	--	10	9	10
Nephritis (kidney diseases)	--	9	7	--

**Note:** Adapted from [17,18,23].

are defined as obese [6,16]. Overweight and obesity are significantly linked to many diseases and result in numerous deaths worldwide. Globally, the rate of diseases associated with being overweight and obese is 44% for diabetes, 23% for heart disease, and up to 41% for certain cancers [6]. Approximately 3 million people die each year as a result of being overweight or obese.

The prevalence of increased weight disorders varies between nations, ethnicities, and age groups. The International Obesity Task Force [17] reported that approximately 2.1 billion adults are overweight or obese worldwide. In 2008, the World Health Organization (WHO) estimated that, globally, nearly 300 million women were obese. In Taiwan, the rates of overweight and obese women are 55.3% and 40.3%, respectively [18]. Ethnicity and age also play a role in the prevalence of overweight and obese women. For example, in the United States, the rates of overweight and obesity among Hispanic (76.1%) and non-Hispanic Black women (78.2%) were much higher compared with non-Hispanic White women (61.2%) [19]. In a study conducted in southeastern Taiwan, two thirds of aborigines aged 20 years and older and 31% of female aborigines were overweight and obese [20]. Researchers found that 32% of middle-aged Chinese women aged 45–49 years were overweight and obese, whereas only 12% of young Chinese women aged 19–44 years were overweight and obese [21]. Thus, age and ethnicity should be considered when dealing with the issues of overweight and obesity in women.

Because overweight and obesity are well known as significant risk factors for diseases and deaths, efforts have been made to prevent these conditions. In order to promote body weight control, the Taiwanese government launched a national weight management campaign in 2012 called “Healthy Centenary, Healthy Taiwan [22].” This action plan encourages individuals in communities to engage in healthy eating habits, enjoyable exercise, and body weight monitoring

every day [22]. Providing supportive environments and communities are key elements to prevent people from becoming overweight and obese.

## Causes of Death

According to the International Classification of Diseases, the leading causes of death are grouped into three categories: (a) deaths from communicable diseases and from maternal, perinatal, and nutritional conditions; (b) deaths from no communicable diseases; and (c) deaths from injuries. Results from a survey conducted by the WHO revealed that two thirds of women worldwide die from no communicable diseases, and nearly one third of women worldwide die from infectious diseases, reproduction, and poor nutritional status [1]. Non communicable diseases have become the world's major cause of death among women in developed countries such as Taiwan. Table 2 lists the top 10 leading causes of death among women in high-income countries specifically comparing them to the United States, and Taiwan (Taiwanese and aboriginal women). As shown in Table 2, the leading causes of death among women vary by nations and ethnicities.

Cancer is a significant leading cause of death worldwide, particularly in developed countries. Cancer accounted for 7.6 million deaths (13% of all deaths) in 2008 and is expected to account for 13.1 million deaths in 2030 [6]. The number of new cancer cases is projected to reach 27 million per year by 2030 [23]. Table 3 lists the top 10 cancers among Taiwanese women in general and among aboriginal women in Taiwan [24]. This section focuses on two main types of female cancer, breast cancer and cervical cancer, which are prevalent among female populations worldwide and in Taiwan.

### Breast cancer

Breast cancer takes the top position in the rates of cancer-related

**Table 3:** Top 10 cancers among Taiwanese women in general and among aboriginal women in Taiwan (2010).

	Taiwanese Women	Aboriginal Women in Taiwan
Trachea, bronchus, lung cancers	1	1
Liver cancer	2	2
Colon and rectum cancers	3	5
Breast cancer	4	3
Stomach cancer	5	4
Pancreas cancer	6	10
Cervical cancer	7	7
Ovary cancer	8	10
Non-Hodgkin lymphoma	9	--
Leukemia	10	9
Oral cancer	--	6
Nasopharyngeal cancer	--	8
Esophagus cancer	--	10

**Note:** Adapted from [24].

incidence and deaths in women. Over 1 million new cases of breast cancer are diagnosed worldwide every year [23]. On a global scale, 16% of all women with cancer have breast cancer, and approximately 465,000 women die from breast cancer annually [1,6]. In highly developed regions such as North America, the incidence rate of breast cancer is as high as 99.4 per 100,000 women, with age-standardized rates [6]. According to national statistics, the incidence rate of breast cancer among Taiwanese women increased nearly 50% from 49 per 100,000 women in 2005 to 71 per 100,000 women in 2008 [9]. In 2011, the number of deaths caused by breast cancer in Taiwan climbed to an alarming 1,852 per 100,000 women [9]. Breast cancer is the fourth most frequent cancer among Taiwanese women in general and the third most frequent cancer among aboriginal women in Taiwan.

Early treatment is useful to increase survival rates of breast cancer. According to the Taiwan National Cancer Registry Report in 2008, the 5-year survival rate of breast cancer in stage 0 and stage 1 was 95% in Taiwanese women. However, the overall 5-year survival rate of breast cancer in Taiwanese women is down to 85% [18]. This decrease among Taiwanese women might be due to later diagnosis of breast cancer. In order to advance the early detection of breast cancer, the Taiwanese government provides mammogram screenings free of charge every 2 years for women aged 45–69 years old. Health-care providers can help promote these screenings by encouraging women to have mammograms and by offering screenings at convenient times and locations in the community.

### Cervical cancer

Cervical cancer is the second most common female cancer and the fifth leading cause of cancer-related deaths among women globally. An estimated 253,500 women die annually from cervical cancer worldwide [1]. In Taiwan, the standardized mortality rate for cervical cancer was 5.7% in 2009. This ranked cervical cancer eighth among the leading causes of cancer-related deaths among the nation's women [18]. Every day in Taiwan, five women are diagnosed with and two women die from cervical cancer. In a case-control study of Taiwanese young women, Chen et al. (2005) found that the

relevant factors for cervical cancer are multiple and complex, and include age at first intercourse, age at first birth, number of vaginal deliveries, and multiparity. A unique finding from Chen et al.'s study was an association of cervical cancer with women's fry cooking at least 5 times per month. More studies are needed to further explore additional relevant factors for cervical cancer.

Early detection and treatment significantly increase the survival rate of cervical cancer. In Taiwan, the survival rate in stage 0 and stage 1 of cervical cancer ranges from 88% to 96% [18]. This statistic indicates that early detection tests such as Pap smear screenings are critical to help women avoid the burden and poor outcome of cervical cancer. Evidence suggests that Pap smear tests can decrease the incidence and mortality rates of cervical cancer by 60% to 90% [18]. Although regular Pap smear screening is effective for preventing cervical cancer, there is a low screening rate in Taiwanese women. The National Health Insurance in Taiwan offers annual Pap smear screenings free of charge to female citizens aged 30 years and older. However, over a recent period of 10 years, the Pap smear screening rate of Taiwanese women increased only 10%, from 51.7% in 1999 to 56.3 in 2010 [9]. Among immigrant women in Taiwan, only 47% had a Pap smear test in the past 3 years [25]. A cross-sectoral collaboration of local health departments, private community organizations, and immigration agencies is needed to conduct effective actions in preventing and treating cervical cancer in both Taiwanese women and immigrant women in Taiwan.

### Mental Health

Globally, more than 450 million people suffer from mental health problems [6]. Promoting mental health and reducing psychologic disorders is a critical focus worldwide. The WHO implemented the "Mental Health Gap Action Programme" in 2008 to increase mental health services across national and international regions [26]. Furthermore, the WHO developed a comprehensive mental health project called "A Zero Draft 2013–2020 Global Mental Health Action Plan" to improve the lives of people with mental illness such as depression and to prevent suicide. This section presents the current situation and burden of depression and suicide among women worldwide and in Taiwan.

### Depression

Depression is a common mental illness, particularly in women. Globally, more than 73 million women experience episodes of depression [2]. Approximately 12 million women in the United States suffer clinical depression each year [27]. In Taiwan, over 1 million people are so affected; the depressed population accounted for 11% of females and 7% of males [28]. Approximately 78% of Taiwanese women have experienced an episode of depression [29]. In a survey of physical and mental health status in southern Taiwan, 40% of immigrant women showed a tendency for depression [30]. In a later study, researchers reported that the rate of postpartum depression was 25% in immigrant women and 19% in Taiwanese women in general [31].

Depression is a leading cause and burden of disability worldwide. Among the global population of women, depression is the cause of disability 42% of the time [6]. Each year, depression is the principal cause of 30,000 suicides in the United States [27]. The

WHO (2012) predicted depression will be the second leading cause of global disability in 2020 and may lead to 850,000 suicides every year worldwide [6]. Statistics reveal that 87% of individuals who committed suicide had a depressive illness [28]. Moreover, depression has resulted in social and economic losses of more than 35 billion NT dollars annually [28].

To decrease the burden and negative outcomes of depression in Taiwan, early and effective treatment is available. However, up to 70% of Taiwanese individuals with depression do not seek medical care due to poor judgment and underestimating and ignoring symptoms [32]. The common symptoms of depressive illness—such as loss of interest or pleasure, feelings of low self-worth, disturbed sleep or appetite, low energy, and poor concentration—may be misconstrued as being in a bad mood. Furthermore, Taiwanese women might mistakenly perceive the signs and symptoms of depression as a part of premenstrual syndrome, menopause, or the aging process. Hence, more efforts are needed to advance women's understanding and awareness of depression and its symptoms in order to successfully improve the outcomes of depression in women.

## Suicide

Approximately 850,000 people worldwide die by suicide each year. The WHO (2009) reported that suicide ranks seventh as the leading cause of death among women aged 20–59 years old. In the United States, suicide is the eleventh leading cause of death in all age groups and the third leading cause of death among individuals aged between 15 and 24 years [27]. According to national statistics in Taiwan, the number of deaths and ratios of suicide among women significantly climbed 2.5 times from 474 women (about 4.6 deaths per 100,000 population) in 1994 to 1,177 women (about 10.1 deaths per 100,000 population) in 2013 [8].

Evidence indicates suicide is associated with ethnicity, age, health status, and social and cultural factors [26]. In Taiwan, suicide was the twelfth leading cause of death among the Taiwanese general population and the eleventh leading cause of death among aborigines in 2010 [9]. Age differences in women who commit suicide rates are also evident. In Taiwan, suicide is the second leading cause of death in adult women aged 25–44 years and the third leading cause of death in young women aged 14–25 years [9]. The relevant factors of suicide among women are complex and associated with psychological, social, and cultural factors such as women's roles and burdens, pressure and stress, marriage relationship with spouse and family members, and negative life experiences. Health factors such as diseases and illness are also associated with suicide. Implementing an interdisciplinary approach that integrates women's health-care providers, social workers, family consultants, and mental health professionals is needed to help prevent suicide in the female population.

## Violence Against Women

Violence against women has become a worldwide social issue. The WHO (2011) noted that 15% to 71% of women around the world have experienced physical or sexual violence [33]. In Taiwan, up to 84% of women experience physical or sexual violence [34]. The prevalent rate of domestic violence among Asian Americans, Native Hawaiians, and Pacific Islanders ranges between 41% and 61% [35]. A Taiwanese national report indicated that in 2011 and 2012, the

number of domestic violence victims was 142,000 women, which included approximately 14,000 immigrant women and 6.6 thousand aboriginal women [36]. The potential for violence against women in Taiwan's immigrant population is almost 24 times higher than in Taiwanese women in general [37].

More than 84% acts of domestic violence are carried out by a partner or relative. The perpetrators of domestic violence are often the woman's spouse or intimate partners. According to an analysis of geographical areas in Taiwan, approximately 60% of acts of violence against women occur in urban areas [36]. However, in a Taiwanese study of women's perceptions about domestic violence, findings indicated that both Taiwanese and aboriginal women perceive the level of domestic violence in rural and mountain populations is much more critical compared to urban populations [38]. Because of inconsistencies between statistical data and women's perceptions, geographical locations and women's thought of violence must be taken into consideration when conducting research on violence against women.

The causes of violence against women are complex and include long-term family pressures, adverse interactions between family members and women victims, socioeconomic status, cultural factors, and family roles. For immigrant women living in Taiwan, a significant cause of domestic violence might be due to transnational marriage. An immigrant woman in a transnational marriage has much less autonomy and power than her Taiwanese husband and his family members. Furthermore, immigrant women in Taiwan often struggle with language barriers, communication difficulties, social isolation, and unequal relationships in their transnational marriage, which may also include a problematic relationship with their mother-in-law. Consequently, an immigrant woman in a transnational marriage in Taiwan might be more likely to experience domestic violence compared to native Taiwanese women. Women who experience physical and sexual abuse often suffer from subsequent serious health issues such as physical injuries, unwanted pregnancies, sexually transmitted infections, and depression. Research findings indicate that 95% of battered women have at least one or more recurring physical disorders, and up to 94% of battered women exhibit post-traumatic stress disorders [39]. Violence against women is a critical issue for health-care providers, educators, and policymakers to address in order to promote women's equality and empowerment on national and international levels.

## Conclusion

Based on the scientific evidence presented in this paper, life expectancy, morbidity and health risk factors, causes of death, mental health, and violence in women population are varied due to their different ethnicities, social environments, cultural perspectives, multiple roles and family responsibilities, and available health-care systems. Healthy life expectancy differs among varied ethnic groups of women both in Taiwan and US. Health risk behaviors of smoking and alcohol consumption are associated with personal attributes and living areas. The prevalence of overweight and obesity vary among ethnicity, age, and social environments. Early detection with mammogram and Pap smear screenings is effective to decrease the prevalence rates and survival rates in breast cancer and vertical cancer. Efforts should be made to find relevant factors for increasing these screening rates in

women, particularly in immigrant groups. Depression, suicide, and violence are associated with social and cultural factors. Researchers found that ethnic women are less likely to have equality, autonomy, and freedom, and that they often experience burdens of housework, face stress and barriers in their relationships with spouses and family members [40,41]. It is crucial to empower ethnic groups of women to be more autonomy and ability.

In summary, women's health needs and demands are highly diversified and complicated. Efforts to improve women's health worldwide must focus on women's nationalities, ethnicities, age, personal life courses, health behaviors, negative life events, and mental health. Eliminating social and cultural disparities that cause health inequalities also needs to be taken into account when developing measures to improve women's health and health-care services. Additionally, more research is needed not only to provide updated information regarding significant factors that affect these women's health issues worldwide but also to compare and provide a better understanding of gender-specific health issues from different nations, ethnicities, age groups, and social classes. Findings from these future studies will help health-care experts and policymakers to develop reliable plans and policies that promote healthy lifestyles and quality health services for women in all international and national regions.

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