



MEETING ABSTRACTS

Dr. Yoshihito Okinaga

Chairman and President of Teikyo University

On this occasion of the opening of the Advancing Women in Public Health and Medicine Symposium, I would like to extend my honor and gratitude to all the participants and distinguished guests. Academic collaboration between Teikyo University and Harvard University started in 1993 when Dr. Shoichi Okinaga, former president of Teikyo University, was invited by then president Neil Rudenstine of Harvard University to his official residence in Cambridge MA, where both signed the collaboration document of the Teikyo-Harvard Program. Since then, both Teikyo and Harvard University have jointly engaged in a range of activities.

Among them, one of the most important activities has been the Teikyo-Harvard Symposium, which is held every 2-3 years. The symposium has not simply been an occasion of exchanging knowledge and experiences of both universities, but it has been a springboard for us. In 1999, after the 3rd Teikyo-Harvard Symposium on the theme of Evidence-Based Medicine, the Japanese government funded a nine-million dollar project to create the Evidence-Based Medicine Center in Teikyo University. After the 7th Symposium in 2009, celebrating the new hospital in Teikyo, both universities agreed to create the first global standard school of public health in Japan. This was how the Teikyo Graduate School of Public Health started in 2011 and since then, this new school TSPH, has been involved in various innovative activities at Teikyo University.

In particular, as President Drew Faust announced, TSPH has played a key role in constructing an academic network of public health in Asia with Harvard University. Participating universities include Chulalongkorn University in Thailand, the University of the Philippines in Manila, Peking University in China and the University of Indonesia, etc. The Special Lecture Series by Harvard professors in Teikyo University has attracted many students and young faculty from Asia who receive state of the art lectures in public health for the last six consecutive years. Back in Teikyo University, TSPH and the medical school of Teikyo jointly planned and created the Teikyo Academic Research Center in 2012 and the Teikyo Center for Occupational and Environmental Health in 2017. TSPH also played an important role in creating the Support Center for Women Physicians and Researchers in 2013.

Last year Teikyo University celebrated its 50th year anniversary and great achievements in academic activities. These achievements cannot be accomplished without our women colleagues, including my wife Hiroko. However, in Japan, women's empowerment is lagging behind the rest of the world and academic institutions in Japan are not exceptions. I believe, through this symposium, analyzing current problems and sharing the experiences will help enhance our efforts and achieve targets on gender equity and promote everyone to enjoy their work and life regardless of their background.

Hiroko Okinaga, MD, PhD

Executive Vice President, Teikyo University,
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Promotion of Diversity Management in Teikyo University

Japan is currently faced with the combined issues of low birthrate and aging and is at risk of a sharp decline in its population. A shortage of doctors is also becoming a nationwide problem, and there has been talk of a collapse of regional medical care for years now. It is critical that women be encouraged to join the workforce in order to replenish the declining manpower and provide an urgent response to the shortage of medical care personnel.

When we look at the gap between men and women in the workforce with the "gender gap index," we find that Japan comes in extremely low at 111th place out of 144 countries; the employment rate of women drastically goes down during major life event periods, such as marriage or giving birth, as represented in the M-shape curve; and there is a decline as they reach higher positions (known as the leaky pipe and glass ceiling). The same trend can be seen in academia, in which the field of natural sciences significantly stands out. According to an analysis by the Japan Inter-Society Liaison Association Committee for Promoting Equal Participation of Men and Women in Science and Engineering (EPMEWSE) regarding why there are few female researchers, issues raised include difficulty in balancing both family and work, difficulty in returning to work after child care leave, the workplace environment, there being few role models, and the social division of labor between men and women.

Taking this into account, Teikyo University set up the "Teikyo University Support Center for Women Physicians and Researchers" in April 2013, and in August 2013, the Center was entrusted with and began supporting the "Program to Support the Research Activities of Female Researchers", a national assistance aid program by the Ministry of Education, Culture, Sports, Science and Technology that assists with expenses for training of science and technology personnel. Its concept is to "bring out the maximum potential of women and train female doctors and researchers so that they can perform high quality research throughout their lifetime while balancing this with their social roles." The program is advancing based on the three pillars of "environmental improvement," "research ability improvement," and "raising awareness."

For "environmental improvement," child care facilities were first brought in with the "Teikyo Wakakusa Nursery" on the University's grounds, and "sick child care facility" established within the hospital in coordination with the region. Second, a "research assistant system" that deploys assistants to help with research and a "child care assistance system" that provides aid for child care facility usage fees are put into action in order to help balance family and research. Third, a system is being put into place for a permanent "assistance service" to be installed within the Center, for "WLB concierge instructors" to be stationed, and for teaching staff to be able to consult and offer assistance to one another. This is expected to become a core network for female researchers.

For "research ability improvement," as the initial concept states, we have made progress on the construction of an assistance system focusing on personnel training. We are aiming to seamlessly arrange curriculum programs that are provided by this University, such as overseas study and training, career education, journal clubs, and the research fund acquisition seminar. We are working to train researchers equipped with management skills that can even be applied overseas. An "international center system" is also underway so that submissions to international journals can be made and guidance for collaborative research can be given.

For "raising awareness," the "EPMEWSE Symposium" is held once a year, which considers the viewpoints of the EPMEWSE and female researcher assistance and delivers information outside of the University. Beginning this year, faculty development activities will also be incorporated and they will begin having discussions by researchers themselves about men and women working together.

Besides the above, this Center is conducting surveys and individual interview surveys targeting the whole campus, creating check lists based on analysis of results in order to improve labor environments, and disseminating this so as to broadly contribute to women in society. As a result of four years of initiatives, we have seen (1) an increase in the number of female researchers and their ratio, (2) an increase in the number of female researchers hired, and (3) an increase in the number of female researcher applicants for aid in scientific research. Moving forward, we are aiming to firmly establish our projects within the University all throughout the campus, and outside of the University we are working to support regional facilities while strengthening coordination with medical and academic societies, as well as endeavoring to disseminate assistance programs for female doctors and researchers. Teikyo University hopes that its message will contribute to improving the challenges which the world is likely to face in the future.

Meredith B. Rosenthal, MD

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Women in Academic Public Health: Leaky Pipelines, Uneven Progress in Gender Equity

Overall in the U.S., women make up a substantial majority of students in public health. This pattern holds for doctoral students and post-doctoral fellows in public health programs, suggesting that the majority of candidates for faculty positions in public health should also be female (except in those fields where faculty typically are trained in disciplinary programs that are not exclusively focused on public health applications). Nonetheless, despite some gains, gender parity in the public health professoriate remains an elusive goal. Researchers and other experts have identified a number of barriers to the recruitment and retention of women in academic careers and leadership roles overall and these are likely to pertain to academic public health as well. Using the Harvard Chan School as a case study, I discuss both our successes and remaining challenges as well as policy frontiers to ensure true equality of opportunity for women in academic public health.

Dr. Mariko Inoue

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Advancing Women in Public Health: The Japanese Experience

When we consider advancing the roles of women, we must be sensitive to social factors and to the health of female workers. In Japan, one study showed that women who work are less likely to be healthy compared to those who do not. Possible explanations for this difference includes difficulties in maintaining a work-life balance due to cultural norms and gender roles, as well as pressure to work according to a typical work schedule. Another aspect of the health disparity found between men and women is caused by diverse work patterns. Although labor participation rates among women of childbearing age have increased in past decades, approximately 55% of working women are employed as non-regular workers. Non-regular worker positions are

acceptable in families with fixed gender roles, where men are the main breadwinners and women merely act as supports. However, non-regular workers face wage discrimination and difficulty later when seeking permanent position—both of which are deeply rooted problems. Social changes have led to lower marriage rates and increasing numbers of single mothers and young couples both working as non-regular workers; populations of vulnerable non-regular employees who are more likely to fall into poverty and put their health at risk. These populations can thus easily experience poorer health and/or quality of life without social structural change.

The abovementioned situations are currently occurring in Japan, largely due to a lack of understanding of the dynamic change in social structure that has occurred. In order to address these issues and ensure that female workers in Japan are healthy and active, we need to rectify the root causes. I believe that public health has potential to achieve the advancement of women by the results of epidemiological studies that seeks the root causes. As greater expansion is a necessary public health contribution, another question is what level of human resources will be required in the public health field to address these social issues. The human resources dedicated to public health practices are largely dominated by females in Japan. On the contrary, the gender ratio among board members of public health professional societies or among university professors is largely skewed towards men. Current efforts in the field of public health might not be reflected at the management level well. Therefore, both public health research and education change in human resources will lead to a positive impact on advancing the roles of women in society as well as the public health sector itself by evidence-based decision-making.

Kyoko Nomura, MD, MPH, PhD

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Balancing Work and Gender Responsibilities: Challenges Japanese Women Physicians Face

In recent years, the number of women entering into medicine is increasing and now constitutes 20% of total number of medical doctors. But the percentage is still lowest among OECD countries and is actually the same percentage in the US but that of the year of 1990. This means that Japan is 30 years behind the US in the use of women physicians. Dr. Nomura conducted a survey of alumnae from 14 medical schools and found that 98% of men but only 70% of women worked in full-time positions, and men worked longer hours per week compared to women. Many women quit working at the time of life events like marriage and child birth/rearing and once women switched from full-time to part-time positions, only one third of these women return to full-time work.

As a consequence of the leaky pipeline, women are underrepresented in medicine in Japan. Women constitute only 2.6% of full professors in academic medicine, which is far behind the US (19%) and UK (16%). One finding derived from the alumnae survey from 14 private medical schools shows that women who had once quit full-time labour due to family responsibilities are less likely to obtain specialist qualification later in their academic lives. Hence, women physicians who face a challenge of balancing between work and personal lives may lose the opportunity for career development.

Dr. Nomura also asked alumnae from 14 medical schools “In your professional career, have you ever been left out of opportunities for professional advancement based on gender?”. Although 21% of women respondents answered that they had such an experience, only 3% of men experienced the gender-related disadvantage.

This discrepancy between women and men suggests that gender discrimination may exist in medicine. Dr. Nomura also investigated individual perception of gender inequality in working opportunity and found that women who strongly perceived the difficulty of pursuing a career were more likely to retire from full-time labour.

Dr. Nomura and her colleagues have recently published a very unique finding based on a survey from 6,211 Japanese surgeons; married men earn more than unmarried women after adjusting for covariates including working hours, and as the number of children increases, annual income linearly increases in men but decreases in women. These findings suggest that Japan's stereotypical gender roles, that men should work outside and women should be housewives still prevails even among highly qualified professionals like medical doctors. In her presentation, Dr. Nomura will also introduce a recent international review about challenges women physicians face and summarize her thoughts about career development for women physicians in Japan.

Erica T. Warner, ScD MPH

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Intra-organizational Coauthor Networks and Career Advancement in Academic Medicine

Given the emphasis on scholarship and publication in academic medicine, coauthorship may be among the most critical connections in faculty careers. The structure of coauthor networks has a significant impact on career outcomes, including scientific productivity. Coauthorship of a published manuscript is evidence of a connection between two or more authors, and collectively these relationships form a coauthor network. Coauthor networks within an institution can represent relationships and connections with people, and the potential for flow of information, reputation, and plans for future collaboration. Social capital theory holds that relationship ties within an individual's social network provide access to assets, advice, opportunities and information. These connections may be particularly important for junior faculty as they build their scientific careers. We investigated the role of intra-organizational coauthor networks (network reach) and gender in promotion, retention, and likelihood of receiving a first National Institutes of Health (NIH) R01 award among over 5,000 instructors and assistant professors at Harvard Medical School (HMS) between 2008 and 2015.

We found that compared to males, females had fewer publications, lower *h*-index, smaller coauthor networks, and were less likely to be assistant professors ($p < 0.0001$). In age-adjusted models, females were less likely to be promoted from Instructor to Assistant Professor, but this difference became non-significant with adjustment for other factors. Faculty in the highest network reach category were over 80% more likely to be promoted from Assistant to Associate Professor and were 17% less likely to have left HMS by 2012 as compared to those in the lowest category. We observed no gender difference in receipt of R01 awards in age-adjusted or multivariable-adjusted models. Network reach, age, HMS start year, *h*-index, academic rank, previous K award, terminal degree, and HMS training were all significant predictors of receiving a R01 award. These results demonstrate that coauthor network metrics can provide useful information for understanding faculty advancement and retention in academic medicine. They can and should be investigated at other institutions.