

Japanese and United States Family Medicine Resident Physicians' Attitudes about Training

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OBJECTIVE: This is the first research known to compare residents' attitudes about training in two countries. The objective was to examine and compare Japanese and US family medicine residents' attitudes about their residency training.

METHODS: A cross-sectional survey was conducted at two Japanese sites and one US site in 1991, and repeated in 1995 at these sites, as well as two additional US sites. Family practice residents completed a self-administered, Likert scale format questionnaire containing items on demographics, identity as a family physician, resident education, the doctor-patient relationship, personal life, economic and women's issues.

RESULTS: The response rates were Japan, 1991: 92%(12/13); US, 1991: 76%(13/17); Japan, 1995: 89%(34/38); and US, 1995: 91%(60/66). Fewer Japanese residents reported feeling like an outsider, or discriminated against while on outside rotations. More US residents reported expectations for training were being met, and being satisfied with their education. More Japanese residents reported that outpatient training was inadequate. US residents responded more positively about the rewards of clinical decision making, patient management and the doctor-patient relationship. Japanese residents were less likely to report training as compromising their physical or mental health, or feeling overworked. Financial concerns were similar for both groups. Most female residents reported feeling that being a woman provider was an advantage.

CONCLUSIONS: Some aspects of family medicine training are transculturally similar, while others are influenced by the medical culture of the respective countries. Family medicine residents' perspectives on training may be valuable to educators planning curriculum development.

KEY WORDS: family medicine, residency training, graduate education, Japan, United States

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Family Medicine in the United States and Japan has a rich historical tradition in the general practitioner [1,2]. However, the effort to formalize the specialty in the United States preceded such efforts in Japan by two to three decades. In both countries, pres-

sure to develop family medicine training resulted from social changes not the least of which has been the trend for organ-specific sub-specialization by physicians and declining numbers of doctors interested in the personalized and comprehensive health of the patient [3,4].

There are two noteworthy events in the history of family medicine in the US. First, the American Academy of General Practice was established in 1947, and like the establishment of the Japanese Academy of Primary Care in 1978, resulted from increasing specialization of medicine and a recognized need for generalist practitioners to join together politically [3,5]. This organization changed its name to the American Academy of Family Physicians in 1971. Second, the American Board of Family Practice was established in 1969 [3]. This organization set the standards for training in family practice programs, and provided official recognition of family doctors as specialists. The Japanese Academy of Primary Care established a certification examination in 1995 [5], though it is not utilized systematically to guide the content of Family Medicine training in Japan. While it has been 20 years since the first university department of general medicine was established in Japan, and officially recognized university departments of "General Medicine" number more than 35, there are a few departments with residency programs that emphasize the importance of the biopsychosocial model and the other principles of family medicine. These different family medicine educational traditions in the United States and Japan render comparative research on similarities and differences to be of great interest.

In the United State, research on the problems of stress during family practice residency training can be dated to the early 1980's [6-9]. The literature describing family practice training in Japan is limited [10], and the only research on residents attitudes about stress during training have been published in Japanese [11,12]. In 1991, Fetters et al surveyed all known family practice residents and recent graduates in Japan, and compared the results with a survey conducted in the United States [12].

The accredited specialty of Family Medicine in the United States has a history of more than 30 years, but the number of medical students choosing Family Medicine has witnessed vacillating popularity with declines noted in the recent past [13]. Leaders in family medicine have sounded the call for residency training reform [14,15]. These trends make residents' views about stress and their training an important factor to consider. While it is unclear if residents are in the best position to decide how residency reform might best proceed, their perspectives on training are undeniably important since their professional and personal careers are directly impacted by any reform policies. Moreover, resident perceptions may influence attitudes of medical students

who are considering family practice training.

The goal of the current research was to better understand what aspects of family practice training are universal, what aspects may be culture specific, and to what extent these issues are stable over time. Moreover, this research sought to describe family practice residents' attitudes about training in Japan, and compare the results with similar programs in the United States. To our knowledge, there are no previous studies published in English that document family practice residents' attitudes about training in Japan, nor are there any known international comparisons of residents' attitudes towards training.

We hypothesized that the specific stressors of generalist, non-specialist training as documented in previous studies in the U.S. [8], would supersede cross-cultural borders. However, given the more robust history of family practice training in the U.S., we expected higher levels of satisfaction with the curriculum and other educational issues by the U.S. residents. We anticipated the stresses on a resident's social life and family life would be similar in both countries since these are not specialty specific. Given the strong tradition of family financial support for university students in Japan, and the high burden of resident debt in the U.S., we hypothesized that residents in Japan would have less financial stressors.

METHODS

This project began in April 1991 when one of the authors (MDF), a second year family practice resident at the time, participated in a one month family practice elective at Jichi Medical School. A discussion with the Japanese residents prompted interest in surveying family practice residents about family practice training in Japan and the United States. Targeted participants included the current residents and graduates of the only two university affiliated family practice residency training programs in Japan, Jichi Medical School and Kawasaki Medical School, and for comparison, the current residents and fellows of the Family Practice program at the University of North Carolina in the United States. While there are a handful of Japanese family physicians who formally trained in family practice in Australia, Canada or the United States, they were not included in the study since their opinions would not reflect residency training in Japan.

The Japanese sites were chosen as they were among the first family medicine-oriented departments estab-

Table 1. Demographics

	Japan 1995	U.S. 1995	Japan 1991	U.S. 1991
participants	n = 34	n = 59	n = 12	n = 13
males	91%	38%	92%	62%
marital status				
single	24%	41%	42%	15%
married	73%	56%	58%	85%
divorced	3%	3%	0%	0%
mean age (range)	28.5 (24–38)	30.4 (25–44)	30.1 (25–38)	31.7 (27–41)
mean years training (range)	3.1 (1–5)	2.0 (1–4)	5.4 (1–13)	3.0 (2–5)

lished in Japan [16,17]. Kawasaki Medical School is a private institution located in Western Honshu and the original Department of General Medicine was strongly supported by the Founder of the medical school. From its inception, the department strongly emphasized the biopsychosocial model. Jichi Medical School is also a private institution though it is actually supported by the forty-seven *Todofuken*. Students of the medical school receive heavy subsidization of their medical expenses but are required to serve in underserved areas selected by their sponsoring *Todofuken* after graduation. In most circumstances, graduates serve in rural communities. This context guided the Department of Community and Family Medicine at Jichi Medical School to an early focus on clinical epidemiology and population perspectives on health.

The questionnaire was developed from themes identified during an informal focus group discussion with Japanese family practice residents at Jichi Medical School. The instrument was written in English, then translated into Japanese. Independent back-translation revealed no significant differences from the original instrument. It included items about basic demographics, and five-point Likert scale (1 = all the time, 2 = frequently, 3 = sometimes, 4 = infrequently, 5 = never) questions about resident identity as a family physician, resident education, the doctor-patient relationship, personal life, economic issues and women's issues. The instrument was distributed at the Japanese sites in April 1991, and at the U.S. sites in May, 1991. A follow-up survey was distributed again to the current residents at the original Japanese sites in July, 1995, and at the University of North Carolina, University of Michigan, and one affiliated program of Michigan State University in November, 1995. A reminder was sent to non-respondents at approximately two week intervals, though because the response rates varied the required follow-up efforts ranged from one to three attempts.

The data was entered into the statistical software pro-

gram SPSS. Descriptive statistics on demographics were calculated for each site, and collapsed into four categories, Japan, 1991; U.S., 1991; Japan, 1995; and U.S., 1995. Likert scale responses were assigned a numerical value of one to five. The specific comparisons on those responses involved: US versus Japan for survey years 1991 and 1995. Comparisons on all scales were made using Mann Whitney U tests for the small sample 1991 data, and t-tests for the 1995 data. In the comparisons, a p value of 0.05 was considered statistically significant. This project was judged to be exempted from evaluation by the University of North Carolina (1991) and University of Michigan (1995) Institutional Review Boards.

RESULTS

The demographics information of the participating physicians are illustrated in Table 1. The response rates were: Japan-1991: 92%(12/13), U.S.-1991: 76%(13/17); Japan-1995: 89%(34/38), U.S.-1995: 91%(60/66). More Japanese respondents were male and single than in the U.S. groups in both years. The ages were similar, but the Japanese groups had more mean years of training than their U.S. counterparts (residency training at the two family practice programs in Japan spans six years).

Responses regarding perceptions about resident education in family practice are illustrated in Table 2. While there were no statistical differences between Japanese and U.S. residents in 1991, there were three differences noted in 1995. Overall satisfaction with residency training was higher among U.S. than Japanese residents. Moreover, U.S. residents were more likely to report feeling that faculty had sufficient knowledge and had an appropriate attitude.

One implied goal of residency education is for residents to feel able to practice as an independent family physician, and their perceptions about their independ-

Table 2. Family Practice Residents' Attitudes About Resident Education*

How often have you felt...	Japan 1995	U.S. 1995	p value	Japan 1991	U.S. 1991	p value
satisfied with your education?	3.18	2.25	0.00	3.00	2.62	0.14
you had good role models?	2.41	2.07	0.08	2.50	2.85	0.22
had a mentor?	2.41	2.78	0.09	2.75	2.92	0.65
curriculum needs better definition?	2.63	2.97	0.19	2.67	2.00	0.10
inpatient training was excessive?	3.15	3.07	0.77	2.90	2.62	0.60
outpatient training was inadequate?	2.79	3.15	0.18	3.00	2.31	0.08
faculty had sufficient knowledge?	2.44	2.01	0.01	2.64	2.69	0.86
faculty had an appropriate attitude?	2.45	1.80	0.00	2.92	2.58	0.35
intellectually overwhelmed?	2.79	2.86	0.76	2.92	3.31	0.33

*numbers in table (except the p values) reflect a mean on a five point scale where 1 = all the time and 5 = never

Table 3. Family Practice Residents' Attitudes About Independence as a Family Physician

How often have you felt...	Japan 1995	U.S. 1995	p value	Japan 1991	U.S. 1991	p value
lack of self-identity as a family physician?	3.41	3.57	0.47	2.83	3.08	0.53
discrimination because of specialty choice?	3.76	3.19	0.01	3.67	2.69	0.01
lacked competency as a family physician?	2.13	2.69	0.00	2.55	2.62	0.87
isolated as an outsider?	3.88	3.24	0.01	3.55	2.46	0.01
expectations for training were being fulfilled?	3.24	2.15	0.00	3.45	2.69	0.04

*numbers in table (except the p values) reflect a mean on a five point scale where 1 = all the time and 5 = never

Table 4. Family Practice Residents' Attitudes About Patient Care

How often have you felt...	Japan 1995	U.S. 1995	p value	Japan 1991	U.S. 1991	p value
there were too many inpatients?	4.00	3.32	0.00	3.42	3.15	0.56
there were too few inpatients?	3.45	3.63	0.50	3.17	3.62	0.27
there were too many outpatients?	3.79	3.71	0.73	3.30	3.85	0.31
there were too few outpatients?	3.61	3.51	0.64	3.80	3.00	0.19
clinical decision-making rewarding?	3.18	2.14	0.00	3.25	1.92	0.00
patient management rewarding?	3.03	2.07	0.00	2.75	2.08	0.05
the doctor-patient relationship gratifying?	2.65	1.97	0.00	2.50	2.00	0.04

*numbers in table (except the p values) reflect a mean on a five point scale where 1 = all the time and 5 = never

ence as a family physician are presented in Table 3. In both survey years, U.S. residents were more likely than Japanese residents to report feeling discrimination because of their choice to specialize in family practice, and to feel isolated as an outsider while rotating in other departments.

Like these environmental factors, patient care factors may also influence a resident's perceptions of his/her ability to mature as a family physician. The residents'

responses to questions about patient care volume and patient management issues are depicted in Table 4. In 1995, Japanese residents were less likely to report feeling there were too many inpatients. A much more striking difference that persists over time is for fewer Japanese residents to feel that clinical decision making is rewarding, that the patient management is rewarding, or that doctor-patient relationship is gratifying.

A resident's ability to focus on patient care and edu-

Table 5. Family Practice Residents' Attitudes About Economics

How often have you felt...	Japan 1995	U.S. 1995	p value	Japan 1991	U.S. 1991	p value
overworked?	3.03	2.42	0.01	2.58	1.75	0.03
underpaid?	2.97	2.58	0.17	2.17	1.50	0.14
moonlighting was essential?	3.27	3.53	0.42	2.75	2.33	0.49
your wages were insufficient for daily living?	3.15	3.39	0.42	2.50	2.33	0.77
your financial obligations were overwhelming?	3.91	3.07	0.00	4.00	2.83	0.06

* numbers in table (except p value) reflect a mean on a five point scale where 1 = all the time and 5 = never

Table 6. Family Practice Residents' Attitudes About the Impact of Residency Training on Their Personal Lives

How often have you felt...	Japan 1995	U.S. 1995	p value	Japan 1991	U.S. 1991	p value
self-confidence in your personal life?	3.53	2.15	0.00	3.27	2.00	0.00
residency training strained your life?	2.32	2.28	0.86	2.33	1.83	0.17
residency training strained your social development?	3.53	2.71	0.00	4.00	2.50	0.00
your physical health was compromised?	3.44	2.97	0.04	3.33	2.58	0.13
your mental health was compromised?	3.21	3.07	0.41	3.25	2.58	0.09
sleep deprived?	2.68	2.37	0.19	2.92	1.92	0.00
your significant other resented your work?	3.56	3.40	0.59	3.22	3.91	0.22
couldn't have children because of residency training?	3.28	3.21	0.84	3.09	4.27	0.04
residency training hindered your marriage?	4.61	3.98	0.00	4.58	4.42	0.70
there was inadequate time to raise children?	2.00	2.16	0.73	2.50	2.57	0.91

* numbers in table (except p value) reflect a mean on a five point scale where 1 = all the time and 5 = never

Table 7. Women's Issues in Family Practice Training

How often have you felt...	Japan 1995	U.S. 1995	p value	Japan 1991	U.S. 1991	p value
being a woman was an advantage?	3.20	2.45	0.06	4.00	2.40	NA
mentally harassed because of female gender?	3.80	4.06	0.42	4.00	4.00	NA
physically harassed because of female gender?	4.40	4.67	0.38	5.00	4.60	NA
felt sexually harassed?	4.20	4.59	0.47	5.00	4.60	NA

* numbers in table (except p value) reflect a mean on a five point scale where 1 = all the time and 5 = never

NA-not applicable due to small cell size

cation can also be influenced by work hours and financial concerns. Table 5 summarizes the participants' responses about related economic issues. In both survey years, U.S. family practice residents were more likely than their Japanese counterparts to report feeling overworked, and to report feeling as though financial obligations were overwhelming.

This research sought to understand not only these

professional aspects of training, but also the impact of training on residents' personal lives. The responses to a series of questions about the impact of residency training on residents' personal lives are contained in Table 6. There are remarkable differences that appear in both survey years. U.S. residents were more likely to report feeling self-confidence in their personal lives, but were also more likely to report that residency training

strained their social development. Differences found only in the 1991 surveys were the U.S. residents' reports of feeling sleep deprived. Fewer U.S. residents reported feeling that they couldn't have children because of residency training than Japanese residents. While both groups in 1995 were not likely to report feeling residency training strained their marriage, more Japanese respondents reported it to never be a consideration.

Cognizant of different societal expectations for women and men, we sought to understand how female gender might impact training as a family physician. While both groups felt being a woman was advantageous, U.S. females felt more strongly about its positive impact. All women reported infrequently feeling physically, mentally or sexually harassed. We failed to anticipate the response of one mail who confided about harassment experiences as a medical student from a senior male faculty member in the medical school.

DISCUSSION

These are the first known international data on residents' attitudes about training. This comparison illustrates that there are universal stressors during the residency training period, as well as intrinsic difficulties in training family practice residents to be competent, comprehensive medical providers. This comparison also provides examples of how the culture of medicine impacts family practice training. While there were differences in the results between the Japanese and U.S. respondents in both survey years, the differences that persist in both survey years will be the focus of the following discussion.

U.S. residents were more likely than their Japanese counterparts to voice feelings of discrimination, or treatment as an outsider. The dissatisfaction of the U.S. residents may be attributable to the "second-class citizen" problem of the university training setting which remains unfriendly to family practice and is more conducive to training specialists [18]. Prior research illustrates that residents in university hospital systems learn fewer procedures than their counterparts in community hospitals in both Japan [19] and the United States [18,20]. While university program graduates had less developed procedural skills, the differences were insignificant by standardized cognitive testing and suggest minimal influence on subsequent practice [20]. For now, the "second-class citizen" phenomenon may be transparent in Japan because the specialty of family practice is still very new, and other specialists may not

feel threatened by family physicians as competitors as may be the case in the U.S.

The markedly lower levels in satisfaction with clinical decision-making by Japanese residents may reflect fundamental differences in medical education. Medical students usually have much less direct patient responsibility than their U.S. counterparts. Subsequently the transition to full patient responsibility as a new resident occurs over a longer period in Japan. In fact, in the first two post-graduate years a resident is usually referred to as an intern. At the Fifteenth Annual Meeting of the Japanese Academy of Primary Care, Japanese residents participating in the Japan-U.S. Residency Training Debate specifically cited the need for medical students and residents to have more patient care responsibilities [11]. Perhaps the national movement to change undergraduate and post-graduate medical education in Japan will have a positive influence in the future. Since the distribution of this survey, the Ministry of Health, Labour and Welfare will mandate in 2004 that residents should rotate in the major medical disciplines during their first two years of post-graduate training in Japan.

Japanese residents lower assessments about their satisfaction with residency training, and assessments of faculty knowledge and assessments may reflect the paucity of family practice teachers in Japan with training in teaching the principles and practice of family medicine.

Japanese educators and residents should be cognizant of the potential costs of increased responsibility. While the U.S. residents reported higher levels of satisfaction with patient care, they also in both survey years reported feeling overworked. U.S. residents' high levels of self-confidence, and conversely, sleep and social deprivation may be related to the greater responsibility and reliance on residents for actual patient care in the U.S. Taken together, these results question whether high quality teaching experiences can only come at the cost of an excessive workload resulting in sleep deprivation, compromise of physical health, and decreased opportunity for socialization. Structural changes to limit resident work hours may have taken an effect since fewer residents reported sleep deprivation in 1995 than in 1991 [21].

The lower levels of self-confidence may also reflect the more reserved nature of Japanese. While reports of feeling harassment were low for all categories of mental, physical, and sexual harassment, a response of five, that is, never experiencing that feeling would be the more desirable response. The data imply that harassment because of gender may complicate family practice

training for women, and previous data from the US and Canada supports this assertion [22,23]. The lower degrees of financial stress among Japanese than US participants is interestingly similar to lower concerns among Canadians, and as concluded by the authors of a previous study, likely reflects differences in financing of medical education [24].

To further develop the residency training system in Japan, Mukobara has advocated a stronger collaboration system between university and community hospitals, sending residency training leaders to training hospitals, and standardizing the assessment for completion of residency training [25]. Based on his own training experience, Waza advocates creating medical institutions that are closely connected with outpatient departments, where from the beginning doctors will focus their clinical abilities on the family and consideration of the community [10]. Another level of advancement of residency training in Japan could be the development of support services for residents in trouble. Both advice based on past experiences and empirical research on the types of services offered in various training programs may serve as a starting point reference for Japan [26].

The sample size of both groups limits far-reaching conclusions, though at the time of this research, nearly all known university based family practice residents and graduates who had trained in Japan, were eligible to participate at least once. Because the U.S. respondents were all from university programs, it would be erroneous to assume that these three programs adequately represent the more than 200 family practice residency training programs in the U.S. Still, the results are consistent with findings that residents' overall satisfaction with training lessened with university program affiliation [18].

To the extent that there are no known studies on resident training attitudes in general or specifically about family practice residents' attitudes in Japan, we feel this is an important descriptive study. Many Japanese resident difficulties are similar to those from the U.S. comparison group in this study and to issues previously identified in the literature. Responses by both U.S. and Japanese residents favoring curriculum improvements highlight the need for and difficulty of developing the optimal family practice curriculum. Further evaluation of residents' attitudes in the future may give teachers of family medicine in Japan a more comprehensive understanding of the stressors of residency training and mechanisms to reduce them.

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