

Return Migration of Japanese Managers and Their Health

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Introduction

International labor migration is often associated with the move of foreign unskilled workers, but we should not forget about international migration of managers (the term “managers” will be used below to avoid the connotation of unskilled workers) on their overseas mission/assignment and their return home. They face various kinds of challenges in adjusting/adapting themselves to another society upon their move. Upon their return, however, they also have to face other kinds of challenges in readjusting/re-adapting themselves to their “own” society. Personnel managers should pay more attention to returnees because they may be facing greater risk than those staying abroad, including health risk and because health is a determinant and an outcome of adjustment/readjustment.

The number of studies on the adjustment and readjustment of Japanese international migrants, particularly managers on overseas mission seems to have increased significantly since the 1980s after a rapid increase in foreign direct investments by Japanese corporations in the late 1970s. In the 1980s, however, they mainly consisted of psychiatric case studies and theoretical work. Inamura (1980) analyzed the adjustment of Japanese in a comprehensive and systematic way in his book for general audience, *Maladjustment of Overseas Japanese*. He cited seven factors of adjustment: 1) duration of stay, 2) personality, 3) food habits, 4) language, 5) life history, 6) age and sex, and 7) others such as accompanying of the family and health. He did not restrict his analysis only to managers on overseas mission and included their family. He dealt with mental health out of his psychiatric interests, but he did not pay due attention to physical health as a factor of adjustment.

Ishida (1985:148) focused on Japanese managers on overseas mission and

suggested that Japanese corporations tend to emphasize only “job satisfaction” as a factor of motivation, but neglect “concern and dissatisfaction regarding daily life (children’s education, family relationship, security, health and health care).” Hanami (1987:115, 156), however, discovered through his survey of corporations that the largest problem cited often by their employees is children’s education, but the second one is medical care and health. His survey of unions had similar results. As a consequence, Japanese companies took various measures in the areas of children’s education, security, health and medical care, but Japanese researchers conducted relatively few studies on these issues except children’s education. One of the major reasons for a relative lack of studies on health, particularly that of the spouse may be relative neglect of the spouse by Japanese corporations, as indicated by a relatively lower proportion of Japanese managers on overseas mission, citing the spouse as a reason for the failure of their missions, in comparison with Americans.

Shiraki (1994), based on the results of Tung’s (1988) comparative study of managers on overseas mission in multinational corporations (MNCs) based in Japan, the U.S. and Europe, argues that American managers tend to have a higher proportion of early return and failure of their overseas mission because of their spouse’s physical and mental inadaptability to the local environment and other family-related reasons. While the spouse’s inability is also a prominent reason among European managers on overseas mission, Japanese managers on overseas mission tend to have a lower proportion of failure that mostly originates from themselves. He also suggests that a lower proportion of failure among Japanese managers is partly brought about by their spouse’s role and status (perseverance during the mission) that are imposed by the Japanese culture as argued by Tung, but that is also due to a higher incidence of leaving the family at home. He also argues that the spouse’s adaptation and satisfaction with the local society have played a major role in the performance of managers and predicts that Japanese corporations can no longer sustain the policies on overseas assignment of managers by ignoring their spouses. Even though Shiraki does not mention, the role and status imposed on the spouses are presumed to be sources of their stress which can cause mental and physical health risk.

However, there has not been too much increase in studies on spouses of managers on overseas mission since then in Japan. One of the reasons for the relative

neglect of spouses in Japan may be due to the relative lack of interests in the spouse's effects on the adaptation of managers on overseas mission in English-speaking countries. Actually, Cerdin (1999:225-226) revealed, based on his empirical analysis, that the interpersonal adaptation of French managers on overseas mission has positive correlation with that of their spouse as in the case of Americans, but that their general adaptation has positive correlation with that of their wife, which is different from the case of Americans.

On the other hand, there have been a few books for general audience on mental health of managers on overseas mission, including Inamura (1980) and Munakata (1994) and a relatively large number of scientific articles as reviewed by Suzuki et al. (1997). Even though a lot of studies are expected on physical health, only a few studies in the field of industrial medicine can be found (e.g., Izuno 1996, Katsuyama and Tsuchiya 1996). In addition, industrial medicine research tends not to study the spouse.

Thus, in this study, we analyze the determinants of self-rated health of Japanese managers and their accompanied spouse (wife) during their overseas mission, immediately after their return to Japan and at the time of survey and the determinants of changes in health conditions between these three periods, based on the 2001 survey of Japanese managers having returned from overseas mission within past 5 years. We also refer to the effects of health on the adaptation/re-adaptation of managers and their accompanied wife in the conclusion. Before these analyses, we review the related surveys and present an analytical framework and hypotheses.

1. Review of Surveys

There have been a larger number of surveys on the adjustment/readjustment of children of Japanese managers staying abroad or having returned from abroad (cf., Employment Research Center 1990 and Chitose and Abe 2002 for reviews). However, there have been fewer surveys on the adjustment/readjustment of Japanese managers on overseas mission, particularly those which collected information on their own and spouse's health. Most of the surveys conducted in the 1980s are reviewed by the Employment Development Center (1990) and Watanabe (1991). They

revealed that large-scale surveys were conducted by the government, the union and the employers' associations in the late 1980s when increasingly more Japanese corporations started foreign direct investment following the reevaluation of the Japanese yen.

Even though these reviews somehow failed to mention, there was a more sociologically oriented survey conducted in 1987 on 1,000 businessmen who had experienced overseas mission and 700 businessmen who had not by Iwauchi et al. (1992) as a part of research project funded by the Nippon Life Insurance Foundation. But we are not sure about health-related information in this survey because we could not find the survey report.

Perhaps, independently from the 1987 NLIF survey the Economic Research Institute of the Machinery Promotion Association (1990) conducted in 1990 a survey on Japanese managers who had been on overseas mission. Its usable sample was 647, but it asked few questions related to health. Since then, there do not seem to be any large-scale surveys on the returnees, except those conducted on MNCs and their unions. The 1987 NLIF survey and the 1990 MPA-ERI survey seem to be the only two that are directly comparable to ours in the sense that their respondents are returnees.

On the other hand, there have been more surveys on Japanese staying abroad. In 1988 the Japan Institute of Labour (currently, the Japan Institute for Labour Policy and Training) conducted its first survey on Japanese managers on overseas mission, which was conducted through the Japanese Chamber of Commerce all over the world and it has repeated the survey in 1993, 1998, 2000 and 2002 through the funding from the Japan Ministry of Labour (currently, Ministry of Health, Labour and Welfare). The JIL surveys asked those staying abroad a few questions related to health (MOL/JIL 1989; JIL 1994, 1999, 2001).

Similarly, a group of family sociologists conducted a large-scale survey on the adaptation process of Japanese managers on overseas mission and their family in 1991/1992 drawing on the scientific grant from the Ministry of Education (Okamoto 1994). It had a usable sample of 3,400 families staying abroad and 700 separated families in which men stay abroad by themselves. It collected a lot of information on adaptation which is closely related to health.

In addition, the project team headed by Munakata (1994) conducted a specialized survey on the mental health of those on the overseas mission and their family in 1989, with a usable sample of 1,099. The team also interviewed personnel managers in private companies and government administrators in 1991 regarding the provision and support for the mental health of those staying abroad. Since it is difficult to get health-related information from the 1987 NLIF survey and the 1990 MPA-ERI survey for returnees, we mainly rely on these surveys of those staying abroad to build hypotheses below.

2. Hypotheses

(1) Analytical Framework

As an analytical framework for health, that developed for infant mortality by Mosley and Chen (1984) has been often used in health sciences and demography, but it is not readily applicable to analyses of the health of adult international migrants. On the other hand, the analytical framework for job adaptation of those on overseas assignment, which was devised by Black et al. (1999), and his preceding ones have been used often in the study for international human resource management. Nagai (1999) applied the intercultural adaptation model devised by Black et al. (1991) to managers on overseas mission and Nagai (1994) applied it to the intercultural adaptation of their wives. Cerdin (1999) also applied and expanded the model by Black et al. (1991) for the adaptation of wives. But considering the limitation of information in our survey and the differences between health and adaptation, we cannot rely on any specific analytical framework in this study.

(2) Hypotheses

We are going to present hypotheses on the determinants of health of Japanese managers on overseas mission and their accompanied wife, below, for each set of independent variables in the models, drawing on the results of past surveys and case studies.

Age and Seniority: The results of the 1988 JIL survey show that the stress is the greatest among those in the thirties and those with the seniority of 10-15 years. The results of the 1991/92 family adaptation survey suggest that younger persons are

more likely to have difficulty for the initial adaptation. Thus, we hypothesize that those aged under 35 and those with the seniority of less than 15 years are more likely to experience bad health.

Separation from the Family: Inamura (1980:197) indicates that the separation from the family has a negative effect on mental health. But the results of the 1991/92 family adaptation survey suggests that those living with the family are faster in adapting themselves to the work, but that the initial stress is smaller among those living separately from the family. Thus, we cannot hypothesize that those living separately from the family are more likely to have bad health.

Health Condition during the Mission: Since Inamura (1990:205) indicates that adaptation is easier for those who are both mentally and physically healthy, we can expect that bad health during the mission hinders adaptation after the return and, in turn, brings about bad health.

Number of Employees and Industry of Home Company: Inamura (1980:241) suggests that small and medium-size companies are less able than bigger ones to have a link with local hospitals and, thus, those in a home company with a small number of employees are expected to have bad health. In addition, the 1989 mental health survey reveals that the support for employees and their family before and after the mission gets better as the size of local subsidiary increases. Thus, the health condition after the return is expected to be better as the size of company increases.

On the other hand, the 2000 JIL survey indicates that various provisions for employees on the overseas mission is inferior among the home companies with 10,000-19,999 employees and that their employees staying overseas are more likely to indicate concerns about health after their return. Thus, their employees on overseas mission and accompanied wives are expected to have bad health.

When the home company is in manufacturing industry, it is more likely to be located in non-metropolitan areas where the contact with those who experienced a life abroad is more difficult to get. Thus, its repatriated employees and their spouse are more likely to have bad health due to the lack of health-related information and support as well as specialized medical facilities.

Number of Workers and Industry of Overseas Company: The 1991/92 family

adaptation survey indicates that, as the size of overseas subsidiary increases, there will be more communication gap between Japanese managers and the local staff. Thus, Japanese managers are expected to experience more stress and consequently more bad health as the size of overseas subsidiary increases. For the same reason of remote location as the home company in manufacturing, the employees in its manufacturing subsidiary and their spouse are expected to have bad health due to the lack of health-related information and support as well as specialized medical facilities.

Job and Position before the Mission: Since the job and the position before the mission are considered to be similar to those during the mission (the position during the mission is generally two-rank higher), there do not seem to be any analyses and we cannot get any inferences for our hypotheses. But the hypotheses regarding the job and the position during the mission below may be applicable.

Job and Position during the Mission: The 1988 JIL survey suggests that the stress is more strongly felt by technical managers than non-technical ones on the mission, particularly among Advisors, Directors and Managers. The 1991/92 family adaptation survey indicates that Directors and Executives are more likely to feel difficulties in human resource management. It also suggests that those in technical jobs are more likely to feel difficulties in human resource management and to take time adapting themselves to the work abroad. Thus, it is expected that those in technical jobs and those in high-ranking position are more likely to have bad health. On the other hand, the 1989 mental health survey indicates that those in non-managerial position are more likely to have bad mental health condition and, thus, they are also expected to have bad health. It is also possible that their wife is also in a similar mental health condition due to the equivalent hierarchy among wives. But the effect of the husband's job cannot be hypothesized.

Job and Position after the Mission: Since the job and the position after the mission are also considered to be similar to those during the mission (the position during the mission is generally one- to two-rank higher), there do not seem to be any analyses and we cannot get any inferences for hypotheses. But it is possible that they exert different effects on the health condition after the return.

Rule and Standard for Duration of Mission: Miyaji (1996:12) indicates that mental health condition is worse among those men and women who are not sure about

the timing of their return. When the company has a rule or a standard for the duration of mission, their employee and his family can plan ahead and experience less stress, thus, they are expected to have better health condition during and after the mission.

Past Experience of Overseas Mission: The 1991/92 family adaptation survey indicates that as Japanese managers repeat their overseas mission, they are less likely to face communication gap with the local staff and to feel stress. Thus, it is possible that past experience of overseas mission improves their health condition. On the other hand, Ishida (1996:18) suggests that those who had overseas mission earlier with better working condition are now more likely to face more stress because of general lowering of condition due to the increase in number. Therefore, the effect of past experience cannot be hypothesized.

World Region of Stay: The 1989 mental health survey suggests that those who are staying in the Middle East, Asia and Eastern Europe, particularly those in the Middle East are more likely to have neurosis. The 2000 JIL survey reveals that the incidence of injury is much higher than the average in Africa and slightly higher in Asia among managers on the mission, but it is higher in Asia and Europe among their family members. The proportion of respondents mentioning “health problems” as a major concern after their return is also found to be much higher in Africa and slightly higher in Asia. The 1990 MPA-ERI survey of returnees also reveals that a higher proportion indicates “health problems” as a demerit of overseas mission among those having returned from the Middle East, Africa, Asia, Oceania and Eastern Europe, possibly because climatic conditions are different and the level of medical technology is lower, except for Eastern Europe. Similarly, the 1998 JIL survey found that the level of stress is particularly high among those staying in the Middle East and Africa. Thus, the health condition of those staying in and returning from this region is expected to be worse.

Duration of Stay: The 1989 mental health survey reveals that those having stayed overseas between 6 and 12 months tend to have bad mental health condition. But Miyaji (1996:18) indicates that those having stayed overseas less than a year tend to have good mental health and that men having stayed for 1-3 years and women having stayed for 1-5 years have bad mental health condition. Therefore, it is difficult to hypothesize about the effects of duration of stay on the health during the mission.

On the other hand, the 1991/92 family adaptation survey reveals that as men and their family stay overseas longer, they are more adapted to the work and life there and to feel less stress. But those who stayed overseas longer are expected to face more difficulties to readjust themselves to work and life in Japan, to feel more stress and to have worse health condition after the return.

Timing of Notification and Training for Return: When the return is of short notice, the preparation period for moving is short, which may result in bad health immediately after return, particularly that of the spouse. Since the 1991/92 family adaptation survey reveals that the preparation training for the spouse before the mission does not have too large effects on adaptation, the preparation training before the return is also expected to have limited effects on the re-adaptation and health of the spouse.

Years after Return: Re-adaptation to Japan is expected to proceed with the years after return in the same way as adaptation to overseas proceeds with the duration of stay.

3. Data and Methods

(1) Data

In the fall of 2001 the National Institute of Population and Social Security Research (attached to the Japan Ministry of Health, Labour and Welfare) conducted a survey on returned managers with a sample size of 2,280 (903 usable questionnaires) thanks to the cooperation of the Japan Overseas Enterprises Association (JOEA) and personnel managers of member companies as well as respondents. The questionnaires were distributed with a return envelope to respondents who have returned to Japan during the past 5 years through the JOEA and member companies in early September and the respondents returned the filled questionnaire by mail through the end of October. However, the questionnaire asked the facts as of September 1.

The survey team consisting of Prof. Mitsuhide SHIRAKI of Waseda University, Prof. Hirohisa NAGAI of Tsukuba University and myself was formed within our Institute's research project on the social integration of international migrants (P.I.: Hiroshi KOJIMA) and the questionnaire was mainly developed by the first two members, partly drawing on that of the JIL 2000 survey of Japanese managers on

overseas mission because they are also its project members.

While we mainly asked questions regarding adaptation and re-adaptation related to work, we also asked self-evaluated health conditions of the respondents and their accompanied spouse during the overseas mission, immediately after the return and at the time of survey. Due to major interests of survey designers, demographic and socioeconomic information on respondents is limited, most independent variables are work- or mission-related, and independent variables had to be selected among them for this analysis. Readers might refer to Kojima et al. (2002) for the details of the survey and the questionnaire.

(2) Methods

We have analyzed the determinants of health conditions at three stages and those of changes, applying logit models to the microdata from the survey. Since almost all the respondents (99%) are males, we have excluded female respondents from our analysis. The health conditions at each stage were collapsed into two categories (Good/Bad) from the original four categories (Very good/Good/Bad/Very bad) because of the infrequent choice of two extreme categories. Then, the two dependent variables for health change were constructed from these binary variables.

All the independent variables used dummy coding for ease of computation and interpretation. The frequency distribution of dependent and independent variables are presented in Tables 1 and 2. For the spouses (wives), we have restricted the analysis to those who stayed abroad at least partly (75%). In the analysis of health conditions immediately after return and at the time of survey, an additional model controlling for the past health condition was also estimated.

4. Results

(1) Health Condition during Mission

Table 3 shows the results for determinants of self-rated bad health during the overseas mission for Japanese managers (husbands) themselves and their accompanied wives. The first column for the husband's bad health shows that the health condition during the mission tends to be bad among those with less than 15 years of employment in their home company, those whose home company has 10,000-19,999 employees,

those whose job was planning and whose position was President during the mission, and those who stayed in the Middle East and Africa. The health condition tends to be good among those whose overseas subsidiary had less than 10 employees, those whose job before the mission was planning or sales, and those having stayed in North America. The husbands having lived separately from their family are somewhat more likely to have bad health during the mission, but the effect is not statistically significant.

The second column for the accompanied wives shows that, unexpectedly, the accompanied wife's health condition during the mission is also affected by similar work-related variables possibly because it is assessed by the husband and possibly because the health conditions of spouses are correlated. The wives tend to have bad health when their husband's job was planning and their husband's position was President during the mission, as in the case of their husbands. Similarly, wives tend to have good health when their husband's job before the mission was planning and sales. However, there are differences with the case of husbands: the wives tend to have good health when their husband's job before the mission was technical; they tend to have bad health when their husband's position before the mission was Manager.

The third column shows the results for infrequent cases in which both the husband and the accompanied wife have bad health. The health conditions of both spouses tend to be bad when the husband's home company has 10,000-19,999 employees, when the husband's job during the mission was accounting, and when the couple stayed in the Middle East and Africa. The health condition of either spouse tends to be good when the husband's home company is in manufacturing and when the husband's job before the mission was sales.

On the other hand, the fourth column shows the results for cases in which either the husband or the accompanied wife had bad health. The health condition of either spouse tends to be bad when the husband's age is below 35, when the husband's position before the mission was Manager, when the husband's job during the mission was planning, and when husband's position during the mission was President. The health conditions of both spouses are good when the husband's home company has 5,000-9,999 employees, when the home company has no rule or standard for the duration of stay, and when the couple stayed in North America.

(2) Health Condition Immediately After Return

Table 4 shows the results for determinants of self-rated bad health immediately after return to Japan from the overseas mission for Japanese managers (husbands) themselves and their accompanied wives. This is the time when bad health is most prevalent. The first column for the husband's bad health shows that the health condition immediately after return tends to be bad for those in their late 40s and those in the home company of 10,000-19,999 employees. When we control for health condition during the mission as presented in the fifth column, however, those whose job immediately after return was sales and those stayed in North America are also more likely to have bad health immediately after return. As expected, bad health during the mission has a very significant and positive effect on bad health immediately after return.

The second column for the accompanied wife's bad health shows different results from the first column, which was not the case with the health during the mission. Perhaps, each spouse is exposed to different health risk at work and at home. The wife's health condition immediately after the return tends to be bad when the husband's home company has 5,000-9,999 employees and in manufacturing industry, and when the husband is notified about the return three months before. It is interesting to see that the industry of husband's home company has the opposite effects on bad health of each spouse. The results after controlling for the past health conditions presented in the sixth column show almost the same tendency in the second column.

The third column shows the results for cases in which both the husband and the accompanied wife have bad health immediately after return. It seems to largely reflect the results for the wife in the second column, except for the effect of age and years after the return. The health conditions of both spouses tend to be bad when the husband is aged under 35, when the husband's home company is in manufacturing industry, and when the couple returned within the past one year. On the other hand, the fourth column for bad health of either spouse shows almost no significant effects, except for the weak negative effect of husband's position as Manager. When the husband is Manager after return, both couples are likely to have good health.

(3) Current Health Condition

Table 5 shows the results for determinants of self-rated bad health at the time of survey for Japanese managers (husbands) themselves and their accompanied wives. The first column for the husbands shows that health condition at the time of survey tends to be bad among those having stayed overseas without their family, those in home company of 10,000-19,999 employees, those in sales job immediately after return, and those having stayed in the Middle East and Africa. However, those whose overseas subsidiary had 10-49 employees are also more likely to have bad health immediately after return when we control for health during and immediately after the mission as shown in the fifth column.

The second column for the accompanied wife's bad health shows again different results from the first column. The wife's health condition immediately after return tends to be bad when the husband's home company is in manufacturing industry, when his job during the mission was sales, when the couple stayed in Europe, the Middle East and Africa, when she had training for return, and the couple returned within the past three years. After controlling for the past health conditions, the effects of stay in Europe and years after the return lose their significance (sixth column).

The third column shows the results for cases in which both the husband and the accompanied wife have bad health at the time of survey. It does not seem to directly reflect the results for husbands and wives in the first and second columns, except for the positive effects of stay in the Middle East and Africa on bad health of both spouses. Aside from the region, the health conditions of both spouses tend to be bad when the husband worked for the home company for less than 15 years, when the husband's home company is in manufacturing industry, when the husband's overseas subsidiary had 10-49 employees, and when the wife had training for return. On the other hand, the fourth column shows that either spouse has bad health at the time of survey when the husband's job immediately after return was accounting, and when the couple stayed in Europe, the Middle East and Africa.

(4) Changes in Health Condition

Table 6 shows the results for determinants of worsening of self-rated health from the time of overseas mission to the time immediately after return and from the time immediately after the return to the time of survey for Japanese managers (husbands) themselves and their accompanied wives. Thus, health conditions are removed from

independent (control) variables. The first column for husbands shows that their health condition worsens from the time of mission to the time immediately after return when their job immediately after return was sales, while it does not worsen when they worked less than 15 years in the home company, their job during the overseas mission was technical and when they were Manager immediately after return. Naturally, the results somewhat resemble those in the first column of Table 4.

It is also true of the second column of Table 6 for the accompanied wives, which shows that their health condition worsens from the time of mission to the time immediately after the return when the husband's home company has less than 9,999 employees, when the husband's home company is in manufacturing industry, when the couple stayed in Europe, and when the return was notified three months before, while it does not worsen when the husband's job immediately after return was technical and when the duration of stay was 2-4 years.

The third and fourth columns show the results for determinants of worsening of health from the time immediately after return to the time of survey, which do not resemble the first two columns of Table 5 too much. The third column for the husbands shows that their health condition worsens from the time immediately after return to the time of survey when their job immediately after return was sales and technical, they experienced past missions, and when they stayed in the Middle East and Africa, while it does not worsen when the return was notified three months before.

On the other hand, the fourth column for the accompanied wives shows that their health condition worsens from the time immediately after return to the time of survey when their husband's home company has 1,000-4,999 employees, when the couple stayed in the Middle East and Africa, and when they had training for return, while it does not worsen when their husband's overseas subsidiary had 100-999 employees.

Conclusion and Policy Implications

Some of the hypotheses presented above have been confirmed by empirical analyses, but others are not. It is not always easy to interpret the effects of work-related variables. It is particularly because we did not collect much information

on general demographic and socioeconomic characteristics of respondents due to our survey focus on work-related adaptation and re-adaptation of returnees. Consequently, at least part of the results above should reflect the effects of these missing variables. In addition, the information on health condition is self-rated and the information on the spouse's health condition is collected from respondents. Thus, we cannot deny the limitation of this study and our survey. But, considering the rich information related to work and unexpected effects of work-related variables revealed by this study, the limitation is compensated to some extent. Since much of support for the employees and their family before, during and after the overseas mission is provided by the companies and the public support, which tends to supplement it, often goes through the company, this study can be justified in including many work-related variables.

Since many Japanese companies are cutting down their benefits and services to their employees, we cannot expect them to improve their support to their employees on overseas assignment and their family before, during and after the mission. However, their productivity and competitiveness also depend on the quality of human resources, including health condition and consequent adaptability to work and life, both in Japan and abroad. Kojima (2002) revealed that bad health immediately after return tends to induce negative evaluation of the situation in Japan, including disposable income, social status, job clarity, job authority and job autonomy. Bad health upon return is also found to promote maladjustment to daily life, housing, food, transport, climate, association with Japanese, relationship with Japanese, work responsibility, achievement expectation, and management responsibility.

Thus, we would like to see more support for Japanese managers on overseas mission and their family, particularly support for their health by the companies themselves as well as the unions and the government. At the same time, personnel managers should take special measures for those with greater health risk, including continued rigorous health examination and a holistic transition program for returnees to make the precious human resources even more productive and competitive.

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Table 1 Frequency Distribution of Dependent Variables

Dependent Variable Category	Freq. (%)
Health Abroad	
Bad	8.41
Good	91.59
Wife's Health Abroad	
Bad	7.27
Good	92.73
Health at Return	
Bad	13.29
Good	86.71
W's Health at Return	
Bad	10.27
Good	89.73
Current Health	
Bad	8.66
Good	91.34
Wife's Current Health	
Bad	6.95
Good	93.05
Couple's Health Abroad	
Both Bad	2.69
One or Both Good	97.31
Couple's Health Abroad	
One or Both Bad	11.69
Both Good	88.31
Couple's Health at Ret.	
Both Bad	4.27
One or Both Good	95.73
Couple's Health at Ret.	
One or Both Bad	18.33
Both Good	81.67
Couple's Current Health	
Both Bad	2.69
One or Both Good	97.31
Couple's Current Health	
One or Both Bad	12.32
Both Good	87.68
Health Change at Return	
Good to Bad	10.25
Good to Good	89.75
W's Health Change at Ret.	
Good to Bad	8.52
Good to Good	91.48
Current Health Change	
Good to Bad	3.80
Good to Good	96.20
W's Current Health Change	
Good to Bad	3.52
Good to Good	96.48

(Note) The cases for wife and the couple exclude singles and those husbands separated from their family.

Table 2

Frequency Distribution of Independent Variables

Indep. Variable Category	Freq. (%)	Indep. Variable Category	Freq. (%)
Age		Job Abroad	
<35	9.15	Accounting	12.80
35-39	22.07	Planning	10.00
40-44	29.39	Sales	34.02
45-49	19.15	Technical	12.32
(50+)	20.24	(Others)	30.86
Seniority		Position Abroad	
<15	21.22	President/CEO	17.07
(15+)	78.78	Executive	13.90
Liv. Arran. Abroad		Director	26.95
Alone	21.59	Manager	25.37
(With Family)	78.41	(Others)	16.71
Health Abroad		Job at Return	
Bad	8.41	Accounting	8.66
(Good)	91.59	Planning	15.98
Wife's Health Abroad		Sales	31.34
Bad	5.61	Technical	13.66
(Good)	94.39	(Others)	30.36
Health at Return		Position at Return	
Bad	13.29	Director +	23.05
(Good)	86.71	Manager	42.07
Wife's Health at Ret.		Chief	24.51
Bad	7.93	(Others)	10.37
(Good)	92.07	Rules for Duration	
Preschool Kids		Rule	18.54
Yes	22.80	(Standard)	65.97
(No)	77.20	No Rule/Standard	15.49
Kids' Return Educ.		Past Mission Abroad	
Yes	10.61	Yes	40.73
(No)	89.39	(No)	59.27
# Workers Japan		Region of Stay	
<1000	6.95	China	11.34
1000-4999	25.24	(Asia except China)	30.36
5000-9999	23.41	Oceania	2.32
10000-19999	16.22	North America	25.37
(20000+)	28.18	C. and S. America	4.39
Industry in Japan		Europe	21.71
Manufacturing	67.68	ME and Africa	4.51
(Non-Manufacturing)	32.32	Duration of Stay	
# Workers Abroad		<= 2 years	10.24
<10	10.37	2-4 years	28.17
10-49	20.49	4-6 years	34.76
50-99	11.95	(6+ years)	26.83
100-999	39.63	Time Notified	
(1000+)	17.56	0-2 months before	30.12
Industry Abroad		3 months before	24.88
Manufacturing	53.05	(4+ months)	45.00
(Non-Manufacturing)	46.95	Return Training	
Job before Abroad		Yes	8.54
Accounting	9.63	(No)	91.46
Planning	10.12	Wife's Return Training	
Sales	37.56	Yes	3.41
Technical	15.73	(No)	96.59
(Others)	26.96	Years after Return	
Position before Abr.		<= 1 years	64.88
Director +	11.34	1-2 years	15.61
Manager	27.56	2-3 years	8.90
Chief	33.29	(3 years+)	10.61
(Others)	27.81		

(Note)

The cases for wife and the couple exclude singles and those husbands separated from their family.

Table 3

**Determinants of Bad Health of Returnees and
Their Accompanied Wife During Overseas Mission**

Indep. Variable Category	Bad Health			
	Returnee	Wife	Both	1+
Constant	-2.876 **	-2.581 *	-2.861	-2.410 *
Age				
<35	-0.164	1.218	-1.025	1.473 #
35-39	0.429	0.539	-0.543	1.075
40-44	0.289	0.322	0.211	0.732
45-49	0.705	-0.158	0.242	0.453
Seniority				
<15	0.829 #	0.244	0.632	0.502
Liv. Arran. Abroad				
Alone	0.227	-	-	-
Health Abroad				
Bad	-	-	-	-
# Workers Japan				
<1000	0.086	-0.743	\$	-0.919
1000-4999	-0.049	0.507	0.018	0.256
5000-9999	-0.375	-0.915	-1.329	-0.838 *
10000-19999	0.686 #	0.492	2.313 *	-0.068
Industry in Japan				
Manufacturing	-0.558	-0.625	-2.966 *	-0.426
# Workers Abroad				
<10	-1.319 #	-0.279	-1.065	-0.500
10-49	-0.232	-0.009	0.428	-0.221
50-99	-0.042	0.314	-0.142	0.297
100-999	-0.282	-0.251	0.269	-0.296
Industry Abroad				
Manufacturing	0.328	-0.207	1.588	-0.240
Job before Abroad				
Accounting	-0.529	0.358	-0.275	0.013
Planning	-1.601 *	-1.304 #	\$	-0.916
Sales	-0.787 *	-1.022 *	-1.593 #	-0.636
Technical	0.161	-2.124 *	-1.006	-0.495
Position before Abr.				
Director +	0.564	1.176	0.508	1.022
Manager	0.424	0.733	-0.831	1.046 #
Chief	-0.451	0.782	-1.526	0.507
Job Abroad				
Accounting	0.199	-0.123	1.876 #	-0.376
Planning	0.830 #	0.914 #	0.382	0.838 #
Sales	0.586	0.086	1.411	0.026
Technical	-0.105	1.492	-0.472	0.241
Position Abroad				
President/CEO	1.080 #	1.144 #	1.441	1.177 *
Executive	0.437	-0.307	-1.521	0.185
Director	0.543	-0.439	-0.441	-0.260
Manager	0.749	-1.049 #	-1.504	-0.281
Rules for Duration				
Rule	0.322	0.205	0.502	0.361
No Rule/Standard	-0.495	-0.468	-1.168	-0.859 #
Past Mission Abr.				
Yes	-0.005	-0.019	0.577	0.040
Region of Stay				
China	0.100	0.417	0.236	0.497
Oceania	-1.426	-0.262	\$	-0.546
North America	-1.121 *	-0.698	-1.093	-1.338 **
C. and S. America	0.337	0.467	0.971	0.515
Europe	-0.674	0.501	-0.659	0.036
ME and Africa	1.031 #	0.691	2.551 *	0.337
R square	414.21	271.24	90.71	389.05
Adjusted R square	774	589	592	589
N	820	633	633	633

(Note) # p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001, \$ too few cases

Table 4 Determinants of Bad Health of Returnees and Their Accompanied Wife at Return

Indep. Variable Category	Bad Health				Aft. Control for Past Bad H.	
	Returnee	Wife	Both	1 +	Returnee	Wife
Constant	-1.142	-3.742 **	-6.022 **	-1.564 #	-1.542 #	-4.122 **
Age						
<35	0.183	0.230	2.811 #	-0.122	0.506	0.210
35-39	0.292	0.043	2.029	0.069	0.413	0.049
40-44	0.125	-0.067	1.418	0.312	0.228	-0.102
45-49	0.710 #	-0.262	0.642	0.554	0.715 #	-0.144
Seniority						
<15	-1.085 *	0.180	-1.160	-0.178	-1.323 **	0.146
Liv. Arran. Abroad						
Alone	0.382	-	-	-	0.383	-
Health Abroad						
Bad	-	-	-	-	2.268 ***	2.114 ***
# Workers Japan						
<1000	0.588	0.848	1.430	0.329	0.676	1.023
1000-4999	0.360	0.410	-0.470	0.478	0.395	0.369
5000-9999	0.333	0.676 #	1.023	0.451	0.470	0.859 *
10000-19999	1.006 **	-0.350	0.085	0.377	0.851 *	-0.436
Industry in Japan						
Manufacturing	-0.734 *	0.986 *	1.209 #	-0.197	-0.571	1.097 *
# Workers Abroad						
<10	0.244	0.196	0.828	0.318	0.509	0.091
10-49	-0.531	-0.269	0.066	-0.506	-0.549	-0.354
50-99	0.480	0.472	1.095	0.278	0.487	0.345
100-999	-0.040	0.318	0.552	0.162	0.010	0.304
Industry Abroad						
Manufacturing	0.237	-0.308	-0.805	0.134	0.116	-0.199
Job Abroad						
Accounting	-0.119	-0.215	0.455	-0.784	-0.056	-0.205
Planning	-0.324	0.555	-0.412	0.322	-0.582	0.468
Sales	-0.249	-0.026	0.165	-0.300	-0.434	-0.088
Technical	-0.904 #	0.328	-0.705	-0.337	-0.939 #	0.330
Position Abroad						
President/CEO	-0.037	0.229	-0.396	0.255	-0.492	-0.115
Executive	0.134	-0.325	0.113	0.066	-0.049	-0.492
Director	0.184	-0.394	-0.785	0.243	-0.003	-0.401
Manager	-0.091	-0.307	-2.140 **	0.156	-0.373	-0.254
Job at Return						
Accounting	0.176	-0.921	-0.796	0.154	0.008	-1.054
Planning	-0.022	-0.824 #	0.035	-0.499	0.237	-0.701
Sales	0.524	-0.444	0.318	0.045	0.753 *	-0.306
Technical	0.658	-2.078 **	-1.515	-0.540	0.546	-2.250 **
Position at Return						
Director +	-0.845	-0.197	-0.935	-0.742	-0.701	-0.133
Manager	-1.152 *	0.538	-0.663	-0.810 #	-1.046 *	0.571
Chief	-0.080	0.252	0.063	-0.091	-0.088	0.211
Rules for Duration						
Rule	0.039	-0.273	-0.266	-0.003	0.023	-0.272
No Rule/Standard	0.182	-0.103	-0.894	-0.244	0.370	-0.079
Past Mission Abr.						
Yes	-0.330	0.133	0.490	0.015	-0.333	0.168
Region of Stay						
China	0.080	0.705	0.994	0.278	0.015	0.699
Oceania	-0.042	-0.330	1.323	-1.173	0.276	-0.453
North America	0.479	0.082	0.585	0.238	0.686 *	0.217
C. and S. America	0.678	0.396	0.474	0.479	0.473	0.434
Europe	0.205	0.590	0.190	0.484	0.344	0.533
ME and Africa	0.847	0.355	0.570	-0.071	0.664	0.180
Duration of Stay						
<= 2 years	0.277	0.128	-0.847	0.179	0.147	-0.425
2-4 years	-0.173	-1.074 *	-1.743 *	-0.240	-0.191	-1.205 **
4-6 years	-0.079	-0.074	-0.235	-0.134	0.016	-0.150
Time Notified						
0-2 months before	-0.180	-0.021	-0.598	0.209	-0.256	-0.007
3 months before	-0.044	0.627 #	0.371	0.389	-0.155	0.755 *
Return Training						
Yes	-0.646	0.104	-0.306	-0.290	-0.641	0.094
Years after Return						
<= 1years	-0.300	0.783	1.667 #	0.115	-0.291	0.858
1-2 years	-0.807 #	0.539	0.413	-0.369	-0.764	0.670
2-3 years	-0.689	0.748	1.816	-0.251	-0.758	0.562
R square	578.76	373.16	173.96	565.35	531.95	351.3
Adjusted R square	768	582	582	582	768	581
N	820	633	633	633	820	633

(Note) # p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001, \$ too few cases

Indep. Variable Category	Bad Health				Aft. Control for Past Bad H.	
	Returnee	Wife	Both	1 +	Returnee	Wife
Constant	-3.378 **	-5.200 **	-19.753 ***	-1.864 #	-5.397 ***	-5.978 **
Age						
<35	0.434	-1.106	-0.561	-0.706	0.209	-0.812
35-39	0.349	-1.452 #	-1.137	-0.582	0.346	-1.413
40-44	0.653	-0.909	0.513	-0.316	0.910	-1.159
45-49	0.616	-1.106	-1.881	-0.047	0.043	-0.785
Seniority						
<15	0.002	0.550	2.136 #	0.278	0.724	0.252
Liv. Arran. Abroad						
Alone	0.730 #	-	-	-	0.332	-
Health Abroad						
Bad	-	-	-	-	1.489 **	1.387 *
Health at Return						
Bad	-	-	-	-	3.358 ***	3.677 ***
# Workers Japan						
<1000	0.268	-0.573	\$	-0.039	-0.190	-0.838
1000-4999	0.550	0.485	0.459	0.550	0.380	0.805
5000-9999	0.012	0.438	0.651	0.032	-0.335	0.341
10000-19999	0.733 #	0.421	0.749	0.080	-0.083	0.673
Industry in Japan						
Manufacturing	-0.038	1.205 *	2.107 #	0.182	0.563	1.024
# Workers Abroad						
<10	0.427	-1.083	2.603	-0.418	0.995	-1.310
10-49	0.604	-1.029	3.028 #	-0.678	1.564 *	-1.444 #
50-99	0.320	-0.729	2.636	-0.685	0.266	-1.019
100-999	-0.168	-1.200 *	0.958	-0.723 #	-0.032	-1.718 **
Industry Abroad						
Manufacturing	0.102	-0.241	-0.569	-0.010	-0.071	-0.096
Job Abroad						
Accounting	0.165	-0.777	-0.257	-0.410	0.501	-0.911
Planning	0.029	1.152 #	0.168	0.396	-0.182	0.428
Sales	-0.101	-0.079	-1.376	-0.166	-0.206	-0.808
Technical	0.288	2.205 **	0.340	1.061	0.810	2.058 *
Position Abroad						
President/CEO	-0.226	0.290	1.495	-0.211	-1.023	-0.728
Executive	0.333	0.820	2.615	0.449	0.073	1.434
Director	-0.052	-0.207	0.595	-0.176	-0.308	0.171
Manager	0.334	0.594	1.707	0.412	0.478	1.072
Job at Return						
Accounting	0.819	0.559	-0.863	1.038 #	0.874	0.977
Planning	0.226	-0.389	-0.853	0.057	0.394	0.586
Sales	0.938 *	-0.184	0.110	0.519	0.995 *	0.731
Technical	0.530	-2.262 *	0.679	-1.157	0.758	-1.506
Position at Return						
Director +	-0.562	-0.783	-1.002	-1.001	0.297	-0.655
Manager	-0.926 #	0.468	0.448	-0.623	-0.280	0.157
Chief	-0.356	0.551	0.034	-0.055	-0.416	0.525
Rules for Duration						
Rule	-0.170	-0.510	-0.461	-0.539	-0.475	-0.752
No Rule/Standard	0.306	-1.991 *	\$	-0.451	0.377	-2.440 *
Past Mission Abr.						
Yes	-0.027	0.205	0.848	0.284	0.349	0.031
Region of Stay						
China	-0.361	1.309 #	1.231	0.464	-0.711	0.933
Oceania	0.473	-0.094	0.599	-0.765	0.383	-1.085
North America	0.582	0.214	-0.237	0.450	0.325	0.256
C. and S. America	-0.734	\$	\$	\$	-3.127 *	\$
Europe	0.217	1.222 *	-0.705	0.786 *	0.026	1.036
ME and Africa	1.603 **	2.528 **	2.887 *	1.654 **	1.593 *	3.167 ***
Duration of Stay						
<= 2 years	-0.974 #	-0.083	\$	-0.620	-2.180 **	-0.758
2-4 years	-0.590	0.358	-0.221	-0.102	-0.746	0.935
4-6 years	-0.416	0.188	1.904 #	-0.349	-0.440	0.060
Time Notified						
0-2 months before	-0.071	0.570	-0.099	0.367	0.200	0.705
3 months before	-0.309	0.491	-0.644	0.283	-0.325	0.361
Return Training						
Yes	-0.206	0.907 *	2.244 *	0.129	0.094	1.382 *
Years after Return						
<= 1years	0.152	1.539 #	\$	0.091	0.233	1.202
1-2 years	-0.435	1.566 #	\$	-0.039	-0.279	1.436
2-3 years	-0.461	2.116 *	\$	0.543	-0.753	1.382
R square	429.5	246.45	82.26	421.86	310.04	178.38
Adjusted R square	768	583	589	583	767	581
N	820	633	633	633	820	633

(Note) # p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001, \$ too few cases

Table 6 Determinants of Health Deterioration of Returnees and Their Accompanied Wife

Indep. Variable Category	From Abroad to Return		From Return to Present	
	Returnee	Wife	Returnee	Wife
Constant	-0.831	-5.169 ***	-6.043 **	-6.219 *
Age				
<35	0.707	1.114	2.368	-0.720
35-39	0.594	0.021	1.141	-0.601
40-44	0.285	-0.257	0.985	-0.086
45-49	0.585	-0.311	0.518	-0.021
Seniority				
<15	-1.429 **	-0.297	0.952	-0.835
Liv. Arran. Abroad				
Alone	0.057	-	0.601	-
# Workers Japan				
<1000	0.723	1.563 *	0.373	0.205
1000-4999	0.220	0.505	0.581	1.725 #
5000-9999	0.341	0.995 *	-0.143	0.114
10000-19999	0.441	-0.366	-0.019	1.028
Industry in Japan				
Manufacturing	-0.613	1.363 *	0.214	0.923
# Workers Abroad				
<10	0.332	0.266	0.715	-0.485
10-49	-0.773	-0.202	1.114	0.187
50-99	0.560	1.005	-0.560	-1.976
100-999	-0.063	0.269	-0.681	-2.400 *
Industry Abroad				
Manufacturing	0.107	0.128	0.413	0.385
Job Abroad				
Accounting	-0.502	-0.467	-0.175	-0.761
Planning	-0.871	-0.188	0.483	0.357
Sales	-0.330	-0.177	-0.525	-1.029
Technical	-1.279 #	0.215	0.235	1.050
Position Abroad				
President/CEO	-0.541	0.106	-0.500	-2.470
Executive	-0.058	-0.336	1.324	0.596
Director	0.033	-0.404	-0.086	-1.028
Manager	-0.563	-0.275	0.421	0.230
Job at Return				
Accounting	0.504	-1.489	1.828	1.323
Planning	0.531	-0.502	\$	1.345
Sales	0.829 *	-0.044	1.355 #	0.502
Technical	0.849	-2.345 *	1.715 #	-0.023
Position at Return				
Director +	-0.979	0.003	0.331	-0.305
Manager	-1.437 **	1.161	1.093	-0.260
Chief	-0.435	0.433	0.576	0.237
Rules for Duration				
Rule	0.096	-0.565	0.503	-0.550
No Rule/Standard	0.258	-0.192	0.433	-2.056
Past Mission Abr.				
Yes	-0.330	0.339	1.102 #	0.444
Region of Stay				
China	0.205	0.627	-1.534	1.225
Oceania	0.354	0.209	\$	\$
North America	0.509	0.413	0.076	0.287
C. and S. America	-0.648	0.292	\$	\$
Europe	0.325	0.868 #	0.216	0.704
ME and Africa	0.302	0.080	1.921 *	2.942 **
Duration of Stay				
<= 2 years	-0.108	1.027	\$	0.631
2-4 years	-0.039	-1.441 *	-1.145	1.365
4-6 years	0.107	-0.021	-0.595	0.411
Time Notified				
0-2 months before	-0.345	-0.325	-0.667	0.745
3 months before	-0.021	0.689 #	-1.513 *	0.256
Return Training				
Yes	-0.816	0.230	-0.308	1.686 #
Years after Return				
<= 1years	-0.474	0.801	-0.672	0.685
1-2 years	-0.817	0.476	-0.064	1.420
2-3 years	-0.857	-0.357	-0.170	2.166
R square	438.08	280.37	157.97	117.19
Adjusted R square	700	536	664	519
N	751	587	711	568

(Note) # p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.01, \$ too few cases