

Do Perceptions of Health Change in Telework Settings? A Japanese Study

Wendy A.SPINKS¹, Yuka SAKAMOTO²

^{1,2}*Tokyo University of Science (RIKADAI),*

1-14-6 Kudankita, Chiyoda-ku, Tokyo 102-0073, Japan

Tel: +81 3 5228-8344, Fax: + 81 3 5213-0976,

Email: spinks@ms.kagu.tus.ac.jp sakamoto@ms.kagu.tus.ac.jp

Abstract: A web-based survey was conducted in December 2007 of some 300 workers (both employees and self-employed), two thirds being mainly or partially home-based. Interviews were also conducted with in-house health program officers for the employee sample. Main findings are home-based workers 1) experienced more third-party consideration of their health; 2) used work considerations less when deciding to take time off sick; 3) were less likely to seek medical treatment or take time off sick; and 4) were less confident their sickness criteria were shared by colleagues. This suggests that health issues do exist for home-based workers in that, although they experience greater moral support, they are not as action-oriented. Moreover, the home-based self-employed subgroup emerged as especially vulnerable. In sum, the results suggest the common assumption that telework automatically results in health benefits is, in fact, erroneous, but the small sample size and low frequency of employee teleworking require caution.

1. Research background

“Health is a critical component of labor supply”

Dora L. Costa [1:60]

The past quarter of a century has seen significant change in the operational environments of businesses, triggered by 1) the rise of service industries and the resultant emergence of the office as the dominant work setting; 2) the globalisation of business, which requires companies to operate in quite divergent markets and to manage highly diverse workforces; and 3) workplace transformation including the diversification of work arrangements. All three developments are either the result of, or enabled by, the so-called “IT Revolution”. Moreover, all three developments have a growing but little understood impact on health norms. Therefore, the aim of this research is to explore how perceptions of health change in telework settings using a grounded theory approach. Specific research questions include when teleworkers take time off for sickness; what factors influence their decisions; what sickness programmes or support schemes are available to facilitate leave for illness; and who is involved in the decision to take sickness absence.

The following sections provide a brief overview of related research, explanations of key conceptual definitions and conceptual models. This, in turn, is followed by a brief outline of the methodological framework, presentation and discussion of results, and final concluding remarks.

1.1 Existing research

The past twenty years has seen a general shift in literature in the general field of occupational health from a focus on “employment” to “work” [2][3][4][5], which is sometimes articulated as a refocusing away from ‘the classical wage earner model’ to ‘a working life model’, or more simply from ‘employees’ to ‘workers’ [6]. Concurrent changes in actual work practices also raise new issues for worker health management, which is a major determinant of Quality of Work Life (QWL) and worker effectiveness.

In the field of telework, much has been written about the health effects of telework, ranging, on the one hand, from the benefits to health deriving from less office stress, fewer commutes and unhealthy environments to such negative impacts as depression from isolation. While the debate has been lively, empirically supported arguments have been few. Important studies include those by Collins [7] and Mirchandani [8], who have explored hassles and the implications of boundary disruption and health and safety. Steward and Spinks [9][10][11] have also conducted studies on health perceptions in United Kingdom and Japanese settings. More recently, Montreuil and Lippel [12] have noted an overall perception by teleworkers at six Canadian organisations of the positive impact of home-based telework on health, while a Swedish study [13] has found that the home still acted as a “place of restoration” for home-based teleworkers. Elsewhere, Mann and Holdsworth [14] have identified a negative emotional impact and greater mental health symptoms in teleworkers. Despite this empirical divergence, home-based telework arrangements are often automatically assumed to promote health by switching from “a malign office to a benign home” [9].

Much occupational health research has focussed by and large on ‘absenteeism’ and its reduction, and it is often assumed that low rates of sickness absence indicate greater health. Steward [15] has shown changes in the definition of symptoms and the opportunities to claim sickness resulting from new forms of technological working. Aronsson et al [16][17] found evidence of ‘presenteeism’, while Benavides et al [18] reported increasing levels of stress with decreasing sickness absenteeism as individual workers perceived their employment to be more precarious.

Absenteeism, however, is not the only salient issue in telework arrangements. Two major questions are “how is illness defined in the absence of a regular commute, and how do workers manage illness if the home is no longer a ‘refuge’ but their main place or work?” [10] Two separate studies indicate that teleworkers often fail to report illness (“containment”) [18] or show a propensity to work through illness (“masking”)[19].

1.2 Key conceptual definitions

Since the study is concerned with various health-related perceptions, several key concepts need to be defined. The following terms were defined as below for the study and are used in this way throughout the paper.

Disease: a clearly delineated, medically defined condition.

Illness: subjective symptoms that are subsequently judged by a medical practitioner to be genuine or not.

Sickness: a culturally defined event when illness is socially acknowledged and triggers rights as well as the responsibility to get better.

Fitness: the state of being in good health

Unfit: not in a state of good health

Health: the state of being in good mental and/or physical condition

An in-depth discussion of lay and occupational beliefs about illness and health in Japan can be found in Steward and Spinks [10], but it should be noted that there is a very strongly entrenched belief in Japan in the virtue of working long hours. The most graphic illustration of this must be the well-documented phenomenon of *karoshi* (death from overwork) (Figure 1) and more recently, the alarming incidence of *karoshi*-induced suicide.

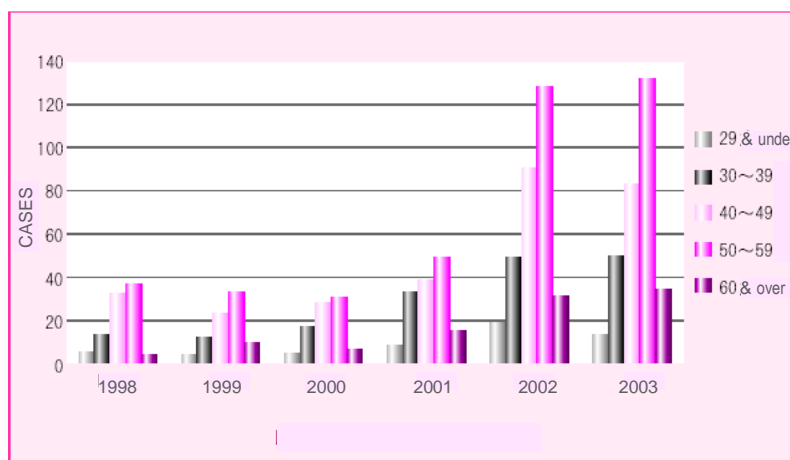


Figure 1: Incidence of *karoshi* by age

(Source) Minaki Michio 2004, On *karoshi*, Japan Labor Health & Welfare Organization, <http://sanpo23.jp/jouhoushi/pdf/25/25-06-13.pdf> (in Japanese)

1.3 The study's conceptual model

The study posits the following conceptual model for framing its analysis and arguments. Namely, the conventional relationship between illness, sickness and fitness is clearly delineated and mediated by the ability to commute and perform duties on the individual level (internal facet) and sanctioned by expert medical opinion and/or collegial/institutional permission at the organisational level (external facet) (Figure 2, left-hand side). However, in home-based work arrangements, the relationship between illness, sickness and fitness becomes blurred and more ambiguously mediated/sanctioned on both the individual (internal) and institutional (external) level (Figure 2, right-hand side). This implies that sanctioning as sickness has to be individually negotiated instead of ascertained by universally applied criteria, which, in turn, may lead to greater “masking” or “unmindfulness” of ill health.

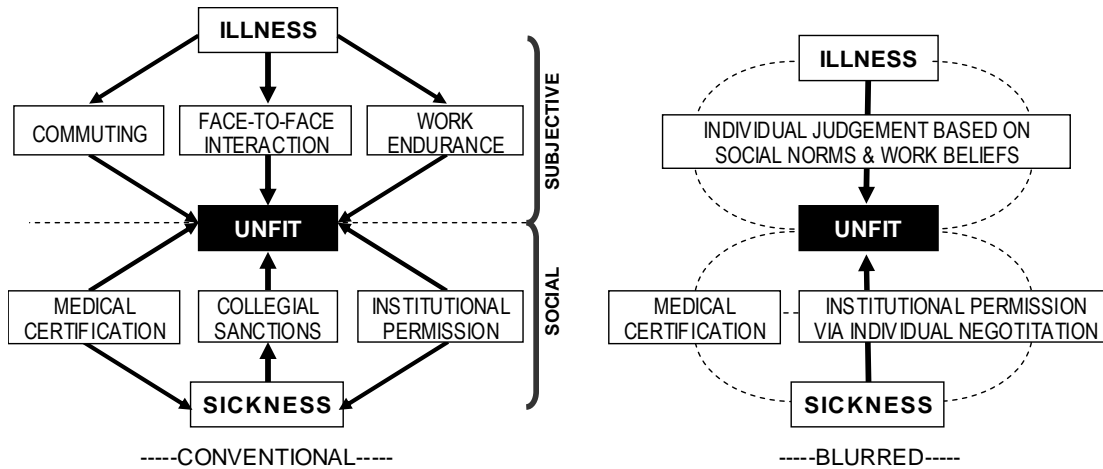


Figure 2: Conceptual model of illness-sickness-fitness relationship

In essence, the research question addressed here is:

“When a physical work place is no longer shared with an employer or client, how is the sickness of a home-based worker perceived and sanctioned?”

2. Methodology

The study was two-tiered and comprised a written web-based survey for salaried employees and self-employed workers in addition to interviews with corporate officers at the place of employ for the employee sub-sample.

2.1 The survey design and sample

The written survey, conducted in November 2007, consisted of 30 items designed to cover three main areas of enquiry in addition to demographic data, namely 1) existing job, 2) state of health, and 3) work environment. The employee sub-sample was drawn from the two companies that agreed to cooperate with the study out of a possible ten companies approached via the Japan Telework Association and all recipients of telework excellence awards for their in-house programs. It numbered 121, of whom 38 participated in in-house telework programs (Figure 3). Company A used its in-house Social Network System (SNS) to call for willing respondents. Company B used in-house mail to the same end. The employee respondents were, therefore, by and large self-selected.

A self-employed sample of 200 was drawn from the panel data of a commercial survey company. A screening survey was used to ensure respondents were actually self-employed and home-based albeit it to varying degrees (mainly home-based respondents 111; partially home-based 79; rejected respondents 10). The non home-based employees and partially home-based self-employees were included as a kind of control group to facilitate exploration of changing health perceptions.

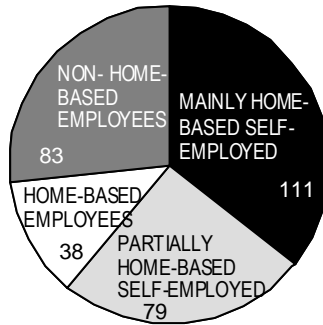


Figure 3: Respondent distribution

2.2 The interview design and sample

The interviews, which were conducted in December 2007 with in-house HRM officers at Companies A and B, were semi-structured and covered four main areas of enquiry, namely 1) health-related in-house programs, 2) sick leave programs, 3) responsibility for programs and 4).budget. Each interview lasted approximately 60 minutes and was conducted by the first author. A written record of the interviews was used instead of tape recording in order to encourage as much candour as possible. The field notes were written up immediately after each interview in order to ensure their accuracy.

2.2.1 Company A outline

Company A is a large IT business established twenty years ago, females accounting for approximately one eighth of its 8,000-strong workforce (Table 1). It provides a comprehensive array of leave programs including childcare leave (for children up to 3 years of age), elder care leave (maximum of 18 months) and reduced working hours (childcare: children up to the third year of primary school; elder care: maximum of three years including elder care leave). According to the two corporate officers (Personnel Division Chief and HRM Group Personnel Officer), these family-care programs are all well used by staff.

A formal launch of Company A's telework program, trialled since July 2007, was scheduled for March 2008. As of September 2007, 167 employees were taking part in the trial, of whom 67 were male and 98 female. A total of 21 were in managerial positions. The participants are surveyed every quarter, their feedback being used to improve the program.

Table 1: Outline of IT Company A

| | |
|---------------------|---|
| Size etc | Established 1988; Capital 142.5 billion yen; Staff 8,324* |
| Main leave programs | Childcare leave; Elder care leave; Reduced hours for childcare; Reduced hours for elder care; |
| Telework | 7/2006 1st trial; JFY2007 formal launch planned; 167 users as of 9/2007 |

*As of 31/3/2007

2.2.2 Company B outline

Company B is a medium-scale IT business established over forty years ago with a workforce of 281, of whom approximately 20% are female (Table 2). As with Company A, it provides a comprehensive array of leave programs including a special sick leave banking

program, maternity leave, childcare leave, elder care leave, long-service leave (after 10, 20 and 30 years of service), reduced work hours (for children up to the third year of primary school) and sick child leave (5 days/year). According to the two corporate officers (1 from General Affairs, 1 deputy head of the Work Life Balance Promotion Office), these family-care programs are well used by staff.

A formal rollout of Company B’s telework program took place in April 2007, after an initial trial period of four months. As of June 2007, 36 staff members participated either as home-based teleworkers (18 male, 5 female) or mobile workers (13 male).

Table 2: Outline of IT Company B

| | |
|---------------------|---|
| Size etc | Established 1966; Capital 100 million yen; Staff 281* |
| Main leave programs | Special sick leave banking; Maternity leave; Childcare leave; Elder care leave; Long-service leave; Reduced hours program; Sick child leave |
| Telework program | 10/2006-1/2007 trial; 4/2007 formal launch; 23 home-based teleworkers; 13 mobile workers* |

*As of 6/2007

3. Results

Given the disappointing level of corporate cooperation, it was not possible to conduct a sophisticated qualitative analysis of the data. Some interesting insights, however, can be gleaned from the descriptive results. This section will briefly outline the demographic profile of the respondents, then proceed to discuss the survey results by major thematic area and sub-sample characteristic. It will then consider the interview results in conjunction with information available from secondary sources. The terms “sub-sample” will be applied throughout to the self-employed/employee division, while “subgroup” will be applied to the home-based/non home-based divide within each sub-sample.

3.1 Demographic Profile

Somewhat unusual for a Japanese survey of home-based workers, male respondents accounted for 72.1% of the entire sample, just under 80% for the self-employed sub-sample and 65% for the employee sub-sample. In terms of age, respondents in their forties accounted for approximately one third of the self-employed and just over half for employees (Figure 4). Non home-based employees were markedly younger than the other three sub-groups.

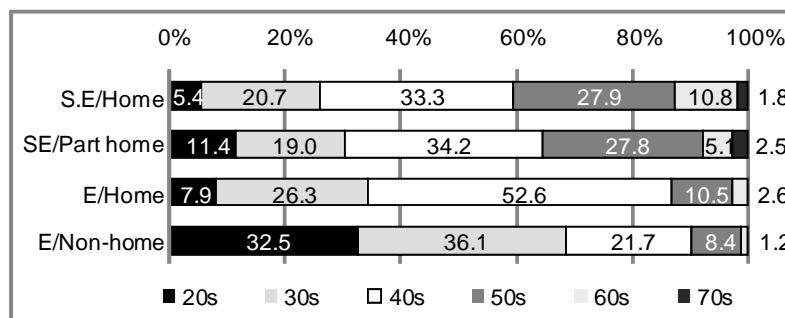


Figure 4: Respondent age groupings

N.B. Unless otherwise specified, respondent numbers correspond to those given in Figure 3.

Regarding living arrangements (multiple response), just over 60% of respondents lived with their spouse, a figure that rose to just under 90% for home-based employees. The share of home-based employees with children at home was also some 20% higher than other sub-groups. In contrast, a relatively higher share of the self-employed lived with their parents (Figure 5).

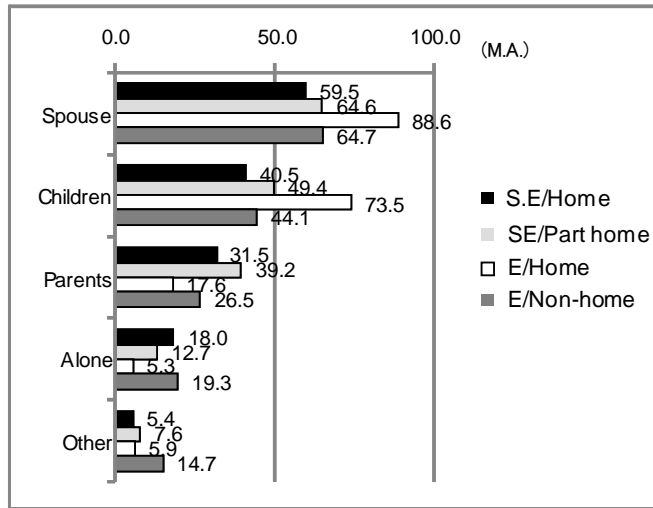


Figure 5: Living Arrangements

Regarding the seniority of the employee sub-sample, 35.1% of the home-based subgroup occupied managerial posts, the corresponding figure for the non home-based subgroup being 26.5%. Turning to length of work experience, approximately half of the self-employed answered ten years or less, but the percentage of mainly home-based self-employed who chose five years or less was slightly higher (Figure 6). As for the employee sub-sample, the non home-based subgroup was clearly less experienced than their home-based counterparts, which is in keeping with the age distribution reported in Figure 4.

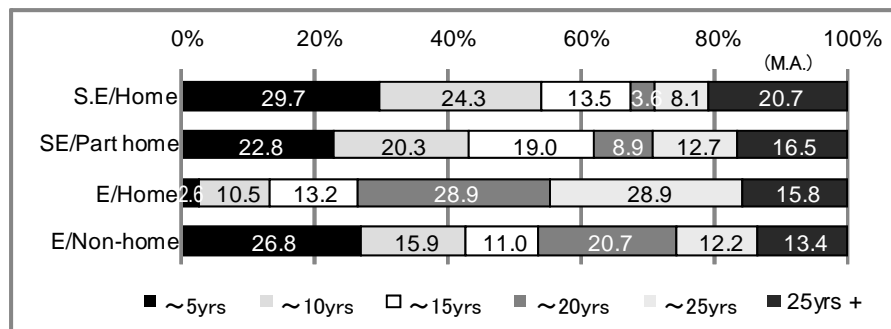


Figure 6: Length of work experience

Regarding length of home-based work experience, the employee sub-sample is clearly much shorter than their self-employed counterparts (Figure 7). As for the actual frequency of home-based work, unsurprisingly the mainly home-based self employed are by far the

heaviest users (almost daily), followed by the partially home-based self-employed (2-3days/week) and home-based-employees (1-3days/month) (Figure 8).

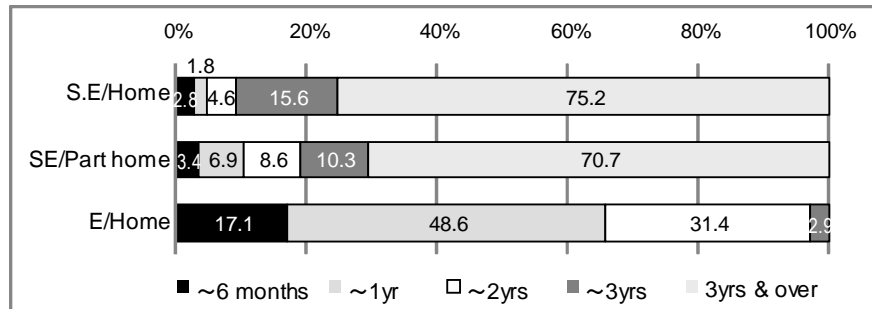


Figure 7: Length of home-based work experience

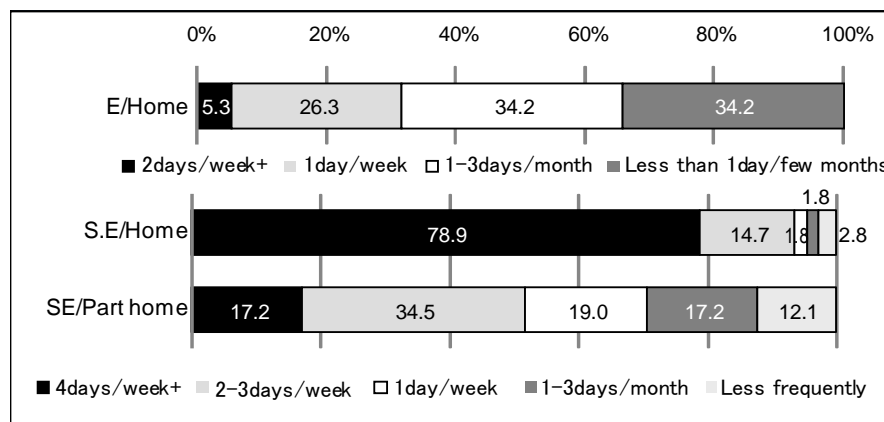


Figure 8: Frequency of home-based work

3.2 Health Situation

No great difference was noted between the respective sub-samples concerning perception of their current overall health. Roughly 40% of all respondents replied they were in good health, home-based employees being slightly higher at 51.4%. A further 40% of all self-employed cited “slight concern” as opposed to around 35% for employees. No significant difference was noted for those citing “considerable concern” (7.2% for mainly home-based self-employed; 5.1% for partially home-based self-employed; 5.4% for home-based employees; and a somewhat higher 9.6% for non home-based employees) or those currently undergoing some form of treatment (11.7%; 7.5%; 5.1%, 12.0% respectively). Much the same applied for perceptions of past health standing, non home-based employees once again citing greater concern and a higher incidence of treatment. Regarding incidence of sickness during the past year, around three quarters of the sample were sickness free, but this figure dropped to around two thirds for non home-based employees.

Of those respondents who had experienced sickness, a marked difference was noted in the existence of chronic complaints, more than two thirds of the self-employed citing chronic conditions as opposed to 20% or less for employees (Figure 9). Similar figures were cited for the incidence of recurrent symptoms.

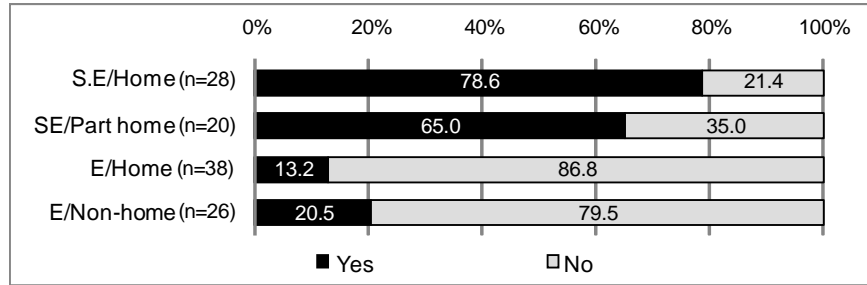


Figure 9: Incidence of chronic symptoms accompanying sickness

While more than half of the self-employed had taken time off due to sickness, only around 20% of employees had done so. While a majority of respondents were sick for a period of less than six months, a not insignificant number had been sick for more than five years (Figure 10).

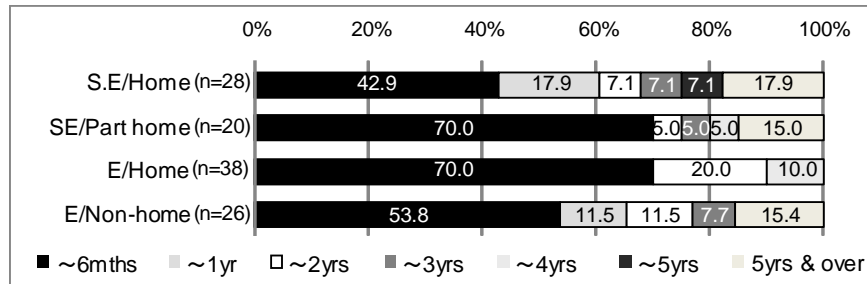


Figure 10: Period of sickness

Three quarters of employees had taken time off sick at their current place of employment, as opposed to around 40% for the self-employed since assuming their current status. Major factors for taking time off across all groups were either being too sick to commute or risk of contagion (Figure 11). Only around 20% of respondents, however, had seen a doctor for treatment with the exception of partially home-based self-employed (45.5%). While those home-based self-employed who did seek treatment all did so at their own behest, 13.3% of partially home-based self-employed did so at the urging of their business clients and 25.0% of home-based employees cited other agents (in-house medical staff).

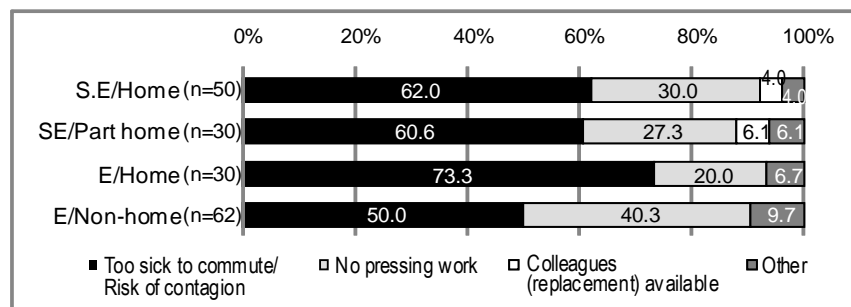


Figure 11: Major factor in taking time off sick

3.3 Work environment

Just under 90% of all employees said sick leave was available at their place of employment. A somewhat worrying 14.5% of the non home-based subgroup said they didn't know, although this may merely be the result of this group's relatively shorter work experience. Close to two thirds cited no change in pay during time off sick, but one in eight cited pay cuts. Once again, the non home-based subgroup was not sure. Figure 12 provides the length of annual sick leave and, while the figures themselves seem reasonable, the divergence in responses is surprising given the fact that the employee sample comes from only two companies.

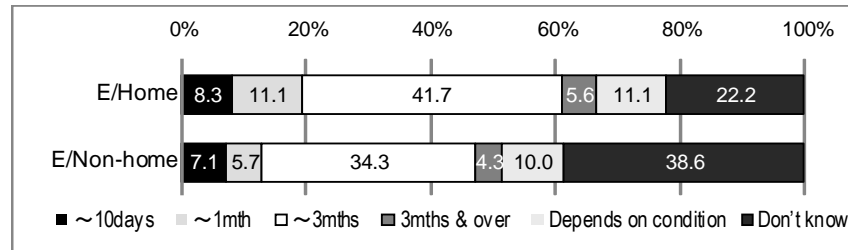


Figure 12: Length of annual sick leave (employees only)

Not surprisingly, only a very few self-employed cited the need to present some form of documentation to take time off sick, the vast majority of employees cited this requirement. Conversely, most employees replied it was easy to obtain the necessary paperwork, while a very high percentage of self-employed said it was difficult. A similar discrepancy was noted concerning regular health check-ups, with all employees undergoing these but only a third of the self-employed. Moreover, whereas more than 90% of employees underwent check-ups twice a year, only one in five self-employed did so, most having an annual check-up. Nevertheless, more self-employed (approximately two thirds) said they could choose which tests they underwent than employees (around half). 40% of the self-employed and 45% of employees said there was not enough time to consult extensively with a doctor during these checkups.

Turning to under what condition respondents felt it was possible to take time off sick, no significant difference between home-based and partially home-based self-employed was noted, the top item cited for both subgroups being "risk of contagion", followed by "too sick (to use public transport)" and "no pressing work", although this last item was ten points lower for the partially home-based subgroup. Employees also cited similar conditions, "too sick (to use public transport)" being top, but an 8 point difference for "risk of contagion" and a 26 point difference for "no pressing work" noted (Figure 13).

Around 30% of the employee sub-sample believed colleagues apply the same criteria as themselves, but most of the remaining 70% said they didn't know. Approximately 15% of the self-employed believed work partners apply different criteria a further 30% being unsure. The figure for perceived different criteria is slightly higher for the self-employed's clients, but relatively the same in the case of employees' supervisors.

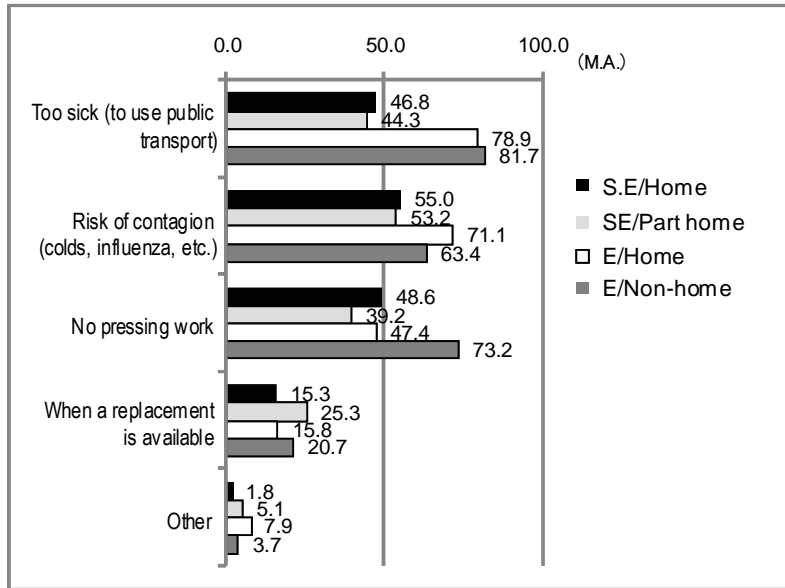


Figure 13: Conditions under which you can take time off sick

Approximately 80% of all respondents said they had experienced being unable to take time off when unwell. Between 40 and 50% said their supervisors/business clients had never encouraged them to take time off when ill (Figure 14), the same trend being noted for colleagues as well.

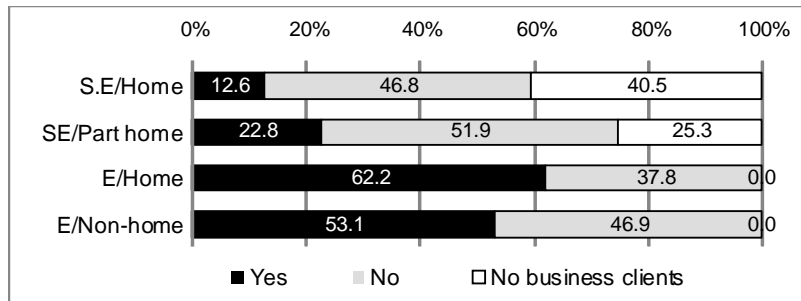


Figure 14: Experience of supervisor/client encouraging time off

Finally, whereas an average of some 20% of the self-employed sub-sample cited no consideration of their state of health by business clients, only 12% of employees felt their supervisors displayed no such consideration. When queried about their workplace as a whole, however, almost a quarter were unsure.

All respondents were provided the opportunity to cite specific examples of consideration or lack thereof for their state of health, a surprisingly high number so doing (Figure 15). Moreover, most of the examples cited were positive in nature, which goes against the usual trend in open comments, which tend to be written by more dissatisfied respondents. It is also interesting to note that the number of positive examples by the self-employed is almost identical to the number by home-based employees. Here the intuitive reaction is that the self-employed are more likely to have weaker ties with their clients than employees with their supervisors and therefore experience less consideration. At least in terms of volume, this does not seem to be the case for this sample.

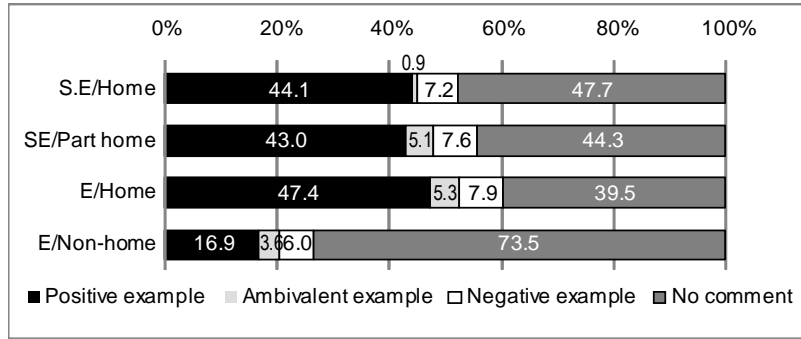


Figure 15: Quantitative breakdown of comments re health consideration

While it is not possible to document all the specific examples of consideration cited, content analysis was used to group individual comments into several categories. As can be seen from Figure 16, most positive examples cited by self-employed respondents fell into either the category of moral support (general: “always shows concern about my health” or verbal: “urged me to make sure I was really well before resuming work”) or some specific action (“changed my deadline”, “sent me home”). For employees, there was a three-way split between moral support (“general feeling of concern” “don’t overdo things”), specific action (“other members covered for me” “allowed time off”) and systems (“monthly health consultation” “regular checkups”), but no mention of deadline leniency. Major complaints across all groups were few, but were split more or less evenly between no consideration whatsoever towards health and precedence for work: “You only hear [the boss] saying ‘go home’ or ‘take a break’ after [he’s] made sure there aren’t any urgent tasks”.

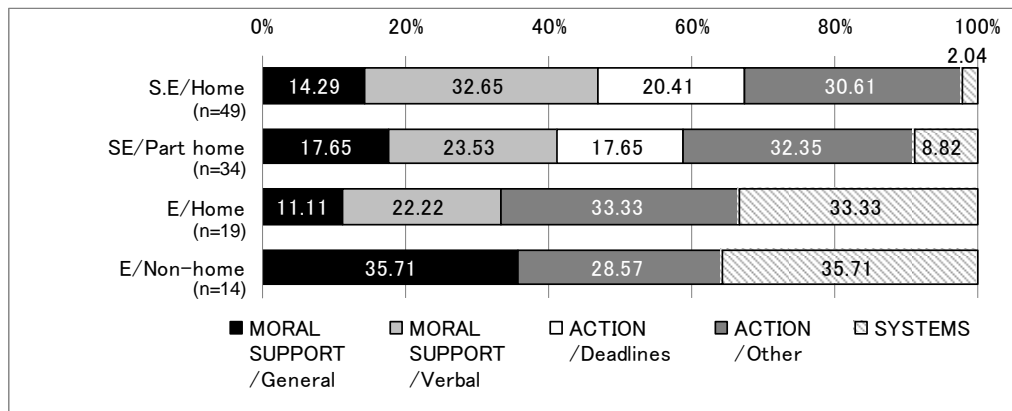


Figure 16: Qualitative analysis of positive comments re health consideration

3.4 Interview findings

3.4.1 In-house health measures

Table 3 outlines the various in-house health measures available at Companies A and B. Naturally, the large-scale Company A’s menu is more comprehensive, but Company B also offers a good range of medical examinations, especially given its medium size. A further reflection of its size may be the fact that medical results are shared with corporate management, whereas in Company A they are withheld despite a stated desire on the part of the HRM Division to access said information.

Table 3: Main health management programs at Companies A & B

| COMPANY A | COMPANY B |
|---|--|
| Regular standard health checks for all staff (results shared with Healthcare Centre, but not HRM division) Health cafeteria plan (intensive checkups) On-site healthcare centre (1 attending physician, 7-8 nurses) Group hospital Voluntary counselling for staff working overtime in excess of 80 hours/month | Regular standard health checks for all staff (annual up to 29 years of age; 30-35 ; 35 and over intensive checkup; 45 and over brain checkup; females 30 and over gynaecological checkup – subsidies for female staff under 30; results shared with corporate management) Voluntary counselling day/month (staff working excessive hours encourage to go) |

3.4.2 Sick leave programs

Company A provides a maximum sick leave entitlement of one year depending on the length of service. Medical documentation from both a physician and the occupational doctor at the in-house Healthcare Centre is a requisite. Special leave is also provided in the case of long-term sickness up to a maximum of three years.

Company B provides a sick leave entitlement of three days per year and allows this entitlement to be banked up to a maximum of 30 days. Sick leave can be used for a variety of purposes, including family care and infertility treatment. Special leave also exists for long-term sickness and sick child care (5days/year). Child care entitlements can be taken in 5-day blocks and from 2007 are included in years of service.

As to the actual degree of program use, Company B has a 100% take-up of maternity leave and one case of both paternity and elder care leave. There has been one case of sick child leave since its introduction in April 2006.

3.4.3 Management structure

The overall health management structure at both companies is provided in Table 4. Given the size of Company A, management responsibility varies according to the nature of the measures involved. For example, the HRM Department is required to report company-wide measures to the Management Council for its approval. Other measures are determined by the manager of the HRM Department, while individual applications are determined by line managers.

Table 4: Health management structure at Companies A & B

| COMPANY A | COMPANY B |
|--|--|
| Overseen by HRM Department since July 2007 (previously under General Affairs) Company-wide measures require top management approval (Management Council) Program design handled by HRM (with line input) Individual sick leave applications decided by line manager Cafeteria Plan introduced at union's request | Overseen by Manager, General Affairs Safety & Health Committee Bottom-up program design (female staff opinions, General Affairs, union, HRM and female staff leaders) Web-based health awareness activity |

At Company B, overall responsibility lies with the manager of General Affairs, although the CEO was also very active participating in the Safety & Health Committee as well as sending mail directly to staff on health-related issues. A topic of current concern is countering metabolic syndrome. Staff input was actively sought through an open communication policy when designing measures, the firm's basic approach being "starting from what's possible". The in-house Affirmative Women Project also runs a work life balance awareness raising page on its own website.

Compliance with government directives are relayed to Company A by its holding company. With the exception of directives that clearly do not fit the organization, Company A's basic stance is to incorporate all such missives. Company B was much more aggressive in its stance, deeming government directives as "minimum" compliance standards that acted as a catalyst for in-house debate. The interviewees both agreed that the CEO's stance was far ahead of the government, and relished the fact that the labour authorities had tried to stop the firm permitting a male employee to take "maternity" leave at a time when Japanese regulations did not take paternal obligations into account.

Regarding changes/improvements in health programs/policies, Company A stated it was satisfied with its comprehensive child and elder care programs. It conceded, however, that there was room for improvement in day-to-day management, such as its expansion in April 2007 of eligibility for reduced work hour programs for parents from children up to the first year of primary school to the third year. It also expressed a desire to strengthen countermeasures for *karoshi* and staff mental health, specifically its occupational health system. Company B expressed a desire to strengthen its workplace culture to increase the exercise of paternal leave. It was also considering expanding its telework program, including coupling it with flexible work hours.

In Company A, regular checkups and Healthcare Centre running costs accounted for the lion's share of the health-related budget. Nevertheless, top management has a strong awareness of the importance of health management and the Management Council has stated "spend as much as it takes" to come up with effective policies. Company B did not have an independent health-related budget, but juggled costs within the General Affairs budget and using external public health programs. Company-wide measures required the CEO's approval.

While both companies were aware of the need to improve their policies and programs, all four interviewees exuded a certain confidence about the comprehensiveness of their healthcare management as well as the sincerity of concern for employee wellbeing. Undoubtedly, this conviction played a major part in their decision to cooperate with a survey on health-related matters. Company B was especially extremely progressive in its attitude, which the interviewees ascribed mainly to the current CEO's enthusiasm and decision-making speed. They termed this as his philosophy of "giving things a go".

4. Discussion

What do the preceding results imply about health perception and health management in home-based settings? As we have just seen in the interview results, both Companies A and

B rate their in-house policies and programs as over and above government requirements. The range of their health-related policies and programs as well as their commitment to employee well-being not only impressive; they are by no means the Japanese norm. As such, any discussion of the employee sub-sample must take into account the relative non-representative nature of their respective workplaces' health management. In order to demonstrate this, we begin with a brief overview of sick leave status in Japan.

4.1 Sick Leave Status

The observant reader will have noticed that the term “to take time off sick” has been used throughout the preceding discussion instead of the more prevalent sick leave”. The main reason for reluctance to use this term is that it implies an officially condoned entitlement, which is not the automatic status of sick leave in Japan. As Table 5 illustrates, sick leave is by no means an automatic worker entitlement, but is categorized as a “special form” of leave alongside much more peripheral programs such as “refresh leave” (a quasi form of long service leave) and volunteer work leave. Moreover, in the ten year period from 1988-1997, the share of companies providing sick leave actually fell, as did the number of firms offering full pay during sick leave. This state of affairs partially explains the low degree of annual leave entitlement take-up in Japan (46.8% in 2007), since in the absence of sick leave, most workers need to keep some paid leave in hand in case they or their family members fall ill.

Table 5: Special Leave Entitlements in Japanese Companies

| Type of special leave by year and co. size、 | % with leave | Wage Payment | | | Maximum no. of days per leave / co average | % without leave |
|---|--------------|--------------|---------|--------|--|-----------------|
| | | Full | Pay cut | Unpaid | | |
| SICK LEAVE | | | | | | |
| 1988 | 30.8 | 83.4 | 16.6 | ... | 66.1 | 69.2 |
| 1997 | 23.1 | 47.7 | 15.9 | 36.3 | 225.1 | 76.9 |
| 1,000 employees or more | (36.5) | 68.8 | 13.3 | 17.9 | 296.2 | 63.5 |
| 100-299 employees | (19.7) | 59.9 | 12.0 | 28.2 | 240.4 | 80.3 |
| PAID EDU/TRAINING LEAVE | | | | | | |
| 1994 | 9.1 | 92.3 | 7.7 | ... | 8.8 | 90.9 |
| 1997 | 4.7 | 94.2 | 5.8 | ... | 22.0 | 95.3 |
| 1,000 employees or more | 3.3 | 88.4 | 11.6 | ... | 59.2 | 96.7 |
| 100-299 employees | 3.5 | 100.0 | - | ... | 69.0 | 96.5 |
| REFRESH LEAVE | | | | | | |
| 1988 | 2.1 | 91.2 | 6.3 | 2.5 | 6.7 | 97.9 |
| 1997 | 11.7 | 93.6 | 0.3 | 6.1 | 7.0 | 88.3 |
| 1,000 employees or more | 51.2 | 98.6 | 0.2 | 1.2 | 7.8 | 48.8 |
| 100-299 employees | 13.6 | 95.4 | 0.6 | 4.1 | 7.2 | 86.4 |
| VOLUNTEER LEAVE | | | | | | |
| 1992 | 0.5 | ... | ... | ... | ... | 99.5 |
| 1997 | 2.0 | 68.4 | 16.2 | 15.4 | 95.5 | 98.0 |
| 1,000 employees or more | 17.0 | 73.2 | 9.5 | 17.3 | 176.2 | 83.0 |
| 100-299 employees | 1.3 | 73.0 | 10.5 | 16.4 | 167.7 | 98.7 |

(Source) Japanese Ministry of Labour, 1998

4.2 Home-based versus non home-based groups

Table 6 lists the major differences between the home-based and non home based groups, irrespective of their employment status. As is apparent, non home-based employees are much younger than other groups, but also cite the highest percentage of current health concerns/treatment as well as past sickness, albeit by a small margin. Additionally, they are generally less well informed about many aspects of health-related support as well as judgement criteria, but this may be a function of their relatively short work tenure. They are also more concerned about pressing jobs when deciding whether to take time off, although, once again, this may be a function of their relatively junior status in the organisation. In other words, they may have less discretion than their more senior home-based counterparts. They are also less likely to have supervisors suggest they take time off when ill, which means either that supervisors with on-site subordinates are more cavalier about health issues or that supervisors with off-site subordinates are more aware of the need to keep an eye on the general well-being of their workers. Nevertheless, virtually an identical share of home- and non home-based employees had in fact taken sick leave at some time or other. Non home-based employees were also slightly more pessimistic about consideration for health in the workplace as a whole.

Table 6: Major divergences between home-based & non home-based groups

| HOME-BASED | NON (PARTIAL) HOME-BASED |
|---|---|
| Greater share of home-based employees married with children | Non home-based employees much younger, but more health concerns/past sickness |
| Greater share of home-based employees in managerial positions | Non home-based employees poor knowledge about policies/programs |
| Home-based employees more likely to have others prompt medical consultation | Non home-based employees poor knowledge of colleague/supervisor sickness criteria |
| Home-based employees more likely to have others suggest time off when ill | Non home-based employees more concerned about pressing jobs when deciding time off |
| Both home-based employees and self-employed cite more health consideration | Non home-based employees' supervisors less likely to suggest time off when ill |
| Home-based self-employed longer period of illness than partial counterparts | Partially home-based self-employed consult doctors more when ill |
| | Partially home-based self-employed more likely to have others prompt medical consultation |
| | Partially home-based self-employed more likely to have others suggest time off when ill |

Home-based self-employed workers suffered longer periods of illness than their partially home-based counterparts. On the other hand, partially home-based self-employed workers consulted doctors more frequently when ill than other groups, but this may simply be a function of being more on the move outside the home, and therefore more conveniently situated to drop in to clinics etc. The same group was also more likely to seek medical opinions at the behest of others, which may be the result of a greater degree of external contact. The same applied, conversely, to the home-based employees, which may be a function of heightened awareness by family members through more contact time on a daily basis.

4.3 Self-employed versus employee groups

Table 7 lists the major differences between the self-employed and employee groups, irrespective of their home-based status. While almost half of self-employed teleworkers have a maximum of ten years' work experience, just under half of employees fell within the 15-25 year bracket, despite similar age composition between all the self-employed and home-based employee groups. Conversely, approximately three quarters of the self-employed had worked from home for more than three years; two thirds of the home-based employees had less than 12 months' experience. Whereas two thirds of the home-based employees were infrequent teleworkers at best (1-3 days/month or less), even partially home-based self-employed worked at home more frequently, just over half recording at least two days a week.

Table 7: Major divergences between home-based & non home-based groups

| SELF-EMPLOYED | EMPLOYEES |
|--|--|
| Higher share of male respondents | Longer work experience |
| Longer home-based experience | All undergo regular checkups and at shorter intervals |
| Greater frequency of home-based work | More need for supporting documentation, but easy to obtain |
| Fewer opportunities for regular checkups and annual at best | Less informed about available programs etc. |
| Less need for supporting documentation, but hard to obtain if required | More unsure of colleagues/supervisors' sickness criteria |
| Greater checkup customization | More likely to have experienced colleagues/supervisors recommending time off |
| More health problems and higher incidence of time off | Feel more justified in taking time off sick |
| More incidence of chronic/recurring conditions | |
| Lower perception of shared sickness criteria | |
| Less third party consideration of health | |

All self-employed workers cited much higher rates of chronic complaints, recurring conditions and time off work. While they have less opportunity for medical checkups and less regularly, they have more opportunity to specify what tests they want done. Partially home-based self-employed also said they were able to consult more thoroughly with the examining physician. Not surprisingly, the self-employed sub-sample said clients' showed less concern for their health than employees' workplaces.

Employees were more unsure of whether they shared the same sickness criteria as both their colleagues and supervisors and yet were more likely to have been urged to take time off when unwell by both colleagues and supervisors. While the latter is not surprisingly given the closer ties that exist between supervisors/co-workers/subordinates than in self-employed/client relationships, the degree of uncertainty of actual criteria is unexpected.

5. Concluding Remarks

Obviously the limited size of the data set is highly problematic when it comes to drawing conclusions. The disappointingly low number of home-based employees and their low teleworking frequency makes only the most tenuous of inferences possible. The following brief summary is organized around sub-sample and subgroup level findings.

At the sub-sample level, the following characteristics were noted.

- Home-based vs. non home-based

Regarding environmental differences, the home-based sample tended to be married (74% versus 64%) and have children (57% versus 43%), whereas the non (partial) home-based sample tended to live with their parents (33% versus 25%). It cited more incidence of consideration by others of their health as well as more specific, positive examples, especially verbal displays of moral support. No consistent disparity was noted between the two sub-samples regarding current or past actual states of health.

Turning to differences in perception, the home-based sample judged it more appropriate to take time off when there was a risk of infecting others (63% versus 58%), while the non home-based sample judged it more appropriate to take time off only when they had no pressing jobs (56% versus 48%). A slightly higher number of the home-based sample had at one time or another felt unable to take time off when ill (85% versus 80%). The non home-based sample had a lower perception of shared sickness criteria with work partners (12% versus 7%).

Regarding differences in action, the non home-based sample was more likely to seek medical treatment when ill. It was also more likely to have taken time off ill.

These results suggest that home-based status does not have a marked impact on actual states of worker health. In fact, the home-based seem to enjoy a generally more considerate health environment. In terms of perception, the home-based sample indicated a lower perception of shared sickness criteria vis-à-vis the non home-based sample, but the figure was low in absolute terms. Their individual judgement concerning the justifiability of taking time off when unwell seemed weighted towards the degree of their incapacity and risk of contagion rather than work considerations. In terms of action, however, they were less likely to seek medical treatment or take time off.

- Employee vs. self-employed

Regarding environmental differences, employees had longer years of service but a low frequency of home-based work. Employees enjoyed a far more comprehensive health management environment than self-employed workers. Self-employed workers had more health problems.

Turning to differences in perception, employees cited a broader range of justification for time off sick. Employees were less sure if their personal sickness criteria were shared by their colleagues and supervisors. The self-employed had a lower perception of shared sickness criteria.

As for differences in action, employees were more likely to be urged to take time off by colleagues/supervisors.

These results suggest employees enjoy greater external health management support, but entertain internal doubts about the sanctioning of sickness at their workplaces.

- Subgroup level

At the subgroup level, of major concern is the finding that home-based self-employed workers experience longer periods of illness, less consultation with doctors and less specific encouragement by third parties to take time off when unwell. However, they indicated a higher level of third party consideration towards their health mainly in the form of (verbal) moral support. In contrast, home-based employees enjoyed a much more positive environment in terms of collegiate consideration and encouragement, reinforced by greater family awareness. Given the low frequency of their home-based work, however, this may simply be the function of their higher age, their relative seniority at work and more family-centred living arrangements.

To sum up, home-based workers 1) experienced more third-party consideration of their health; 2) used work considerations less when deciding to take time off sick; 3) were less likely to seek medical treatment or take time off sick; and 4) were less confident their personal judgement criteria were shared by colleagues. This suggests that health issues do exist for home-based workers in that, although they experience greater moral support, they are not as action-oriented. Moreover, the home-based self-employed subgroup emerged as especially vulnerable.

Clearly, there are complex factors at play which have not been fully captured by the current study. It is imperative, therefore, that further analysis of the data set, including focussing on home-based versus non home based experiences, needs to be conducted. Reanalyzing the data using multivariate constructs anchored on health experience, length and frequency of home-based work and/or workplace environment may lead to more robust insights.

Endnote

Due to time constraints, the current paper provides only the simplest of descriptive frequency results. Every effort will be made to provide as more sophisticated treatment at the Workshop presentation.

Acknowledgements

This research was funded by a grant from the Japanese Science Promotion Council (Grant No. 18530298, JFY2006-07). The authors would also like to thank the companies and their officers who cooperated with the study. Finally, the first author would like to acknowledge her intellectual debt to Barbara Steward, who provided both the original inspiration for this line of research and the occupational health expertise upon which the current study is based.

References

- [1] Costa, Dora L. 1998, *The Evolution of Retirement: An American Economic History, 1880-1990*, University of Chicago Press, Chicago
- [2] Burgess, J. 1994, 'Restructuring the Australian Labour Force: From Full Employment to Where?', *Journal of Australian Political Economy*, no. 34, pp. 103-127
- [3] Ewing, K. 1996, *Working Life – A New Perspective on Labour Law*, Institute of Employment Rights, Lawrence & Wishart, London
- [4] Handy, Charles 1989, *The Age of Unreason*, Business Books Limited, London
- [5] Schmid, G., O'Reilly, J. & Schomann, K. (eds.) 1996, *International Handbook of Labour Market Policy and Evaluation*, Edward Edgar, Cheltenham, U.K.
- [6] Australian Centre for Industrial relations Research and Training 1999, *Australia at Work*, Prentice Hill, Sydney
- [7] Collins S.C. 1994, *A Pic'n'Mix of Hassles in Teleworking* Paper presentation to the British Association Conference Loughborough University of Technology September 1994
- [8] Mirchandani K. 1997, No Longer a Struggle: Teleworkers' Reconstruction of the Work-non-work Boundary. in P.J. Jackson & J.M. van der Wielen (eds) *Teleworking: International Perspectives: From Telecommuting to the Virtual Organisation* London, Routledge
- [9] Steward, Barbara 1999, 'Sickness absenteeism in telework: a sociological study', Proceedings, The 4th International Telework Workshop, Tokyo, August 31-September 3, pp. 61-68
- [10] Steward, Barbara & Spinks, Wendy A. 2001, 'Telework and Health Management: UK and Japanese Research', presentation at the 8th European Assembly on New Ways to Work, Academic Track t -world 2001, Helsinki, September 12-14
- [11] Spinks, W.A. 2002, 'A Survey of Home-Based Workers in Japan: Emerging Health Issues', (Japanese) *Journal of Occupational Health*, 44: 248-253
- [12] Montreuil, Sylvie and Lippel, Katherine 2003, Telework and occupational health: a Quebec empirical study and regulatory implications, *Safety Science*, Volume 41(4), 339-358
- [13] Hartig, Terry ; Kylin, Camilla; Johansson, Gunn 2007, The Telework Tradeoff: Stress Mitigation vs. Constrained Restoration., *Applied Psychology*, 56(2):231-253
- [14] Mann, Sandi and Holdsworth, Lynn 2003 The psychological impact of teleworking: stress, emotions and health, *New Technology, Work and Employment* 18(3), 196-211
- [15] Steward B. 2000, Telework and Health: A Sociological Study of Illness and Sickness in New Forms of Employment, unpublished PhD Thesis, University of East Anglia, UK.
- [16] Aronsson G. & Goransson S. 1999a, Permanent employment but not in a preferred occupation: psychological and medical aspects, *Journal of Occupational Health Psychology* 4:152-163
- [17] Aronsson G. 1999b, Paid by time but judged by results: an empirical study of unpaid overtime, *International Journal of Employment Studies* 1(1):1-15
- [18] Benavides F.G., Benach J., Diez-Roux A. & Roman C. 2000, How do types of employment relate to health indicators? Findings of the Second European Survey on Working Conditions, *Journal of Epidemiology and Community Health* 54(7): 494-501
- [19] Tokyo Worker Welfare Association 2001, *Worker Welfare Emergency Report (Home-based Worker Survey)*, March (in Japanese)