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Illness Experience and Therapeutic Choice

Evidence from Modern Japan

This article presents a history of medicine from the patient's viewpoint. Using archival materials from the Takinogawa Health Survey, conducted in Tokyo in 1938, the article examines differences in self-reported morbidity according to patients' ages and genders. It also examines differences in their choices of treatment according to income. The article proposes to understand these differences with reference to sociocultural, biological, and economic factors.

During the past 10 years or so, the history of medicine in modern Japan has at last "taken off," transforming itself from an intellectual backwater to a frontier of exciting research. Important monographs have been published, most notably by William Johnston (1995) on tuberculosis, Yutaka Fujino (1993) on leprosy, and Wataru Iijima (2005) on malaria; collections of research papers on the history of medicine are appearing at a breathless pace; numerous young scholars are excavating rich primary medical materials for their PhDs, some of which are being turned into books; and a major epidemiological database covering 1870–1960 is now available on the Internet (Yamada and Kuriyama 1997; Kuriyama and Kitazawa 2004; Tomobe and Suzuki 2006; Kōzai 2007).

Recent scholarship has focused primarily on the medical policies of the state and the role of those doctors who worked closely with the state. Historians differ in their assessments of the relationship between medicine and the modern Japanese state, ranging from Fujino's narrative of the overwhelm-

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ing power of the state leaning toward totalitarianism to Johnston's cautious evaluation of the resilience of private practitioners. They share, however, a framework that puts the alliance or the collaboration of the state and the doctors at the center of their historiographies.

This article intends to present a different historiography and different problems. My first concern is introducing "the patient" to the discussion of modern Japanese medicine; like Roy Porter and Dorothy Porter (1988), I aim at practicing medical history from below in modern Japanese medical history. Particularly, I will focus on the patient's subjective experience of illness. Since many cases of experience of illness lead to an action to alleviate the pain or disturbances of one's body, the discussion below will necessarily involve the question of therapeutics, especially the patient's choice of therapeutics, drugs, or other remedies. In discussing therapeutics and drugs, I will follow medical anthropologists and examine the total drug effect, departing from the framework that prioritizes the narrowly conceived efficacy of remedies (see Page 2004). Drugs were often chosen for factors other than their efficacy, ranging from their external appearance, such as color, shape, and packaging, to the underlying rationale of their therapeutic action. From these numerous factors, I will concentrate on the compatibility of drugs' therapeutic mechanisms and the body images that people hold. This article thus explores the subjective experience of illness and the means to cope with such experience.

Patients' experiences of illness have been typically explored by historians through qualitative evidence, such as letters, diaries, and autobiographies (Fukuda 1995). To overcome the familiar limitations of those sources, such as the strong bias toward highly educated "elite" patients and the difficulty of generalizing from a small number of case studies, this article uses quantitative data that include a fairly large number of patients from various classes. The data have been taken from the archive of the Takinogawa Health Survey (THS), conducted by the Ministry of Health for one year beginning in May 1938.¹ The (then) metropolitan ward of Takinogawa lies on the northeastern outskirts of Tokyo, an area rapidly urbanized from the late nineteenth century. Its residential population was a mixture of the wealthy, the poor, and the middle and working classes. Scattered mansions of aristocrats gave the area the aura of grandeur, and famous intellectuals and literary celebrities flocked there to form a community. At the same time, many skilled and unskilled workers lived there and worked in large factories, such as the Arsenal for the Imperial Navy and the Printing Office of the Mint Bureau,

as well as in small factories of various sorts, among which rubber factories were prominent after World War I (Araki 1923). From this mixed population, 370 households, or about one-sixtieth of the entire households of the ward, were selected as the subjects of the survey. These households were chosen to include families of various incomes, classes, and backgrounds. The selected sample thus included both the destitute and the wealthy. In total, the selected households had 2,330 individuals at the beginning of the survey. The subject population of the survey fluctuated due to emigration and attrition ($n = 283$), births ($n = 36$), and deaths ($n = 24$). I excluded emigrants and dropouts but kept the newborns and the deceased, which means that the following analysis is based on the illness experiences of 2,059 individuals in Tokyo on the eve of World War II.

Those subjects were surveyed in both intensive and extensive ways. Each household was asked to keep a diary to record its members' illness experiences, including nature, duration, type of treatment sought, and expense of the treatment and related expenditures (Committee of Takinogawa Health Survey 1941). Surveyors made regular monthly visits to the families, examined the diaries, asked about ambiguous entries, and made monthly records of the diary entries. Such visits were repeated for a year, after which the monthly records of each individual were transcribed to a tabloid-sized sheet. The sheet contains not only records of illness episodes but also various items of information about the individual and the household to which he or she belonged. The impetus for this large-scale survey remains to be examined, but it is certain that the major reason lay in the state's move to wartime production of medicines and reorganization of medical services for the wartime economy (Komine 1939). The Ministry of Health tried to assess the consumption of medicines and medical services by the people, whose health was regarded as the key in the inevitable total war with the United States.

Subjective Experience of Illness

From the account above, it is clear that the THS dealt with self-perceived or subjective morbidity, not with objective morbidity, such as incidence or prevalence (Riley 1987, 1997; Johansson 1991). Whenever the subject felt ill for a length of time and took some action in response, the illness episode was recorded. Analysis of the incidence of illness in the THS has thus only limited value from a purely epidemiological viewpoint, since it did not involve

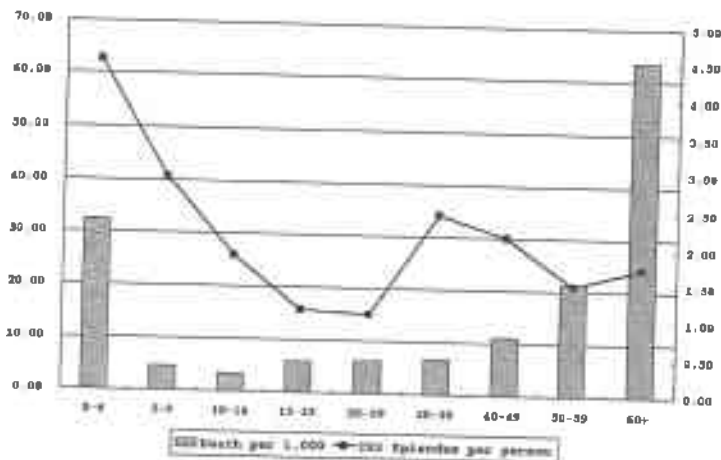


Figure 1 Mortality index from Tokyo and morbidity index (episodes per year) from Takinogawa Health Survey, by age groups
Sources: For mortality, Naikaku Tōkeikyoku 1937, for morbidity, Committee of Takinogawa Health Survey 1941.

medically reliable assessment of the bodily state by qualified doctors. From a sociohistorical point of view, however, the THS offers a unique window into the question of how frequently people perceived themselves to be ill and took action against the illness.

Both common sense and several pioneering works by Edward Shorter (1991, 1993), James Riley (1997), and others suggest that subjective morbidity and objective bodily status do not always agree. Some individuals are hypochondriacs, while others hardly notice serious illnesses that have befallen them. The THS allows us to examine such discrepancies between subjective and objective morbidity from a solid statistical basis.

The greatest discrepancy between the two morbidity indices is observed in elderly people. Figure 1 shows the mortality in Tokyo in 1935 and a morbidity index obtained from the THS (Naikaku Tōkeikyoku 1937). The vertical bars present the age-specific mortalities per 1,000 people in Tokyo in 1935, while the line presents the number of illness episodes per person in the THS for each age group. This exemplifies both the fit and the misfit of mortality and morbidity, that is, objective morbidity and subjective morbidity. In the early phase of life, mortality and morbidity moved in parallel: infants and

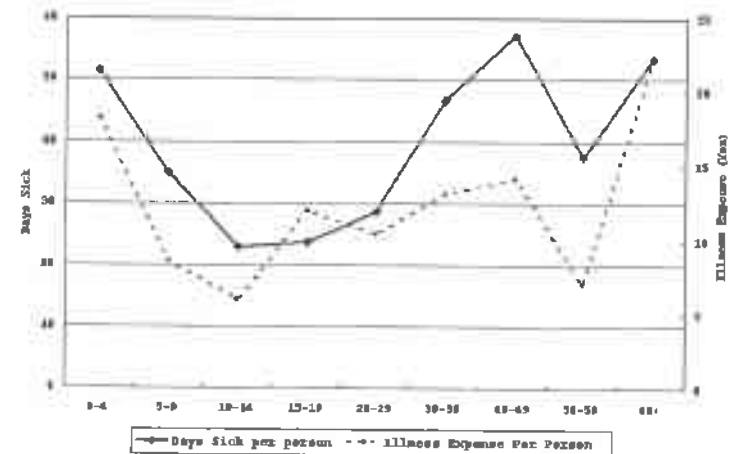


Figure 2 Average number of days sick and amount of illness expenses, both by age groups
Sources: Committee of Takinogawa Health Survey 1941.

children in Tokyo showed a high mortality of 65 per 1,000, while those in the THS reported about 4.5 episodes per person per year. With the decline of mortality with age, the THS morbidity index lowered too. However, the parallel stopped in middle age. While the mortality continually increased as one grew older, the morbidity index peaked in the age group 30–39 and then gradually decreased.

Particularly striking is the discrepancy between the two indices in the age group over 60, in which mortality peaked but the morbidity index did not rise in response. When one uses the duration of illness episodes or their expenses as an alternative index of morbidity, mortality and morbidity in middle and old age still are not parallel. The average days of sickness per person per year decreased after the peak in the age group 40–49, again failing to respond to the rise of mortality for those over 50. Expense shows a similar curve, although it exhibits a more substantial rise in those over 60 (see figure 2). Elderly people in Tokyo in 1938 behaved as if they were insensitive to or unable to act against the increasing frailty of their bodies. The apparent insensitivity to one's disease or inertia in health-seeking behavior among the elderly did not change until the 1970s, when the Scheme for the Medical Expense of the Aged made medical service for the aged virtually free and old

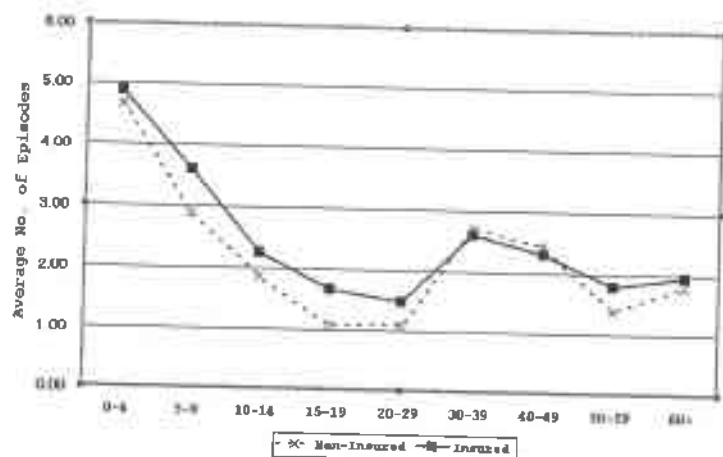


Figure 3 Average number of episodes per year by age groups, insured and noninsured
Sources: Committee of Takinogawa Health Survey 1941.

people's visits to doctors showed a drastic increase (Ministry of Health and Welfare 1999). However, the lack of insurance does not explain the senescent inactivity in health-seeking behavior. Although insurance made some impact on the reported morbidity pattern of Takinogawa residents and the morbidity of insured individuals was generally higher, the medical inactivity of the elderly is still observed for the insured as well as for the uninsured (see figure 3).

These findings suggest that the fit or misfit of mortality and morbidity was not even across age groups. In childhood and youth, mortality and morbidity moved in parallel, while in middle and old age they did not. Even in a regime in which the illness or disease of infants and children was well attended, corresponding to the greater risks to their lives, elderly people's subjective morbidity failed to respond to their rise of mortality. One can only speculate about the reasons for this apparent paradox. One might be that illness episodes of the elderly were more likely to be left underreported, unrecognized, or untreated because they were regarded as the normal state of aged people. It should also be noted that a similar phenomenon of the low self-reported morbidities of elderly people was observed in another roughly contemporary health survey in the United States (Falk et al. 1933). The senes-

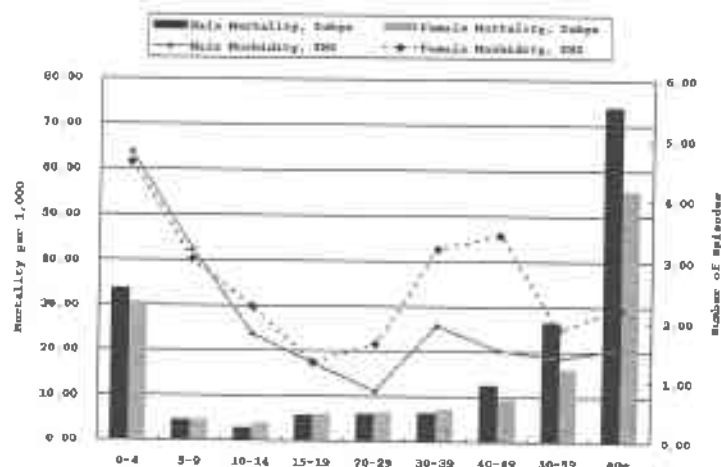


Figure 4 Mortality in Tokyo and number of illness episodes per person per year, by sex and age groups
Sources: For mortality, Naikaku Tokeikyoku 1937; for numbers of illness episodes, Committee of Takinogawa Health Survey 1941.

cent inactivity in health-seeking behavior might have been fairly common or even a norm in past societies.

If we turn to the difference in subjective morbidity according to sex, another interesting twist appears. Figure 4 represents the number of illness episodes per person per year divided by age and sex, with mortality shown in vertical bars. Morbidities for boys and girls were virtually the same until they came of age. After age 20 the morbidities started to differ. Female adults reported illness and took curative measures much more often than their male counterparts, especially in the age groups 30-39 and 40-49, when their mortality was only slightly higher than that of males. They not only reported illness more frequently but visited doctors more frequently, remained under medical care longer, and spent more money on their health. Even when those who gave birth during the survey were excluded, female excesses persisted. The male excess in mortality after age 40 did not reverse the situation, although the gap between the morbidities of men and women narrowed.

Adult women's higher subjective morbidity, particularly their larger expenditure on medicine, is at least mildly surprising, for we are accustomed to thinking of prewar Japan as a patriarchal society in which women's politi-

Table 1 Number of episodes for male and female adults, divided by disease types

Disease type	Male (N = 497)	Female (N = 537)	Total (N = 1,034)	Difference between female and male
Cracked hands	13	111	124	98
Dental	32	103	135	71
Stiff shoulders	35	105	140	70
Common cold	193	252	445	59
Reproductive	0	54	54	54
Skin	54	100	154	46
Gastrointestinal	114	155	269	41
Ophthalmologic	26	58	84	32
Respiratory	22	52	74	30
Sickness (unspecified)	81	110	191	29
Headache	18	47	65	29
Injuries (unspecified)	45	70	115	25
Fever	5	11	16	6
Beriberi	6	11	17	5
Brain and heart	7	9	16	2
Nose and ears	12	13	25	1
Acute infectious	3	1	4	-2
Others	28	62	90	34
Total	694	1,324	2,018	630

cal and civil rights were severely limited and their voices were suppressed. According to the stereotype, men got the lion's share of food, clothes, and health care at home, while women persevered on meager food and endured their illnesses in the spirit of self-sacrifice. Data from the THS controvert a certain part of this image. The women in Tokyo on the eve of the Pacific war expressed their illness experiences and took action to alleviate pain or sickness more often and more extensively than men.

Although a handful of diseases specific to women played some part in the overall female excess in morbidity, they were not the sole reason that women reported more illness than men. Table 1 presents the number of episodes for those over age 20 divided by sex and disease type. The table suggests several important points. Illness closely related to a "hard" biological difference between the sexes certainly contributed to excess morbidity among female adults. Illness episodes related to pregnancy and childbirth and other gynecological problems were naturally reported only by women. The large

female excess in dental problems was also related to a biological consequence of pregnancy due to women's calcium deficiencies after childbirth. Frequent childbirth was still the norm at that time, and female reproductive activity depleted nutrients from women and resulted in higher morbidity. Yet "cracks in the skin" were related to the social division of labor. These caused itchy hands, associated with the use of cold water during winter. Women's predominance in this category was no doubt due to their household duties: they rinsed rice before boiling it, washed dishes, and did the laundry. These were thus occupational health hazards for adult women, so to speak. Stiff shoulders, or *katakori* in Japanese, was a culturally conditioned illness whose major symptom was dull pain around the shoulder joints. It is believed to be a local disease of Japan (Kuriyama 1997). Its mechanism remains a mystery at present, but researchers agree that sedentary work that involved repetitive motion, stress, and psychosomatic causation played large roles. Probably the physical burden of household chores and the psychological stress caused by them underlay the female excess morbidity in this category. The same mixture of the somatic and the psychological or the biological and the cultural was present in women's excess morbidity in other categories. Women reported that they got cold more often and had more injuries, more skin problems, more headaches, more respiratory symptoms, more ophthalmologic difficulties, and more gastrointestinal disorders. Illness episodes in these categories may have some basis in the real differences of the bodily status of men and women. It is, however, hard to conceive that female bodies were susceptible to respiratory diseases twice as often as men's without any correspondingly large differences in the mortality of such diseases. It is almost certain that adult women's higher subjective morbidity in those diseases resulted not only from their bodily status due to their reproductive activities and their occupational hazards but also from their lowered threshold for illness and their readiness to treat conditions through various means. There is even the possibility that women's knowledge of female excess mortality heightened their semihypochondriac sense of being "at risk," resulting in more active health-seeking behavior. By contrast, the male culture of bravery and perseverance might have resulted in underreporting of their ill health.

I would like to reinforce the complexity of the concept of subjective morbidity or illness experience. Cultural historians or social constructionists might argue that studying morbidity in the past is not unlike studying past people's unhappiness, because illness is a culturally mediated or socially

constructed category. Although such a statement has some truth, it does not capture the complex interplay between the biological and sociocultural factors in the determination of subjective morbidity. The low subjective morbidity of elderly people in Tokyo in 1938 was clearly due to sociocultural factors that defied the biological frailty of the elderly and prevented them from translating their objective ill health into a search for treatment. Yet at least some parts of the excess morbidity of women had solid biological or somatic bases in their bodies. However, even such biologically "hard" conditions as decayed teeth or cracked hands were mediated through socially determined behaviors, such as frequent childbirth and the division of household labor. Moreover, the threshold of treatment-seeking action was almost certainly lower for adult women than for men due to sociocultural factors. Both biological and sociocultural elements played important roles in determining people's subjective morbidity. It is important to note that their effects differed by age, sex, and perhaps other parameters.

Choice of Treatment

The ultimate goal of the THS was to measure people's use of drugs and other medicinal matters. Among the various measures of treatment recorded in the survey, two were particularly important, namely, consulting a doctor and taking over-the-counter (OTC) medicines. Of the 4,879 illness episodes, about 1,600 involved seeing a doctor, and OTC drugs were taken on about 3,300 occasions. Other categories listed by the survey, such as folk medicine, religious healing, and alternative medical practice, contributed much less, about 500, 170, and 70 episodes, respectively. (Table 2 shows how these measures were used in combination.) Medical consultation and OTC drug taking present particularly interesting questions. The choice between these two measures has been studied in the context of modern health economics as a choice between expensive and "correct" or culturally legitimate treatment favored by well-off and better-educated individuals, on the one hand, and cheap but ineffective treatment resorted to by poorer and less educated ones, on the other (Fleming et al. 1984; Leibowitz et al. 1985; Johnson 1991; Fillenbaum et al. 1993; Sauerborn et al. 1994).

In the THS, seeing a doctor was, generally speaking, substantially much more expensive than treating one's illness through OTC drugs. As expected, medical consultation was favored by those with larger incomes. The example

Table 2 Combination of treatments ($N = 4,879$)

Combination of types of treatment	Number of episodes	Combination of types of treatment	Number of episodes
D	1,026	M	2,619
D + M	403	M + O	30
D + M + O	11	M + P	157
D + M + P	62	M + P + O	7
D + M + P + O	7	M + P + R	9
D + M + P + R	4	M + R	16
D + M + R	10	O	95
D + O	9	P	175
D + P	37	P + O	12
D + P + O	1	P + R	12
D + P + R	1	R	16
D + R	2	R + O	1
		Unknown	157

Notes: D = seeing a doctor, M = taking OTC drugs, P = taking popular medicines, O = seeing medical practitioners other than a doctor, R = religious healing.

of the common cold in table 3 shows the percentage of the illness episodes that involved medical consultation cross-tabulated by selected disease categories and the house and apartment rent paid by the household to which the patient belonged. For individuals belonging in the lowest rent band A, a qualified doctor was consulted in only one-fifth of the entire common cold cases, with the majority of the rest being treated by OTC medication. As we go up the rent bands, the percentage of medical consultation becomes progressively larger, and in the top rent band D one-third of the common cold cases were treated by a doctor. Richer and poorer individuals assumed different attitudes to the common cold: the former were much more likely than the latter to seek a medical consultation. Treating one episode of the common cold by OTC medicine cost on average 0.26 yen, while consulting a doctor for it cost 7.46 yen, or 30 times as much. Moreover, consulting a doctor involved the hidden cost of traveling to see one or paying a fee for a house call, which certainly deterred poorer subjects from seeking treatment from a doctor. Likewise, in treatment choices for acute infectious diseases, the gap between poorer and richer subjects was even wider than in the case of the common cold. In the lowest rent band only 26 percent consulted a doctor and 67 percent employed drugs without seeing a doctor, while in the high-

Table 3 Percentage of medical consultations according to rent paid and selected disease types

Disease type	Rent band (yen per month)			
	A (0-12)	B (13-20)	C (21-35)	D (36-300)
Common cold	21.4	26.0	27.9	36.4
Injuries (unspecified)	21.4	16.0	16.7	16.7
Ophthalmologic	31.5	28.6	68.2	50.0
Acute infectious	25.7	45.2	84.6	65.5
Respiratory	41.4	33.3	37.8	46.3
Dental	56.6	65.8	83.3	89.8
Stiff shoulders	0.0	0.0	12.0	0.0
Gastrointestinal	23.8	35.1	42.4	27.6
Headache	0.0	6.7	25.0	9.1
Fever	34.4	27.8	32.1	58.8
Skin	18.5	17.1	22.7	38.3
Frostbite	0.0	3.3	0.0	4.5

est rent band 65 percent consulted a doctor and only 18 percent resorted to OTC drugs. Dental problems and other categories of diseases show a similar pattern. In these cases almost certainly the principle of substituting expensive goods for less expensive ones was operating for the patients with lower incomes.

The situation was, however, much more complex. The extent of substitution differed considerably from one disease category to another, as shown in table 3. Although treatment choices for dental episodes show the same pattern of progressive increase in the use of medical practitioners, the rate was very high even among poorer subjects, reaching 56 percent. Moreover, treatment for external injuries did not show the pattern discussed above: the rate stayed roughly fixed around 20 percent for all four rent bands. The threshold between injuries that could be coped with via OTC drugs and injuries that needed a consultation with a doctor did not change greatly according to an individual's economic status. Likewise, all subjects, regardless of economic status, treated stiff shoulders or frostbite without recourse to a doctor's visit by applying OTC drugs, plasters for the former and ointment or hand cream for the latter. There is little sign of flexibility according to the subject's economic status in the treatment choice for external injuries, stiff shoulders, and frostbite.

In one interesting case the poor clearly preferred a more costly treatment and the rich more often adopted a cheaper one. This involved the choice between two OTC drugs for the treatment of eruptions on the skin. One is Mentholatum, a patent medicine originally produced by Albert Hyde in Kansas in 1889 and produced and sold in Japan from 1920 by William Vorries, a Kansas-born American missionary and drug merchant (Iwahara 1997). It was the most popular medicine in the THS, used for 142 illness episodes. It is still a very popular remedy for various minor skin problems in Japan. The other is Tako no Suidashi, or Octopus Cupping Balm (OCB), a patent medicine first sold in 1913 by Machida Shin'nosuke, a graduate of the Meiji School of Pharmacy. Like Mentholatum, it was an instant success and remained popular for several decades: in 1947, 28 "imitations" were sold. It was also popular in the THS, employed in 30 episodes. Although it is still sold under the same name, its sales and popularity declined, and it is now little used.

These two medical balms had an overlap in their target symptoms. They were both applied for tumors, boils, abscesses, acne, and similar skin problems, although Mentholatum was more versatile and was used for virtually any skin problems, such as minor cuts and frostbite, which OCB did not cover. If one had an itchy eruption on the skin, one had a choice between Mentholatum and OCB. Analysis of the mechanism of this choice elicits an interesting insight.

The clienteles of the two drugs were remarkably different. Figure 5 represents the compositions of those individuals who used OCB and Mentholatum divided according to the house or apartment rent paid by the household to which the individual belonged. The customers of OCB show a strong bias toward the poorer sector of society, who paid lower rents, while the customers of Mentholatum do not have as strong a bias. Indeed, those who applied Mentholatum for such skin problems as were covered by OCB actually show a strong bias toward the wealthy sectors. In a similar vein, OCB customers were less likely to be well educated. Only 16 percent of OCB customers (4 of 25) belonged to a family whose head had received education beyond compulsory primary schooling, while for the customers of Mentholatum the corresponding figure is 32 percent (33 of 103). OCB customers were clearly less well-off and less educated than those who applied Mentholatum for skin problems that could have been treated with OCB (see table 4).

Surprisingly, using OCB was costlier than using Mentholatum. Or-

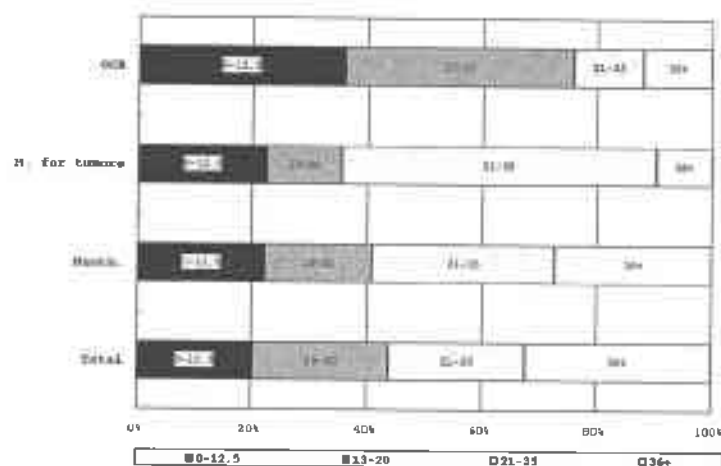


Figure 5 Composition of users of Octopus Cupping Balm and Mentholatum, divided according to rent paid for lodging

Sources: Committee of Takinogawa Health Survey 1941

average OCB cost 0.32 yen per episode, while Mentholatum for tumors and other conditions cost about one-third less, 0.21 yen. Here we have a puzzling situation in which poorer people were more likely to buy a drug of higher price for complaints that better-off people treated with a cheaper salve. One of the possible keys to the paradox lies in the images of the therapeutic actions of the two drugs and their compatibility with the body images held by people in Tokyo in the 1930s. The advertisements and the visual effects of the two medicines were remarkably different. As soon as Mentholatum began to be sold in Japan, the company (Ohmi Brotherhood Pharmaceutical) launched an aggressive advertisement campaign, issuing 38 ads in the *Asahi* newspaper between 1921 and 1926. The ads were of large size and elaborate design, a new one appearing for each promotional campaign. They made the most of the fact that Mentholatum was an imported brand name: the advertisements said the product was the “family medicine of the world” and combined Western—particularly American—and modernized Japanese icons. In comparison, advertisements for OCB looked primitive and cheaply produced. They were small in number and size, lacking any fanciful designs. The only prominent images in the advertisements were an octopus or an octopus trap.

Table 4 Level of education and choice of medicines

Level of education	Total	Mentholatum	OCB
Primary	1,562	70	21
Secondary or beyond	772	33	4
Unknown	8	0	0

OCB's emphasis on octopus was not just a reference to the name of the product but an implicit explanation of its therapeutic action. OCB and Mentholatum were effective against skin problems in different manners. The THS reveals that Mentholatum was usually applied to the eruption on the skin after the area was disinfected by alcohol, hydrogen peroxide, or iodine. The balmy component of the medicine forms a protective layer that blocks the entrance of harmful matter through the opening in the skin. Camphor and menthol soothe itchy pain by facilitating the flow of the blood around the painful part. In short, the efficacy of Mentholatum lay in its image of protecting the integrity of the body inside the skin.

OCB acted through a radically different conceptual mechanism. Its key ingredient is copper sulphate or blue vitriol, which corrodes the top layer of skin over an eruption and so lets the swelling drain. The medicine is conceived as a chemical octopus, so to speak, which sucks the pus out of the eruption and heals it. Moreover, for those who used OCB the action was not just mechanical extraction of fluid: it extracted “poison” from the body. This was exemplified by an autobiographical sketch by Toyokichi Endō (1990), who remembered his experience of tumors and OCB as a child. For the juvenile Endō, the swellings on his body (particularly on the buttocks) contained poisons collected from his body, and he was terrified by the succession of tumors, which signified an enormous amount of poison within. Endō remembered the sense of relief when OCB was applied and the poisonous pus was extracted. OCB's therapeutic mechanism thus had an obvious resonance with the indigenous medicine of Japan, although the source of the inspiration of the drug is not clear. At any rate, OCB was advertised as following “masters in Chinese medicine” (*Kateiyaku Tōsei Kumiai* 1947). The therapeutic action of OCB was framed in the traditional conceptualization of the body and the disease, in which the extraction of poisonous fluid relieved the body of harmful agents. The principle was the mirror image of Mentholatum: while Mentholatum protected the body by blocking the entrance of

harmful matter from outside, OCB extracted the concentrated harmful matter in the pus.

At least a part of the answer to the paradox lies therefore in the contrast between the Western and the indigenous images of the healthy and the diseased body. Better-off and better-educated people were more likely to buy a patent medicine that protected the body from invasion, while poorer and less-educated people tended to choose a drug that expelled harmful matter from the body. The former concept resonated with the classic bacteriological model of health and disease, as Emily Martin (1994) suggested in her *Flexible Bodies*, while the latter drew inspiration from the indigenous humoral medical system (see also Jenner and Taithe 2000). A similar pattern of indigenous drugs showing a strong bias toward poorer subjects is observed in the distribution of the use of other popular OTC drugs. For example, more than 75 percent of the subjects who used Jisubosan, a popular infusion for various women's complaints that had been sold for at least 300 years, belonged to the rent bands A and B. The better-off were readier to adopt imported medical ideas, and the less well-off preferred indigenous medicine, sometimes regardless of the cost.

It is, however, simplistic to conclude that poorer people were ignorant of Western medical concepts or obstinately clung to dying indigenous medical ideas. Abundant evidence suggests a more complex picture. Many customers of OCB used a disinfectant before applying the balm, which means that they knew and adopted bacteriology-based remedies. Moreover, OCB was launched in 1915, and its sales grew rapidly in the following two decades. OCB was no remnant of outmoded medicine but a response to new developments in medical research and to public health policies in the Taishō and prewar Shōwa eras.

The key development was the switch of focus from acute infectious diseases to chronic illness beginning in the 1910s (Ministry of Health and Welfare 1976). After winning a Pyrrhic victory over such acute infectious diseases as cholera, measles, dysentery, and plague in the last two decades of the nineteenth century, Japanese medical policy started to focus on chronic infectious diseases, such as leprosy, tuberculosis, and venereal disease (Fujino 1993; Johnston 1995; Fröhstück 2003). Those diseases were subjects of new regulatory laws in 1907, 1919, and 1927. Massive campaigns against these diseases heightened people's alarm over pathogens that stayed inside their bodies for a long period and intensified fear over the carriers of the

diseases. Syphilis especially had an obvious resonance, given the body image and therapeutic mechanism associated with OCB. Etiologically speaking, syphilis was caused by "poison" in the body, and advertisements for patent medicines for syphilis routinely said that they purged poison from the body; indeed, one of them was called *Poison-Purge-Pill*. Moreover, symptoms of syphilis included "pox." Case records from a mental hospital in Tokyo routinely mentioned the patients' fears of infection with syphilis and tuberculosis. This intensified anxiety may have underlain the success and popularity of OCB among poorer people, who were frightened into believing that their own bodies harbored poison, deadly to themselves, their children, and the empire.

Conclusion

Analysis of the archive of a 1938 health survey in Tokyo reveals that cultural and social factors played important roles in influencing self-perceived morbidity and choice of treatment in subtle and complex combination with somatic and economic factors. The differences in mortality or objective bodily status explain only some of the variances in self-reported morbidity according to age and gender. The somatic and biological basis influenced but did not determine the patterns of recognition of illness and subsequent health-seeking behavior. Likewise, a model based on a simplistic economic determination of illness behavior is not adequate, as the examination of the choice between two OTC drugs clearly shows. Despite its higher price, a drug whose therapeutic mechanism was formulated in accordance with the traditional body image was favored by people with lower incomes.

These aspects of the THS reinforce that the comprehensive approaches adopted in the contemporary discussion of health transition are useful for historians (Caldwell and Caldwell 1991). Studies of health transition in the past decade have increasingly emphasized sociocultural determinants of health, going beyond a narrow concentration on the medicobiological status and income of a given society. These studies have shown that sociocultural factors, although they resist neat definition or straightforward measurement, provide a key to understanding the uneven distribution of health and of health care in contemporary societies. Historians can benefit greatly from insights drawn from these studies and apply them to their examinations of past societies.

Notes

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1 The archive of the THS is now housed at the Komine Institute in Tokyo.

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