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Antibiomedicine belief and integrative health seeking in Taiwan

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Abstract

The newly emerged concept of integrative medicine may provoke a closer investigation into the pattern of biomedicine use in the context of medical pluralism. In this study, I propose two concepts to examine the complicated cognitive and behavioural responses to biomedicine (Western medicine, *xi-yi*) in relation to the use of non-biomedical therapies in Taiwan, a society with renowned medical pluralism. Data came from a nation-wide telephone survey conducted during September 2002 among community-resident population aged 20 and older. The sample includes 1517 respondents. The first concept—antibiomedicine—includes three indicators to measure an individual's negative stance on *xi-yi*: overall competence, capability to cure from within, and side effects. Combined, these three indicators were further constructed into a single composite index: antibiomedicine beliefs. Integrative health seeking tackled two aspects of health seeking: *selective use* and *adaptive use*. The former concerns particularly the use of specific ingredients of biomedicine. In this study, emphasis was placed on the diagnosis versus treatment of *xi-yi*. The latter was focussed on the strategic uses of *xi-yi* in the face of its limitation and incompetence. Three types of adaptive health use were identified: alternative type, complementary type, and exclusive type. Results of the analyses indicate that antibiomedicine belief held explanatory potential to selective use and adaptive use of *xi-yi*. The study sheds light on further exploring the blending of health-seeking practices and "hybrid" medicine. It is suggested that novel explanatory constructs and more sophisticated study designs should be developed to articulate the sequential of pluralistic health-seeking process.

Keywords: Antibiomedicine belief; Integrative health seeking; Complementary/alternative medicine; Taiwan

Introduction

Medical pluralism is a universal phenomenon. It is also universal that at least, in most of the modernized, medically pluralistic societies, biomedicine usually occupies a dominant and hegemonic status, enjoying both structural superiority and functional strength (Lee, 1982). This article is an effort in response to the recent revival of complementary and alternative medicine (CAM) and a conceptual advance to integrative medicine (Easthope, 2003). My attempt is to develop a preliminary framework to depict the characteristic feature and magnitude of "integrative health seeking" in Taiwan in the context of medical pluralism and biomedicine's dominance. I also propose to construct a composite measurement to articulate the image and evaluative reaction of the lay public to biomedicine.

The blending the use of diagnostic and therapeutic procedures derived from different medical traditions is an underlying reality while addressing medical

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pluralism. In this article, by taking into account definitions of Easthope (2003, p. 2) and NCCAM (2003), I refer to *integrative* use of biomedicine as any type of combining components of biomedicine with non-biomedicine to treat illness. In this regard, non-orthodox therapies are deemed simply medical care options without any implication of political jurisdiction.

Unlike most of the Western societies, Taiwan's medical pluralism is characterized by a dual system, two co-existing great medical traditions: traditional Chinese medicine (*zhong-yi*) and biomedicine or Western medicine (*xi-yi*). But like societies all over the world, within this dual system, *xi-yi* still holds the ultimate dominance, although both are granted medical professions (Kleinman, 1980) and included in the National Health Insurance. A recent survey among the general population on CAM utilization in Taiwan indicates that in the previous year 75.5% of the respondents had used at least one modality of CAM (non-Western medicine) for treating illness or alleviating symptoms (not for preventing or promoting health). Among the 19 therapeutic modalities reported, it is interesting to note that certain "unconventional" modalities such as health foods (used by 24.3% respondents), organic diet (19.5%), and aromatherapy (15.7%) have become popular (even acupuncture was used by only 17.1% of the respondents) (Lew-Ting, 2003). These imported modalities that were introduced in the last two to three decades seemed to have been appreciated by the lay community, in much the same way as Chinese herbal medicine or acupuncture have been recognized and adopted in the West. In summary, medical pluralism in Taiwan keeps evolving. The rapid growth of therapeutic modalities in variety and quantity in Taiwan provides a unique scenario to tackle the phenomenon of integrative health seeking. By doing this, an investigation into varying levels of deviation from orthodox use of *xi-yi* also becomes possible.

Methods

Data are from the "Use of Complementary and Alternative Medicine Survey" conducted during September 2002. Random-digit dialing technique was used to sample households all over the Taiwan area. Within each household the adult who first answered the phone and whose age was 20–70 was the potential respondent. Data from 1517 participants who made valid responses to the questionnaire items were collected. The response rate was 87.1%.

Sample

Of the 1517 respondents, the proportion of women (55.2%) was 10% greater than that of men (44.8%). The mean age was 41.4 yr. Most (71.7%) respondents had achieved at least a high school educational level. More than two-fifth (41.1%) resided in areas with low level of urbanization (townships or villages) and about one-fifth (19.6%) in most urbanized areas (Taipei or Kaochung metropolitan areas). Chi-square test for goodness-of-fit shows that the sample and the general population were similar in the distribution of residential areas and therefore ascertains the representativeness of the sample.

Instrument

The preliminary version of the interview questionnaire was developed based on the CAM utilization literature, particularly on population-based empirical studies (for example, Astin, 1998; Eisenberg, 1993, 1998; Siahpush, 1999). In addition, a qualitative study in a Chinese medicine clinic was carried out to in-depth interview 10 patients to obtain laypersons' attitudes towards *xi-yi* versus CAM therapies, and their behavioural responses to the diversified medical care choices. The results of the qualitative research were used to specify and articulate the more subtle features of strategic management of health seeking. Finally, a pilot telephone survey of 40 citizens was accomplished to further clarify and ensure the comprehensibility and relevance of interview items. A special attention was paid to the precise use of local languages or dialects for different CAM therapies.

The final version of questionnaire includes the following areas of core questions: CAM use, attitudes towards and use of biomedicine, beliefs in medical technology, etiological orientation, beliefs in the nature of therapeutic effects, health status, and health information exposure. The present article is particularly concerned with the participants' negative perceptions of biomedicine (*xi-yi*), and its relevance to integrative use of *xi-yi*.

Measurements

Antibiomedicine belief

This is a composite measure constructed by three indicators:

1. Confidence in overall competence of *xi-yi*: "Of all the diseases that human beings may suffer from, how many do you think *xi-yi* can cure?"
2. Attitude towards *xi-yi*'s capability to cure from within: "How much do you agree that *xi-yi* can only deal with the symptom rather than the cause of the disease?"
3. Anxiety about *xi-yi*'s side effects: " Have you ever avoided visiting *xi-yi* due to concern about its side effects?"

The above three indicators were summed up to measure the extent to which an individual held negative responses to biomedicine.

Integrative health seeking

Two aspects of integrative health seeking are examined in this study:

1. *Selective use*: Concerning the use of specific ingredients of *xi-yi*. Here I emphasize the differentiation of biomedical diagnosis from its treatment: "Have you ever visited *xi-yi* only for diagnosis and then use other types of therapies to treat illness?"
2. *Adaptive use*: Concerning strategic uses of biomedicine in the face of its limitations and incompetence: "What if you had diseases which you think *xi-yi* was not able to cure? Would you still visit *xi-yi*?" A "no" response was deemed as *alternative type* while *xi-yi* was no longer adopted and was replaced by other therapeutic modalities. However, a "yes" response may include two possibilities: the *exclusive type*—the *xi-yi* was still the only choice made by the respondents, or the *complementary type*—not only *xi-yi* but also other modalities were additionally used.

Data analysis: The data analysis is carried out through the following steps:

1. Describe the respondents' stance on the three features of *xi-yi* and, based on which, construct antibiomedicine index.
2. Delineate the distribution of integrative health seeking, including selective and adaptive use of *xi-yi*.
3. Explore the relationships between antibiomedicine belief and integrative health seeking.
4. Profile sociodemographic characteristics of individuals who held antibiomedicine belief and who engage in integrative health seeking.

Results

Antibiomedicine belief

As presented in Table 1, the respondents' overall confidence in *xi-yi*'s competency was strong; more than half of them asserted that *xi-yi* could cure at least 70–80% of human diseases. However, *xi-yi*'s capacity to treat from the very origin, i.e., the causes of the disease, was less recognized by the respondents. More than half (63.3%) considered *xi-yi* could only deal with the symptoms rather than the causes of the diseases. Furthermore, while the negative aspect of *xi-yi*'s treatment—side effects—was addressed, more than one-third (15.0% always and 19.8% sometimes) avoided visiting *xi-yi* simply for the sake of side effects.

To measure one's overall negative stance on *xi-yi*, the above three variables were dichotomized to binary indicators and were further constructed into a single index with a range of 0–3. The increase in score represents a stronger antibiomedicine belief. The distribution of antibiomedicine belief index is presented in Table 1.

Table 1
Perceptions of *xi-yi* among the study sample

	n	(%)
Confidence in xi-yi's competency		
Can cure almost any diseases	221	(14.6)
Can cure 70–80% of diseases	527	(34.7)
Can cure about half of the diseases	294	(19.4)
Can cure 30–40% of the diseases	29	(1.9)
Can cure very limited amount of disease	33	(2.2)
Do not know	413	(27.3)
Attitudes to the statement "xi-yi can only deal with the symptoms rather than the causes of the diseases"		
Agree	495	(32.6)
Somewhat agree	451	(29.7)
Disagree	421	(27.8)
Do not know	150	(9.9)
To avoid visit xi-yi due to the side effect of medicine		
Always	227	(15.0)
Sometimes	300	(19.8)
Rarely	910	(60.0)
Not sure	78	(5.1)
Antibiomedicine belief index[a]		
0 (weak)	413	(27.2)
1 (median)	572	(37.7)
2–3 (strong)	532	(35.1)

[a]Antibiomedicine belief index is constructed by summarizing the dichotomized values of the three variables (score range: 0–3): competency confidence (cure all/70–80% = 0, else = 1), treating symptom but not disease (agree = 1, else = 0), avoiding side effect (always/sometime = 1, else = 0).

Integrative health seeking

Selective use of *xi-yi* was found among half (48.5%) of the respondents, who had ever requested only diagnosis from *xi-yi* but then turned to other therapeutic modalities for treatment (Table 2). Adaptive use, on the other hand, includes three types. *Exclusive type* appeared most often (38.7%), far more than *complementary type* (23.8%) and *alternative type* (21.3%).

Strong relationships were found between antibiomedicine belief and integrative health seeking. As Table 3 indicates, 54.1% of respondents with strong antibiomedicine belief were selective users, compared with weak (47.0%) and median (44.2%) groups ($p = 0.003$).

Antibiomedicine belief was also associated strongly with adaptive use of *xi-yi* ($p = 0.0001$). Those who held weak and median antibiomedicine beliefs (i.e., positive

Table 2
Integrative use of *xi–yi* by the study sample

Selective use		
Visit *xi–yi* for purpose of diagnosis but seeking treatment elsewhere		
Yes	735	(48.5)
Never	782	(51.5)
Adaptive use (n=1343*)*[a]		
Whether use *xi-yi* if afflicted with disease that is considered beyond *xi–yi*'s capability		
No, use other therapeutic modalities (alternative)	286	(21.3)
Yes, but also use other therapeutic modalities (complementary)	319	(23.8)
Yes, and use *xi-yi* only (exclusive)	520	(38.7)
Do not know	218	(16.2)

[a]Exclude participants who considered *xi-yi* as being capable of curing all diseases.

Table 3
Relationship between antibiomedicine belief and integrative use of *xi-yi*

	Selective use; use *xi-yi* for diagnoses only & seek treatment elsewhere (%)	Adaptive use; use of *xi-yi* use while having disease that is beyond *xi-yi*'s capability ($n=1343$)			
		Alternative (%)	Complementary (%)	Exclusive (%)	Unsure (%)
Antibiomedicine belief					
Weak	47.0*	15.6	23.5	45.6	15.3**
Median	44.2	18.3	21.9	39.8	20.8
Strong	54.1	28.7	25.8	32.5	13.0

*$P<0.005$ **$P<0.001$.

to biomedicine) were less likely to be alternative type of users than were the strong-belief respondents. In contrast, a negative gradient was found between antibiomedicine belief and exclusive use. In summary, strong antibiomedicine belief led to use therapies other than *xi-yi*, whether alternative or complementary type.

Table 4 shows the sociodemographic profile of respondents engaged in different types of integrative health seeking and holding different degrees of anti-biomedicine beliefs. Education was the most significant determinant in differentiating belief level. A reverse relationship was found between education and anti-biomedicine belief. Respondents with higher educational levels tended to hold weaker antibiomedicine belief.

On the other hand, higher educational levels led to selective use of biomedicine and exclusive use of *xi-yi*. It has to be noted that respondents with only primary school education were much more likely to provide uncertain responses.

Discussion

Results of this study show that the general populace's responses to biomedicine or *xi-yi* in Taiwan are ambivalent and paradoxical. On the one hand they trusted its competency. On the other hand, they also recognized its limitations and, as a result, used its services selectively and adaptively. The discontent of biomedicine in relation to the use of Chinese medicine has also been observed in other Chinese societies, particularly in Hong Kong (Chan et al., 2003; Holroyd, 2002; Lam, 2001; Wong et al., 1998). It implies that although *xi-yi* is deemed powerful, it brings with itself a certain quality that may jeopardize its claimed or expected competency.

Beliefs in biomedicine and the measurement

The measurement of antibiomedicine beliefs in this study is a tentative effort. Nevertheless, its strong relationship with selective use of biomedicine and adaptive health seeking suggests acceptable construct validity. Still, with a composite measurement based only on three indicators (competency, side-effects, and superficiality), its content validity may cause concerns. Theoretically, antibiomedicine belief should be more or less geared to cultural elements. If, for example, biomedicine has been granted a techno-science complex (Clarke, Shim, Mamo, Fosket, & Fishman, 2003), the

Table 4
Sociodemographic profile of respondents in relation to antibiomedicine belief and integrative use of *xi-yi*

	Antibiomedicine belief			Selective use		Adaptive use			
	Weak %	Median %	Strong %	Yes %	No %	Alternative %	Complementary %	Exclusive %	Unsure %
Sex									
Male	29.0	37.7	33.4	46.3	53.7	23.9	19.8	41.2	15.2**
Female	25.8	37.8	36.4	50.2	49.8	19.2	27.0	36.7	17.1
Age									
20–29	26.8	37.9	35.3	48.4	51.6**	30.2	20.2	37.0	12.6***
30–39	30.1	34.3	35.5	54.8	45.2	21.9	28.5	37.1	12.6
40–49	26.9	35.3	37.8	51.1	48.9	17.5	29.8	40.4	12.4
50–59	27.6	42.1	30.3	39.9	60.1	16.8	22.3	39.6	21.3
60+	23.4	42.1	34.5	43.1	56.9	15.2	12.3	40.9	31.6
Education									
Primary	20.1	44.9*	35.1*	31.8	68.2***	15.4	15.4	32.0	37.1***
Secondary	20.5	40.9	38.6	46.5	53.5	23.5	23.5	37.2	15.9
High	29.0	33.7	37.3	50.9	49.1	22.9	23.1	40.1	13.8
College	30.9	37.6	31.6	53.3	46.7	21.0	27.2	40.3	11.5
Urbanization									
Highest	32.6	40.6	26.9*	47.7	52.3	16.9	21.0	44.9	17.3
High	28.2	35.1	36.8	47.1	52.9	24.2	26.1	32.5	17.2
Median	25.4	38.2	36.5	48.8	51.2	20.3	26.7	36.8	16.3
Low	25.7	36.8	37.6	49.0	51.0	23.4	22.5	38.8	15.4

*$P<0.05$ **$P<0.01$ ***$P<.001$.

constellation of beliefs about this medical paradigm and the system that contains it should contain even broader worldviews with regard to control of nature, techno-science veneration, and values of life.

It should also be noted that even though laypersons expressed negative reactions to biomedicine, it does not necessarily imply their overthrowing the value of this medical tradition and undermining its contributions. Nor would they fully reject its possible utility to them while confronting a health crisis. Rather, the pessimistic sentiment and the challenging attitudes reflected the general expectation of an "ideal" health care system.

Integrative health seeking

I have employed *integrative health seeking* in this study to denote any actions combining therapeutic elements by laypersons, somewhat reflecting what Adler (2001) observed "personal integrated health belief systems" among women with breast cancer. The construct, as Adler emphasized, is helpful for "the study of CAM…in which individuals combine disparate elements—from what may appear to be mutually exclusive health traditions—into a syncretic whole (Adler, 2001)". In response to the incompetence of biomedicine, the integrative use of available therapeutic modalities is an adaptive tactic to manage health crises. In this study, only two types of integrative health care management (selective use and adaptive use) were included. A quantitative approach as presented in this paper may not be able to tackle the underlying subtlety of individuals' integrative strategies. Nevertheless, it suggests that the integrative health seeking was widely held.

This study shows that around half (48.5%) of the respondents have had the experience of visiting *xi-yi* only for the purpose of diagnosis and would then seek remedial help from other therapeutic modality. This is perhaps only one among various types of selective use of biomedicine. The increased use of complementary therapies always attracts attention to the variety and amount of non-biomedicine consumed. Yet, in what way is biomedicine utilized has been much less elaborated.

Similarly, while scholars have been eager to clarify whether non-orthodox therapies were consulted alternatively or complementarily (for example, Druss & Rosenheck, 1999), the black box of blending practices fabricated by desperate clients has been ignored. Indeed, the conceptualization pitfall of "tyranny of use/no use" (Pescosolido, 2000), which was the dominant analytic framework in health services utilization or illness behaviour research, is no longer rigorous enough to

capture the complicated ways of integrative use. The recent novel outlooks on "hybrid" medicine, such as McGuire's *bricolage* use of cultural elements of diversified healing practices (McGuire, 2002) and Morris' imaginative application of architecture concept *of double coding* (Morris, 2000), are stimulating for future research on multiple health care paradigms.

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