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Public attitudes toward traditional Chinese medicine and how they affect medical treatment choices in Hong Kong

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Structured Abstract

Purpose: This paper's aim is to test a conceptual model using public attitudes toward biomedicine and traditional Chinese medicine (TCM) to predict respondents' medical treatment choice in Hong Kong.

Methodology: An online survey was conducted among 1,321 Hong Kong residents aged 15 or above. Data were collected using a structured questionnaire. The scales used for measurement came from a previous study of attitudes toward acupuncture in Hong Kong.

Findings: Attitudes toward biomedicine in relation to TCM and perceived cost of TCM consultation were found to be significant variables in predicting respondents' medical treatment choice of treatment. Perceived efficacy of TCM however was not a significant predictor. Older respondents as well as respondents with higher education were less likely to consult biomedicine first when ill. They were also less likely to consult biomedicine exclusively.

Practical implications: The results demonstrated that perceived TCM's efficacy itself was insufficient to drive respondents' choice of it as a preferred medical treatment. To promote TCM in Hong Kong, there is a need to enhance trust in it. This can be

achieved through strengthening scientific research and development of TCM, enhancing professional standards of TCM practitioners, and educating the public about the qualifications of TCM practitioners. Strategic channel planning to reach potential target and reducing the time cost of TCM medication should be examined.

Originality: The study is the first to relate attitudes to and perceptions of TCM with medical treatment choices in Hong Kong.

Research limitations: This study used a convenience sample recruited through personal networks. The findings cannot be generalized to the rest of the population.

Key words: traditional Chinese medicine; public attitudes; health services marketing; medical treatment choices; quantitative study

Paper Type: Research paper

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Introduction

Traditional Chinese medicine (TCM) has a very long history of more than 2,500 years and it is an integral part of Chinese culture (Lu and Needham, 1980). TCM, in particularly acupuncture, is becoming a popular medical treatment in North America and Europe (e.g., MacPherson et al., 2006; Xue et al., 2008; Zhang et al., 2012). As a former British colony, the medical system in Hong Kong is dominated by biomedicine. TCM has been marginalized in the healthcare system and most of the western-trained doctors are not willing to recommend TCM to patients (Chung et al., 2011). Among the 1.63 million persons who had consulted a doctor during the 30 days before survey enumeration, 89 percent had consulted biomedicine practitioners, while 18 percent had consulted TCM practitioners (Census and Statistics Department, 2015). TCM practitioners in Hong Kong can be classified into three types: herbalists (treating illness by herbal prescriptions and other medicinal materials), acupuncturists (treating illness by needle insertions), and bone-setters (treating fractures, sprains, and other bone-related health issues) (Luk, 2001).

A recent survey found that public attitudes toward advertising of TCM practitioners were in general favorable. Respondents found TCM advertising useful in

providing information about medical services. However, they worried that TCM advertising being misleading or exaggerated. They also perceived that TCM advertising would lead to increase in the cost of services (Chan et al., 2015b). A focus group study of acupuncture users and non-users found that among the user groups acupuncture was perceived as being effective, having few side effects, and generating lasting impact; among the non-user groups it was perceived as lacking a clinical base, being high risk, and suffering from a lack of standardization. Participants with no acupuncture experience had more confidence in biomedicine than in acupuncture (Chan et al., 2016). A content analysis of newspaper articles about acupuncture in Hong Kong before and after the 1997 transfer of sovereignty to China found that acupuncture has become increasingly legitimate in media discourse. Both the texts and the social contexts associated with acupuncture demonstrated three forms of legitimacy, including authorization, rationalization, and moral evaluation (Dong and Chan, 2016). Despite the long history of TCM practices in China and the fact that Hong Kong is a Chinese society, there are barriers that hinder TCM from being a desirable medical treatment. What are these barriers, and what are the prevalent perceptions of TCM practices? How does the public perceive TCM in relation to biomedicine? This study attempts to answer these questions.

In this study, the research objectives are:

1. to measure quantitatively public attitudes toward TCM in relation to biomedicine as a medical treatment;

2. to test a conceptual model of the relation between attitudes toward biomedicine in relation to TCM and medical treatment decisions.

Literature review

Fundamental differences between TCM and biomedicine

There is much difference among doctors and scholars of Chinese medicine and biomedicine in how they approach illness and healing. Their views on the inner structure as well as principles of operations of the body, nature of illness, and strategies for medical intervention differ strikingly (Karchmer, 2013). TCM is often considered as an integrative treatment and personal medicine whereas biomedicine is considered as a disease-targeted therapy (Gu and Chen, 2014). In the past, biomedicine has been the mainstream medical treatment in Hong Kong. However, more people starting to believe in philosophical aspects of illness and disease. Traditional Chinese medicine is gaining popularity because of its practitioner friendliness, interpersonal sensitivity, perceived fewer side effects, and the possibility of improved health (Barnes et al., 2004; Kelner and Wellman, 1997; Quan et al., 2008).

In the past decade, TCM and biomedicine are interacting with one another in their development. For instance, Gu and Chen (2014) commented that the discovery of biomedicine served as the basis to explain certain TCM basic theories, diagnosis and treatment principles. On the other hand, TCM provided biomedicine with insights on the combination of herbal drugs in a complex manner for a matrix of causes and results (Gu and Chen, 2014).

Integrating biomedicine and TCM in Hong Kong

Formal institutional integration of TCM into the public biomedicine system in Hong Kong has been limited. There is no formal referral framework linking TCM and biomedicine within the private sector (Chung et al., 2012). Before 1997, TCM did not have a formal place within the public healthcare system. After the reunification of mainland China and Hong Kong in 1997, the new Special Administrative Region government established policy initiatives regarding TCM. These initiatives include introduction of formal statutory regulation of the practice of Chinese herbal medicine, acupuncture, bone-setting, and massages; establishment of full-time TCM undergraduate programs in public universities, and the establishment of the Chinese Medicine Council of Hong Kong as a regulatory body for TCM practices (Chung et al., 2012).

Public attitudes toward TCM

Several studies were conducted to measure public attitudes toward TCM in Hong Kong. Overall, respondents hold positive attitudes toward TCM. For example, a majority of respondents of a survey conducted in 2007 perceived that TCM has fewer side effects than western therapies (Chung et al., 2007). Interviewees of a focus group study perceived that TCM was able to cure the root of the problem in most cases but was slow to act. Many interviewees consulted biomedicine and traditional Chinese medicine practitioners at the same time (Lam, 2001). Another survey conducted in 2003 identified three different groups according to their attitudes toward TCM. Respondents who were younger generally had more trust in TCM, and this group accounted for 63% of the sample. Older respondents with relatively lower incomes were more skeptical about TCM. This group accounted for 24% of the sample. The remaining respondents (13% of the sample) had a diverse demographic profile and they expressed faith in both TCM and biomedicine (Chan et al., 2003).

Medical professionals, however, held mixed attitudes toward TCM. A focus group study among students of biomedicine found that they were skeptical about TCM practices and critical of TCM for its lack of scientific evidence. Some interviewees perceived TCM to be a holistic approach to medical treatment. However, they also thought that the regulation of TCM practice was not stringent enough to uphold professional standards (Wong et al., 2006). Another survey of registered

nurses in Hong Kong found that over half believed that biomedicine was more effective than complementary and alternative medicines for acute diseases (Holroyd et al., 2008). A recent study found that a majority of biomedical doctors in Hong Kong held positive attitudes toward TCM (Chung et al., 2011). However, they seldom referred their patients to TCM practitioners. These authors commented that the historical dominance of biomedicine and lack of a collaborative policy for western and TCM medical practices were the causes of the low referral rate.

A meta-study of 28 studies about views of TCM among the Chinese population concluded that this public shared a common cultural affinity with TCM and perceived it to be an effective complement to biomedicine for treating chronic or serious diseases. However, there were diversified views on disclosure of TCM use to biomedical doctors and the potential harm of herbs (Chung et al., 2012).

A review of literature found that none of these studies tested the relationship between public attitudes toward TCM and medical treatment choices. This is the first study to establish a conceptual framework to examine such a relationship.

Conceptual framework

Based on the literature, we propose a conceptual framework to guide our study (see Figure 1). We propose that a person's decision to choose either biomedicine or TCM as the preferred medical treatment depends on his or her

attitudes toward biomedicine in relation to TCM, and perceived efficacy of TCM. As the decision resembles a consumer purchase decision that involves cost, it is proposed that perceived cost of the medical treatment will also influence the medical treatment decision. We propose that the cost of the medical treatment includes the financial component and the convenience component. The preparation and dispensation of TCM were often considered as time-consuming and inconvenient as it involved decocting of raw herbs into a liquid form for consumption. Concentrated Chinese medicine granules are now available in Hong Kong and provide an alternative way to cope with the busy lifestyles of the consumers (Leung et al., 2012). We propose two predicted variables related to medical treatment choice. The first predicted variable examines whether a person will consult biomedicine or TCM first when he or she is ill and need to seek doctor consultation. It measures a person's likelihood to adopt biomedicine as the preferred medical treatment in relation to TCM. The second predicted variable examines whether a person will consult biomedicine exclusively. Biomedicine is the mainstream of medical treatment in Hong Kong. According to a study conducted by the Census and Statistics Department, 7 percent of the 1.63 million who had visited a doctor in the past 30 days consulted both biomedicine practitioners as well as TCM practitioners (Census and Statistics Department, 2015). The second predicted variable attempts to measure the tendency of consulting

biomedicine and TCM simultaneously. It indicates a person's perception of whether TCM was complementary to or contradicting to biomedicine. These two predicted variables are different. The first predictor indicates the result of evaluation when both biomedicine and TCM are in the consideration set. The second predictor indicates whether TCM is in the consideration set when a person is consulting biomedicine.

According to the conceptual model (see Figure 1), those who perceived biomedicine to be superior to TCM will be more likely to consult biomedicine first and choose biomedicine as the exclusive treatment. Those who perceived efficacy of TCM to be high will be less likely to consult biomedicine first and choose biomedicine as the exclusive treatment. Those who perceived cost of TCM higher than biomedicine will be more likely to consult biomedicine first and choose biomedicine as the exclusive treatment.

[Insert Figure 1 about here]

Research method

Quantitative research design was adopted as the research objectives include numerical measurements of attitudes of the respondents. The study was analytical as it attempted to describe and explain certain situations.

Sampling

A quota sampling survey of Hong Kong people aged 15 or above was conducted in March 2016. Students taking a communication research class at a public university in Hong Kong were asked to invite individuals in their social network to fill in an online questionnaire. Each student was asked to recruit at least one male and one female person in the age groups of 15-19, 20-29, 30-39, 40-49, 50-59, and 60 or above. Altogether 1,451 questionnaires were collected. However, 9 percent of the questionnaires were considered invalid as more than two-thirds of the questions were not answered. The remaining 1,321 (i.e. 91%) questionnaires were used for analysis.

Measures

The questionnaire was adapted from a previous study on public attitudes toward acupuncture in Hong Kong (Chan et al., 2015a). Attitude toward biomedicine in relation to TCM as a medical treatment was measured by seven statements using a five-point scale with "1" indicating "disagree strongly" and "5" indicating "agree strongly". A sample statement was "biomedicine is more scientific than TCM." The Cronbach alpha coefficient was 0.78. Perceived efficacy of TCM was measured by seven statements using five-point scale (1 = disagree strongly; 5 = agree strongly). A sample statement was "TCM is effective for preventive care." The Cronbach alpha coefficient was 0.64 for seven items. The statement "TCM is more efficient than biomedicine" had the lowest item-scale correlation and was removed from the scale.

The Cronbach alpha coefficient for the resulting six-item scale was 0.66. Two statements on cost of TCM and biomedicine were constructed. One measured the financial cost and the other measured the time cost. Both were measured using five-point scale. The Cronbach alpha coefficient for the cost scale was 0.21. This was too low to consider as a scale. As a result, each of the two statements was used as an individual predictor. Medical treatment choice was measured by two separate statements in five-point scale (1 = disagree strongly; 5 = agree strongly). The first statement was "In the event of illness, I would first consult biomedicine. When biomedicine fails, I would consider TCM." The second statement was "When receiving biomedical treatment, one should not receive TCM treatment." Demographic questions and previous consultation of TCM doctors during the previous three years were also collected. The study was conducted in Chinese.

Data analysis

Descriptive statistics for the attitudinal statements of predictors and the predicted variables were compiled. Regression analysis was conducted. Demographic variables, attitude toward biomedicine and TCM, perceived efficacy of TCM, and perceived cost of TCM were used to predict medical treatment choice.

Findings

The demographic profile is summarized in Table 1. There were nearly equal proportions of male and female respondents. Altogether 43 percent of the respondents came from families with monthly income between $10,000 and 29,999 Hong Kong (HK) dollars. Altogether 40 percent of Hong Kong population had monthly income between HK$10,000 and 29,999 (Information Services Department, 2015). So the sample contained a higher proportion of individuals in this household income bracket than that in the general population. Two thirds of respondents reported having consulted TCM practitioners in the previous three years.

[Insert Table 1 about here]

Attitude toward biomedicine and TCM

Descriptive statistics of the seven attitudinal statements toward biomedicine and TCM as well as the mean scores for the compiled mean are shown in Table 2. Respondents had strong and positive beliefs about the biomedical system. They perceived that biomedicine was scientific, and was governed by rigorous rules. Respondents put more trust in biomedicine and biomedical doctors than TCM and TCM doctors. Respondents demonstrated doubts about the qualifications of TCM doctors. They perceived that TCM practices were not standardized and depended highly on TCM doctors' expertise and patients' individual characteristics.

Perceived efficacy of TCM

Overall speaking, respondents had strong and positive beliefs about the efficacy of TCM. There was a strong perception that TCM provided preventive care and had fewer side effects when compared to biomedicine. Respondents also perceived that TCM was able to provide a permanent cure. However, TCM was not perceived as being more efficient than biomedicine.

Cost

Respondents found taking biomedicine more convenient than taking TCM prescriptions. A high percent of respondents had neutral attitude toward the statement "TCM treatments cost more than biomedicine treatments".

[Insert Table 2 about here]

Predicting choice of medical treatment

Multiple regression analysis was performed. The regression was conducted in two steps. Demographic variables were introduced in the first step, followed by the other four predictors in the second step. The results of the regression analysis are summarized in Table 3 and Table 4.

In the first step of multiple linear regression, a statistically significant R square value of 0.02 was obtained. Both age and education were significant predictors. Older respondents were less likely to consult biomedical treatment first than younger respondents. Respondents with higher education were less likely to consult

biomedicine first than respondents with lower education. In the second step of multiple linear regression, a statistically significant R square value of 0.24 was obtained. This indicated that 24 percent of the total variation of the dependent variable could be explained by the set of seven predictors. The increase in R square value was significant at 0.001 level. Among the seven predictors, five were significant. These five predictors were age, education, attitude toward biomedicine and TCM, perceived financial cost of TCM, and perceived convenience of taking biomedicine. Among these five significant predictors, attitude toward biomedicine and TCM contributed the largest variation of the dependent variable. Respondents who had a more positive attitude toward biomedicine, respondents who perceived higher cost for TCM, respondents who perceived that taking biomedicine would be more convenient, older respondents, and respondents with higher education were less likely to consult biomedicine first when ill. Perceived efficacy of TCM was not a significant predictor in the regression model.

[Insert Table 3 about here]

Predicting consulting biomedicine exclusively

The same procedure was adopted to predict respondents' decisions to consult biomedicine exclusively. The results were almost the same as that obtained in the prediction of consulting biomedicine first. The sets of significant predictors in both

steps were the same. The direction of correlation was the same. However, there were three differences. The standardized beta of the predictor "attitude toward biomedicine" and the R square value were both higher in the first regression model than that in the second regression model. The education variable played a more important role in the second regression model than in the first regression model.

Discussion

Before discussing the findings, a limitation needs to be recognized. The sampling method is non-probability and the findings may not be generalized to the Hong Kong population. Despite the limitation, this quantitative study has revealed four key findings that can guide future strategies in promoting TCM as a medical treatment.

1. There is a trust issue associated with TCM. Overall, respondents put more trust in biomedicine than TCM. The trust in biomedicine is built on the perception that biomedicine is more scientific and more rigorously regulated than TCM. Overall, respondents demonstrate lack of trust in TCM. The lack of trust in TCM is built on doubts about the experience and qualifications of TCM practitioners.

   The central issue of trust in choosing medical treatment found in this study echoes the findings reported in previous studies of decisions about acupuncture treatment using qualitative as well as quantitative methodologies (Chan et al., 2015a; Chan

et al., 2016). The current study indicates that trust in TCM is related to trust in the system governing TCM practices as well as trust in TCM practitioners. The regulation of biomedicine and the dominance of biomedicine in the public health system in Hong Kong have been in place for 60 years. The regulation of TCM practices in Hong Kong was established only two decades ago. It is understandable that TCM will take some time to develop credibility and earn the trust of the public.

2. Perceived efficacy of TCM alone is not sufficient to drive the intention to adopt TCM as a preferred medical treatment when ill or to adopt TCM as a complementary treatment together with biomedicine. Overall, TCM was well received among the respondents. It is perceived to be effective for both preventive care as well as for curing diseases. However, respondents with higher perceived efficacy of TCM are not more likely to consult TCM when ill.
3. Perception of financial cost is related to medical decisions. There is a need to address the issue of cost of consultation for TCM. In Hong Kong, a typical consultation of a private biomedical general practitioner is about HK$300 (equivalent to US$40), including two to three days of medication. A typical consultation of a private TCM practitioner is about HK$200 (equivalent to US$25). However, a patient needs to pay a medicine fee, and a herb decocting

service fee if he or she wants a herb decocted. A typical fee for two to three days of medication with decocting is around HK$270 (equivalent to US$35). So, the financial cost of consulting TCM can be higher than consulting a biomedical doctor. Setting a fixed cost on consultation with a specified day of medication for TCM should be explored.

4. One of the barriers to TCM consultation is the perception that TCM medication is inconvenient when compared to biomedicine. The busy and hectic lifestyle of Hong Kong does not facilitate the taking of TCM medication.

   Regarding the relationship between demographic characteristics and medical treatment choices, it was found that respondents with higher education and older respondents are more likely to consider TCM consultation when ill. These two groups are also more likely to consider TCM consultation together with biomedicine consultation. The highly educated group provides a promising target segment for TCM's future development.

Marketing implications

The implication is that in future promotion of TCM as a preferable medical treatment choice, there is a need to build and reinforce public trust in TCM. How can we do it?

Based on the current study, we propose the following ways to enhance the public image of TCM:

1. A majority of the respondents perceived that TCM is not as scientific as biomedicine. To rectify this perception, there is a need to strengthen research and development of TCM. The government should increase funding for clinical research related to TCM medication. Teaching and learning of TCM in university undergraduate programs should be evidence-based. Universities with TCM programs should enhance the release and publicity of clinical evidence regarding TCM treatments. Clinical results should be written in a jargon-free manner and should be consolidated for easy access by reporters, news agencies, and the general public. University professors conducting clinical research on TCM should be trained to communicate their findings beyond the professional arena.
2. There is a need to enhance the professional standard and status of TCM practitioners. The Chinese Medical Council of Hong Kong should provide a channel for the public to make complaints against TCM practitioners. The channel should be of high transparency and of high credibility. An examination of the web site of the Chinese Medical Council of Hong Kong found that it contains only information about the regulation of TCM practitioners and the regulation of TCM herbs. On the other hand, The Medical Council of Hong Kong that regulates

biomedicine on its web site devotes a full section to complaints and disciplinary inquiries. The web site states that “doctors have a duty to maintain a good standard of practice and care and to show respect for human life” in order to justify patients’ trust in them (The Medical Council of Hong Kong, 2017). The web site also shows how patients can lodge a complaint involving professional misconduct with the doctor, and what the Medical Council will do to investigate the complaint. Information about previous disciplinary inquiries is reported in detail on the web site. However, there are no equivalent information or procedures reported on the web site of the Chinese Medical Council of Hong Kong. The absence of such information sends out a message to the public that the Chinese Medical Council does not consider the public an important stakeholder in TCM regulations.

3. A majority of the respondents expressed confusion about the professional qualifications of TCM doctors. According to The Chinese Medical Council of Hong Kong, only two types of practitioners, Registered TCM practitioners and Listed TCM practitioners, are allowed to practice TCM in Hong Kong. These two groups are differentiated by their academic qualifications as well as years of practice before January 2000. Occasionally there are advertisements in the media for practitioners from mainland China who claim to be health practitioners that are

able to cure serious diseases using traditional herbal treatments. There is a need for The Chinese Medical Council to take a proactive role in investigating their eligibility to practice in Hong Kong.

4. Many respondents perceived that individual differences in body structure would hamper the desired medical effects of TCM. There is a need to educate the public about the philosophy of TCM and its advantages for personalized medication.
5. Making TCM medication more convenient will facilitate the choice of TCM consultation. Making concentrated Chinese Medicine granules products a norm in TCM prescriptions will help the promotion of TCM treatment.
6. Unlike the results in a previous study, older respondents and respondents with higher education are more likely to prefer TCM as a medical treatment. This segment should be emphasized in future marketing efforts.
7. as a preferred medical The integration of TCM into the current public health system in Hong Kong still has a long road to tread. The omission of the incorporation of TCM in primary care reflects the lack of government and institutional effort in fostering integration of TCM and biomedicine. This will lead to fragmentation of health choices and treatment decisions among patients (Templeman and Robinson, 2011).

Conclusion

A conceptual framework to examine the relationship between public attitudes toward biomedicine in relation to TCM and their effects on medical treatment choices was put to test using quantitative research method. Results show that choice of medical treatment is related to age, education, attitude toward biomedicine in relation to TCM, and cost of consultation. Prevalent in the public perception of these two fields of medicine are trust in biomedicine and inconvenience in taking TCM medications. Marketing strategies to promote TCM as a preferred medical treatment are drawn from the findings.

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Table 1. Demographic and behavioral profile of the respondents (N=1,321)

Demographic	**Number**	**Percentage**
Female	573	43.4
Male	748	56.6
Aged 15 - 29	386	29.2
Aged 30 - 49	478	36.2
Aged 50 - 59	232	17.6
Aged 60 or above	227	17.2
Primary school or below	88	6.7
Secondary school or high school	537	40.6
Post-secondary school or university	697	52.7
Monthly household income at HK$9,999 or below	248	18.9
HK$10,000 - HK$29,999	569	43.3
HK$30,000 or above	496	37.8
Production workers	86	6.5
Office workers	220	16.7
Professional/executive/managerial	270	20.4
Students	299	22.6
Housewives	149	11.3
Retired	195	14.8
Others	102	7.7
Living in public housing	352	26.6
Subsidized home ownership scheme housing	265	20.0
Private rental housing	179	13.5
Private owned housing	486	36.8
Others	40	3.0
Consulted TCM doctor in the past 3 years	896	67.7
Did not consult TCM doctor in the past 3 years	427	32.3

Table 2. Descriptive statistics of predictors and predicted variables in the conceptual framework

Statement	% agree	% neutral	% disagree	mean	s.d.
Predictors					
Attitude toward biomedicine and TCM (α = 0.78)				**3.3**	**0.6**
Biomedicine is more scientific than TCM	65.4	22.4	12.2	3.6	0.9
TCM doctors' experience and practices vary. As a result, it may not achieve the desirable medical effect	48.5	34.2	17.3	3.4	0.9
Patients' body structure and responses to TCM varies. Therefore, TCM doctors may not be able to give an accurate prescription	50.5	31.6	17.9	3.4	0.9
Rules governing biomedicine are more rigorous than those governing TCM	47.8	30.5	21.7	3.3	1.0
The professional qualifications of TCM doctors is confusing	46.1	30.6	23.3	3.3	0.9
I trust biomedicine doctors more than TCM doctors	31.3	42.2	26.5	3.1	0.9
I trust biomedicine more than TCM	31.0	41.8	27.2	3.0	0.9
Perceive efficacy of TCM (α = 0.66)				**3.4**	**0.6**
TCM is useful for preventive care	72.1	18.5	9.4	3.8	0.9
TCM has fewer side effects than biomedicine	69.9	22.4	7.7	3.8	0.8
TCM can achieve a permanent cure	65.7	24.3	10.0	3.7	0.9
TCM is better than biomedicine to achieve a permanent cure	51.1	35.2	13.7	3.5	0.9
Even when other medical treatment fails, TCM is able to cure the health problem	32.9	42.5	24.6	3.1	0.9
TCM is an alternative treatment for difficult and rare diseases	26.5	27.1	46.4	2.7	1.0
Cost of TCM and biomedicine (α = 0.21)					
To take biomedicine is more convenient than TCM medicine	77.4	12.7	9.8	3.9	0.9
TCM costs more than biomedical treatment	21.4	40.6	38.0	2.8	0.9

Predicted variable					
In the event of illness, I would first consult biomedicine. When biomedicine fails, I would consider TCM	53.2	23.9	22.9	3.4	1.0
When receiving biomedical treatment, one should not receive TCM treatment	48.6	23.6	27.8	3.3	1.1

Table 3. Summary of regression analysis for variables predicting respondents' likelihood to consult biomedicine first when ill (N = 1,321)

Variable	B	SE B	β	
Step 1				
Sex (2 levels; 1 = M, 2 = F)	-0.04	0.06	-0.02	
Age (7 levels; 1 = age 15-19; 7 = >70)	-0.08	0.02	-0.13	***
Education (3 levels; 1 = elementary; 3 = college)	-0.07	0.05	-0.04	
Step 2				
Sex (2 levels; 1 = M, 2 = F)	0.03	0.05	0.02	
Age (7 levels; 1 = age 15-19; 7 = >70)	-0.06	0.02	-0.11	***
Education (3 levels; 1 = elementary; 3 = college)	-0.09	0.04	-0.05	*
Attitude toward biomedicine as superior to TCM	0.66	0.04	0.40	***
Perceived efficacy of TCM	-0.01	0.04	-0.00	
TCM costs more than biomedical treatment	0.11	0.03	0.10	***
To take biomedicine is more convenient than TCM medicine	0.12	0.03	0.11	***

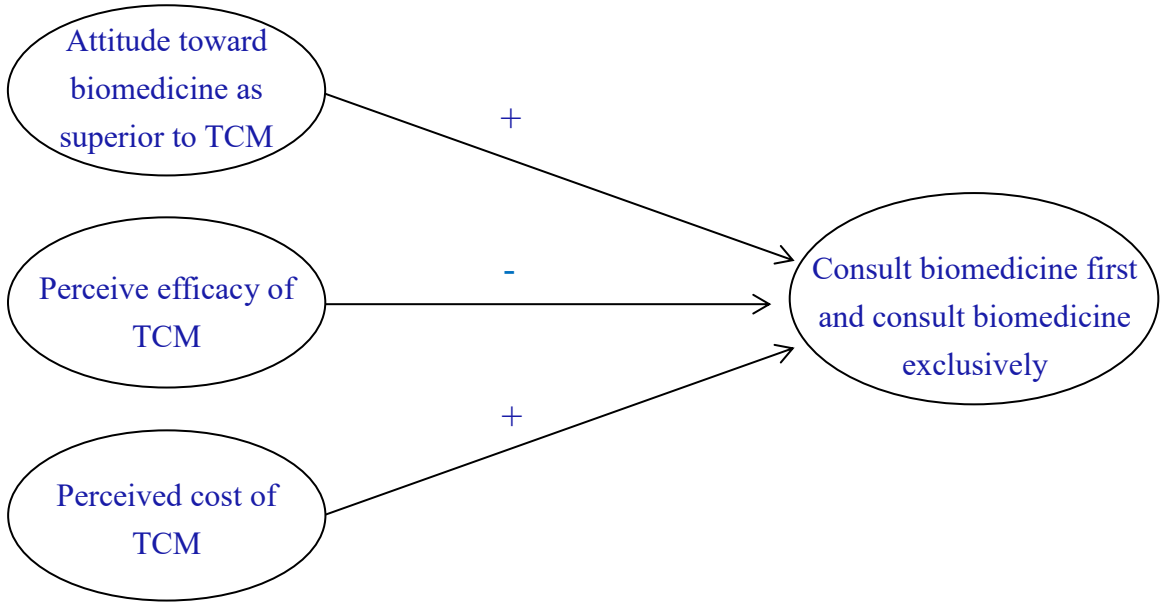
Note. R^2 = .02 for Step 1; ΔR^2 = .23 for Step 2 ($p < 0.001$)

Table 4. Summary of regression analysis for variables predicting respondents' likelihood to consult biomedicine exclusively when ill (N = 1,321)

Variable	B	SE B	β	
Step 1				
Sex (2 levels; 1 = M, 2 = F)	0.00	0.06	0.00	
Age (7 levels; 1 = age 15-19; 7 = >70)	-0.11	0.02	-0.17	***
Education (3 levels; 1 = elementary; 3 = college)	-0.18	0.05	-0.10	***
Step 2				
Sex (2 levels; 1 = M, 2 = F)	0.03	0.06	0.02	
Age (7 levels; 1 = age 15-19; 7 = >70)	-0.10	0.02	-0.15	***
Education (3 levels; 1 = elementary; 3 = college)	-0.17	0.05	-0.10	***
Attitude toward biomedicine as superior to TCM	0.30	0.05	0.16	***
Perceived efficacy of TCM	0.10	0.05	0.05	
TCM costs more than biomedical treatment	0.11	0.03	0.09	***
To take biomedicine is more convenient than TCM medicine	0.12	0.04	0.10	***

Note. R^2 = .03 for Step 1; ΔR^2 = .07 for Step 2 ($p < 0.001$)

Figure 1.
The conceptual framework



Note: A '+' sign indicates a positive correlation while a '-' sign indicates a negative correlation