Evaluation of Willingness to Accept the Referral Policy: Mediation of System Related Sensibility on Power of Interest-Related Groups

Qian Yang1, Fei Teng2, Xudong Zhou3, Lin Gao4, Yuhang Zeng1, Hengjin Dong5*

1Center of Health Policy Studies, School of Public Health, Zhejiang University, P.R.China
2Center for Studies of Psychological Application, School of Psychology, The Base of Psychological Services and Counseling for "Happiness" in Guangzhou, South China Normal University, P.R.China
3Associate Professor, Institute of Social Medicine, School of Public Health, Zhejiang University, P.R.China
4Graduate student, Institute of Social Medicine, School of Public Health, Zhejiang University, P.R.China
5Director, Center for Health Policy Studies, Zhejiang University School of Medicine, P.R.China

ABSTRACT: Background: Although the Chinese government has enacted many policies to reform its health system, the reaction of its citizens to these policies remains unknown. The existence of different health reform interest-related groups means that there may be group-related differences in the willingness to accept a health reform policy. Objectives: The objective of the study is to determine Chinese citizens’ willingness to accept a referral policy, based on their social group. A related objective is to explore the underlying mechanism of the influence of the social group and system-related sensibilities on the reform process. Methods: We selected a county-level city in eastern China as our study site. Purposive sampling yielded four groups of respondents, including patients, governmental officials, hospital workers, and primary care institution staff. We surveyed 468 people using a self-administered questionnaire. The variables of interest were perception of power, system threat, system dependency, system inescapability, and perceived feelings of control as well as willingness to accept the policy. Results: Willingness to accept the referral policy differed by interest group. Specifically, willingness is affected by group power and mediated by a psychological feeling of perceived control. Conclusions: Of the participants, 70% were willing to accept the referral policy to varying degrees depending on the group and other social and psychological features. Recommended interventions included strengthening the power of the executive department and addressing patients’ feelings as related to control. To guarantee an appropriate policy environment for health reform, we need to empower the county health bureau and rebuild healthy doctor-patient relationships.

Key words: Referral policy, Willingness to accept, Social psychology, Benefit-related groups, Perceived power

INTRODUCTION

In recent years, Chinese healthcare resources have become more plentiful. By the end of 2011, medical and healthcare institutions around the country totaled 954,000; licensed doctors (assistants) reached 2,466,000; registered nurses totaled 2,244,000; and the number of hospital beds reached 5160,000 (Information Office of the State Council, 2012). Nevertheless, patient access to healthcare has not increased, and the county-level hospital has become even more crowded (Zhou, Li & Hesketh, 2014). It is believed that the speed of hospital admission in urban cities cannot keep up with the flood of patients from rural areas. Further, patients’ trust in clinics and community health centers is low, and they still seek care services at large hospitals for simple health problems (Yip et al., 2012). Finally, health workforce resources are allocated inequitably, especially within provinces and between urban and rural areas (Anand et al., 2008; Yang & Dong, 2014).

Although 83.3% of all households (80.8% in rural areas) can reach a medical institution within 15 to 20 minutes, there have been few visitors to the community health centers, even after the Chinese government invested a large amount of money in their construction (the 12th Five-year Plan). Our qualitative study of a province in eastern China in 2013 also revealed that both large and public township hospitals were still overcrowded (Yang & Dong, 2014). Thus, it is likely that the structure of health services allocation, which is in the shape of an inverted triangle, with large hospitals at the top, is the underlying problem.
According to the Oregon Primary Care Association (2014), 80% of patients could resolve their problems in a primary care institution. As such, an effective referral system would be useful. An effective referral ensures a close relationship between all components of the health system as well as assists in making cost-effective use of hospitals and primary healthcare services. The World Health Organization (WHO, 2004) recommends referral policy as an option to help to ensure that people receive the best possible care closest to home and that increases patient satisfaction, with no adverse effects on quality of care or patient outcomes.

Weak referral systems have led to fragmentation and discontinuity of care, both within and between healthcare institutions, and between the formal health care system and other sources of care (WHO, 2007). But a good referral system assists in ensuring people receive the best possible care closest to home, making cost-effective use of hospitals and primary health care services and building capacity and enhance access to better quality care (WHO, 2005). It also helps to improve the equity, efficiency, effectiveness, and responsiveness of a government’s health system, and the Chinese government is no exception. With this as background, the Chinese State Council (2006) has issued statement to propose the implementation of joint and cooperation of community health service institutions and large and medium-sized hospitals in a variety of forms, the establishment of classification of medical treatment and two-way referral system, explore and carry out the first treatment in the community to make pilot, general out-patient clinics, rehabilitation and nursing services by community health service institutions to undertake the big and medium-sized hospital (para. 6).

The two-way referral procedure is dual-direction process between community healthcare institutions and hospitals. When the community health sector is unable to provide an intervention for a patient, he or she is transferred to a large hospital. When the patient completes the medical care in the hospital, he or she is discharged and transferred back to the community to recover (Cervantes, Salgado, Choi & Kalter, 2003). Since then, China has established a referral service to optimize its health system structure.

Nevertheless, there are obstacles to implementing referrals, such as differing definitions of services and staff, the boundaries between primary and secondary care, changing organizational structures, and an increasing reliance on primary care teams (WHO, 2004). In addition, different social groups may have differing perspectives and benefits.

Four major interest-related groups are worthy of analysis. When primary healthcare institutions become gatekeepers, hospitals face a double-edged sword. On the one hand, the heavy workload caused by outpatient crowding will be relieved. On the other hand, the hospitals’ economic situation will be threatened by a decrease in the number of outpatients. Primary health institutions would see reciprocal effects. They might get a fiscal boost from the increase in visitors, but staff also would need to upgrade their medical skills to cope with the increasing demands of patients (Yip et al., 2012). The central government also would benefit from referrals, as medical resources would be utilized more reasonably and medical procedures standardized and optimized, but the local health bureau would have to bear the pressure of implementation in view of certain obstacles and conflicts over which they have little control. Finally, patients would not need to travel long distances for hospitals; they could get healthcare services more conveniently. Notably, referral policy is based on the premise that gatekeepers are worth trusting with medical technology and mortality decisions. In reality, however, patients may be reluctant to give up their ability to choose a hospital.

The issue of power in the politics of health and health policy is a key area of study in the field of health services administration and organization. Among the different interest-related groups in Chinese health reform, power is distributed unequally. While Europe and the United States have passed through the historical period of emphasizing patient power (Lindsey, 1993; Saltman, Figueras & Sakellarides, 1998), and Americans are worrying about the overexpansion of government power with Obama Care (Faria, 2012), China has the opposite situation. With the deterioration of the doctor-patient relationship, the struggle for power between doctors and patients is becoming increasingly fierce (Xu, 2014). Moreover, although the organ of authority has transferred from the Ministry of Health to the National Development and Reform Commission, the strongest power group related to Chinese health reform is always the central government. Health workers, especially in rural areas, have little power in the healthcare reforms (Zhou, Li & Hesketh, 2014). Even a benevolent policy may fail. The reform process is related to different interest-groups, and power waxes and wanes, which will inevitably influence and restrict policy implementation (Mi & Wen, 2013). Thus, we need to study the relationship between the power of interest-related groups and the referral policy in Chinese healthcare reform.

Social identity and social dominance influence the perceptions of different social groups (Jost, Banaji & Nosek, 2004). As such, healthcare workers, patients, and bureau staffs, who encounter different social environments and restrictions and have varying degrees of power, may have different perceptions of their degree control. People prefer to believe that they have personal control over their lives and are motivated to avoid a sense of non-randomness (Lerner, 1980). A sense of personal control is a key contributor to physical and mental well-being, as it buffers individuals from the uncomfortable reality that randomness and chance can determine important life outcomes (Kay, Whitson, Gaucher & Galinsky, 2009).

No one, however, has complete personal control, as, to some extent, one’s outcomes also are controlled by social institutions (Kay & Friesen, 2011). The process of compensatory control refers to the relationship between perceptions of personal control and institutional or external control (Kay et al., 2008; Kay, Whitson, Gaucher & Galinsky, 2009). If, for example, primary healthcare workers perceive less personal control than do physicians, they may be more likely to seek compensatory control from the external system, such as the authoritative central government. Thus, they may be more willing to accept a health reform policy.

In this study, we will determine whether peoples’ willingness to accept a referral policy is affected by their perspective, such as the interest-related groups to which they belong and how powerful their group or personal control are, and then analyze the difference. We are concerned with whether perceptions of power differ between groups and how these perceptions affect the willingness of accepting the new policy through perceived personal control.

We assume that the four interest-related groups, government officials, hospital (upper-level institute) workers, primary care institute (grassroots institute) workers, and patients, differ in their willingness to accept the new reform of referral policy.

**METHODS**

**Study Site**

To ensure an appropriate economic context for the research, we conducted our study in a county-level city in eastern China, whose economy is more developed than in the western part. Further, the province that we chose is a pioneer in county-level public healthcare reform.

The local health bureau has advocated for a referral system since 2012, when the Provincial Health Bureau signed a contract with a general practitioner. The city has an estimated population of 467,900 (as of 2010), with a GDP of 235.25 billion YUAN (as of 2013). Both
indexes fall in the middle level of the province, which has provided us with their cooperation for the study.

**Sampling Procedure and Sample Size**

This study is a part of a larger project on the referrals in a certain province in eastern China. As noted, the sampling focused on the four interest-related groups in terms of health reform: government officials, hospital workers, primary care institute workers, and patients.

For the governmental officials, we gave questionnaires to all 20 staff members of the local health bureau. In terms of hospitals, there are four county-level hospitals in the city. We selected the two best general hospitals for their typicality and the integrity of medical and health contexts. We visited department by department, on a convenience basis. We recruited 200 hospital workers, based on the number needed to study the variable of interest. For patients, we sampled from these two hospitals to achieve a comparable sample size. The city has four community health centers in urban areas and 12 township health centers in rural areas. We chose two community health centers and four township health centers to visit.

**Data Collection**

The questionnaires were self-administered and contained closed-ended questions. The main sections included interviewees’ demographics, system-related perceptions, and attitudes toward the health policy of the referral. We also used a social desirability scale for validity control and an open-ended question for interviewees to report their thoughts and suggestions.

**Willingness to Accept the Policy of Two-Way Referral:**

There was a single item to measure people’s willingness to accept the new policy: “To what extent do you think the two-way referral policy is necessary?” The item was answered on a 5-point scale (1 = strongly unnecessary, 5 = strongly necessary).

**Perception of Group Power:**

Perceptions of how much power their groups have were assessed by one item: “How much power do you think the institution or organization you belong to possessed during the referral?” The item was answered on a 5-point scale (1 = very little, 5 = a lot of).

**Perceived Control:**

We used a previously validated 12-item measure of perceived control (Michinov, 2005) for the fourth condition. All items were rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree).

We organized a one-day workshop for training interviewers prior to administering the survey instruments. The interviewers came from the local university and included a graduate student and another undergraduate who was majoring in social science. The first author provided the questionnaires to governmental and primary care groups, analyzed the survey results, which were provided to the director of each institution, and supervised the quality of the survey.

The other interviewers provided questionnaires to hospital and patient groups. They analyzed the results of the survey, which were provided to the nurses for each section of the hospital. Nurses then helped to issue questionnaires to other health workers and patients. The interviewers and the nurses were available to answer questions during the survey process.

We received 17 valid responses in the governmental sample (6 female; mean age = 38.63, SD = 7.42), 155 in the hospital sample (105 female; mean age = 30.62, SD = 10.17), 149 in the primary care sample (78 female; mean age = 38.63, SD = 37.44) and 185 in the patient sample (78 female; mean age = 37.30, SD = 14.03).

**RESULTS**

**Sample Characteristics**

Table 1 presents the sample sizes and percentages of each interest-related group. The mean age of the total sample is approximately 35 years. The hospital sample (M = 31, SD = 10) is younger than the other three samples, with a mean age of approximately 37. The gender distribution is relatively balanced; 56.69% are female. Almost half of the participants have three members in their family. The education level and income of patients is lower than that of the other three samples.

**Willingness to Accept the Referral:**

Due to the variable of willingness to accept the referral is a mean score of two items, we reported the acceptance rate and percentage of each interest-related group. The results are presented in Table 2.

We compared the acceptance of referral, perceived group power using the Kruskal-Wallis test. An examination of the mean scores suggested that all of the four interest-related groups tended to accept the referral policy (χ² = 9.82, p < .05). The highest support rate is seen among the health bureau officials, as 82.35% were willing to accept the new referral policy. The group least willing to accept is the patients group, of whom 58.76% were willing to accept the new referral policy. The acceptance rate of healthcare workers is 78.23% for hospital workers and 73.05% for primary healthcare workers.

**Impacts of Power and Conditions:**

As shown in Figure 1, perceived group power in regard to the referral policy acceptance differed among groups (χ² = 16.44, p < .01). The group that perceived themselves as the most powerful is hospital workers (M = 2.81, SD = .75). In contrast, the least powerful group is governmental officials (M = 2.31, SD = 1.14). Perceived individual power possession also has significant difference among groups (χ² = 9.91, p < .05). Patients perceived that they have the highest individual influence in terms of referral (M = 2.58, SD = 1.02), while the government officials felt that they had the least influence (M = 1.88, SD = .93).

**Relationship between perceived group power, perceived control, and acceptance of referral policy:**

We tested whether the relationship between perceived power and willingness to accept the referral policy was mediated by perceived control. We conducted separate analyses and found perceived feelings of control to be a mediator.

A simple mediation bootstrapping procedure (Preacher, Rucker & Hayes, 2007) in a PROCESS SPSS macro (Model 4; 5,000 bootstraps; Hayes, 2012) revealed the significant indirect effects of perceived feelings of control on the relationship between perceived group power and willingness to accept the referral policy. Through the same procedure, we found that the indirect effect is significant (b = .026, SE = .016, 95% CI [.002, .067]) (Figure 2).

**DISCUSSION**

The current research is the first to adopt a social-psychological perspective to study the process of implementation of health policy. The results of the study show the distinct level of willingness to accept the new health reform policy of referral among various benefits groups as related to Chinese healthcare reform. From a social psychological perspective, the study also provided an understanding.
of the willingness to accept this beneficial policy, in terms of the perceptions of four interest-related groups, such that perceived control mediate the relationship between perceived group power and willingness to accept the new policy.

In general, members of all four groups are inclined to accept the new reform policy of referral. Among the four groups, the greatest differences were between health bureau officials and patients. Patients are the most opposed to the referral policy, while healthcare workers are among those who welcome the referral policy most. This difference may due to different benefits that they expect to get from the implementation of the new policy. Specifically, of medical skill of the current primary health workforce to be the biggest obstacle to referral implementation (Yang & Dong, 2014).

In addition, healthcare workers, especially hospital workers, who are overworked, would look forward to the referral mechanism to relieve them of some pressure. Finally, the unenthusiastic attitude of primary care workers might be due to their feeling unprepared for the referral. In our previous study, people considered the level of medical skill of the current primary health workforce to be the biggest obstacle to referral implementation (Yang & Dong, 2014).

The current study provides another possible interpretation for the referral policy implementation difficulties. Chinese patients hold the most freedom to choose which health institution or doctor to visit and, thus, deem the two-way referral as unnecessary. The referral policy is the decision of the national health authorities and is a centrally planned reform (Ma, Lu & Quan, 2008). The county health bureau is the grassroots organization of the government, and, as an affiliate of the central government, they would take the new health policy as their task and would have to bear the implementation stress and conflicts among the various groups. In addition, healthcare workers, especially hospital workers, who are overworked, would look forward to the referral mechanism to relieve them of some pressure. Finally, the unenthusiastic attitude of primary care workers might be due to their feeling unprepared for the referral. In our previous study, people considered the level of medical skill of the current primary health workforce to be the biggest obstacle to referral implementation (Yang & Dong, 2014).

The current study provides another possible interpretation for the policy implementation difficulties.
Unfortunately, the largest opposition to the new policy among the four groups was the patients, who perceived they have the highest individual influence in terms of the health reform. Further, the local health bureau staff, who should be the leader of the new reform, perceived themselves as having the least group power and individual influence among the four groups, even though they were the most willing to accept the referral policy. According to the fiscal federalism approach, regional/local governments have the primary responsibility for providing public services and exercising key regulatory powers, which calls for decentralization (Oates, 2005). The county health bureau is a grassroots-level sector. They have to respond to a dozen primary healthcare centers in the council area, as well as to their leader—the prefecture-level health bureau. In this overseeing position, the county health bureau is the main implementing force and should be the most powerful group among the reform. However, in their “sandwich” position, they have little power (McConville & Holden, 1999).

Fortunately, one of the largest supporters, hospital workers, view their group as the most powerful in reform. Interestingly, the primary healthcare workers, on whom one should first rely during the referral process, are also the least self-confident in the referral. They perceive that they have little power in the healthcare reform, either at the group or individual level. SJT tells us that there may be mediating factors in this relationship, which prompted us to explore the effect of system-related conditions on the relationship between perceived power and willingness to accept the reform.

The mediator is perceived personal control. It mediated the effects of perceived group power on willingness to accept the referral policy. For Chinese people, the most significant compensatory power institute is the Chinese government. When hospital workers perceived themselves as having lower personal control, they defended the legitimacy of the sociopolitical institutions that offer outside control to compensate for their lack of personal control. In contrast, primary care workers, who feel the most personal control, have no need to use a compensatory control process; thus, they are not as enthusiastic about the new policy implemented by the government. The last two groups remain on the same pathway that we proposed. Patient groups, who perceive more power at the group or individual level in healthcare reform, find it less necessary to be compensated by an external system. For this reason, patients are not very willing to accept the referral policy. The county health bureau staff members, who are the least powerful in healthcare reform, are very willing to accept the change.

In summary, the tendency to invoke the authority of the government is to empower the benefits-related groups. Reform always implies the authority of the central government. Groups who perceive that they have less power in the reform, such as the county health bureau staff, need to have strong personal control to compensate. In contrast, with a perception of more personal control, which is not threatening to one’s overarching sense of order, individuals compensate by turning to and defending social systems (e.g., governments, religions, organizations) that can reassure them that things are under control (Kay & Freisen, 2011). Powerless groups are more willing to engage in approach processes when their social disadvantage is obviously illegitimate. To the extent that a given psychological phenomenon originates from the motivation to defend a particular social system, a system should increase the need to support the current authority.

Implications

The current research also provides us with guidance for the healthcare policy planning and implementation. First, given that there are many benefits of implementing the referral policy for the Chinese healthcare system, it is useful to understand the mechanism underlying its levels of acceptance. As we know, the major problem of Chinese healthcare reform is that it is difficult to get the opinions, ideas, and preferences of different interest groups. Based on this, the current research revealed the possibility of understanding the mechanism through a social psychological approach.

To guarantee the successful implementation of the referral policy, China’s top priority should be to enhance the power of the county health bureau. Our data indicated that health sector officials perceived themselves as the least influential and least powerful among all groups. Consequently, we suggest that more authority should be given to the local health bureau to respond to the decentralization (Oates, 2005). It is beneficial to establish a powerful health system by integrating resources and adjusting different interests as necessary, as well as to unite various forces, just as ObamaCare did (Greer & Singh, 2014).

Further implications for Chinese healthcare reform came from broader system-related evidence and its mediation of power-related perceptions. Perceived feelings of control played an important role in the willingness of people to accept the referral. The most powerful group, the hospital workers, perceived themselves to have the least amount of control. As stated by Kay et al. (2009), lower levels of perceived feelings of control are associated with higher support for governmental control. In contrast, patients and primary care workers, who have little power but perceived themselves as having the most personal control, are not willing to accept the referral. As a consequence, we need to strengthen the county health bureau to give them more group power. Further, the power relationship between doctors and patients should be reversed. Patients have high perceived feelings of control in China. The best evidence of this is the increasing number of reports about violence toward doctors by patients (Zhao, Zhang, Bai & Wang, 2014). Nevertheless, in China, patient demand is prevalent. Patients have become so powerful that they have “ordered” physicians’ prescriptions (Currie, Lin & Zhang, 2011). Thus, there should be more education for the general public about the limitations and risks of medicine. These strong perceptions of control compensate for the lack of control from the external system (Kay, Whiston, Gaucher & Galinsky, 2009). As a consequence, we should set up stronger external systems, including adequate authoritative mechanisms and reliable public education systems for handling patients’ complaints and needs in China.

Limitations and Directions for Future Research

Before generalizing from the findings, one must keep in mind that our sample of the government group contains only 20 staff members of a health bureau in a county-level city. Investigations of other bureaus related to the health reform, such as the social security bureau or the finance bureau, may provide a more complete picture. Further, we hope to inform future studies that assess the upper-level health bureaus in a vertical direction to allow a more comprehensive understanding of the power interactions between the prefecture health bureau and the county health bureaus.

CONCLUSION

Most study participants tended to accept the referral policy. With the broadening implementation of the new healthcare reform in China, we need to understand such acceptance in terms of the perspectives of different interest-related groups. Such willingness is affected not only by the group power but also mediated by perceived control. Interventions such as strengthening the power of the implementation department and enhancing perceived control among patients could increase support for the reform. To guarantee an appropriate policy environment for health reform, policy recommendations are needed in regard to decentralization to empower the county health bureau, optimization of health resources distribution to reduce the increased consumption, and the rebuilding of a healthier doctor-patient relationship. From a social-psychological perspective, the current
study opens the door to additional research on the conditions and reasons for the willingness to accept healthcare reforms in terms of psychological and sociological processes.

Acknowledgement

This research is sponsored by Zhejiang Province Science Foundation of China (LQ14G030009).

REFERENCE


