

The Influence of Organizational Culture on Information Use in Decision Making within Government Health Services in Rural Burkina Faso

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ABSTRACT

Efforts to build statistical capacity in the developing world have often failed to produce the expected increases in information use in management and planning. The ways in which culture influences evidence-informed and results-oriented decision making in organizations in low- and middle-income countries are not well understood. In this explorative study, a sample of health managers working in the public sector in a rural district in Burkina Faso was interviewed to elucidate the relationships between cultural dimensions at the organizational level, organizational practices, and the use of routine health information in decision making. Based on the results, a conceptual framework for these relationships is proposed, and strategies are suggested for overcoming cultural constraints to information use.

Keywords: *routine health information, organizational culture, information use, decision making, Burkina Faso, sub-Saharan Africa.*

1. INTRODUCTION

Promoting evidence-informed and performance-oriented decision making at all administrative levels in low- and middle-income countries is viewed as an essential strategy to achieve more effective and appropriate use of scarce resources and improved development outcomes (PARIS21 Secretariat, 2004). In the health sector, routine health information generated at regular intervals from institution-based data sources provides information about the performance of government policies, programs, and health facilities. Since the 1980s, a number of countries have restructured their national routine health information systems

with the objective of strengthening the ability of managers and health care providers to assess performance and to take action to improve the functioning of the health services (Sauerborn and Lippeveld, 2000). Yet, an increase in the availability of timely, accurate and relevant information has in many cases not resulted in more evidence-based decision making (Campbell, 1997; Chaulagai et al., 2005). This is despite the channeling of considerable financial resources to the development of the information systems (AbouZahr and Boerma, 2005; Rommelmann et al., 2005).

This study addresses the need to explore the ways in which the shared values of employees influence information use particularly in sub-Saharan Africa where progress towards the achievement of the Millennium Development Goals has been slow. To this end, a sample of 20 health managers working in one rural district in Burkina Faso was interviewed in a conversational style with the aid of an interview guide. In the qualitative analysis of the interview transcripts we identified dimensions of organizational culture and organizational practices affecting information use in decision making. Based on the findings, we suggest culturally appropriate strategies for promoting an informational approach to management in the local context.

With the exception of locus of control, the definitions of the dimensions of societal and organizational culture investigated in the GLOBE Study were adopted in this study (House et al., 2004; Table 1). The aspects of collectivism covered in the GLOBE Study by the constructs of In-Group Collectivism and Institutional Collectivism were incorporated into the generic term *Collectivism* (Gelfand et al., 2004).

Table 1. Dimensions of culture investigated in the study. With the exception of *Locus of Control*, the definitions were adopted from the GLOBE Study (House et al., 2004).

Performance Orientation: The extent to which a community encourages and rewards innovation, high standards, and performance improvement.

Power Distance: The degree to which members of a collective expect power to be distributed equally.

Uncertainty Avoidance: The extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate the unpredictability of future events.

Institutional Collectivism: The degree to which institutional practices at the societal and organizational levels encourage and reward collective distribution of resources and collective action. (Incorporated into the generic term *Collectivism*.)

In-Group Collectivism: The degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families. (Incorporated into the generic term *Collectivism*.)

Gender Egalitarianism: The degree to which a collective minimizes gender inequality.

Locus of Control: The extent to which individuals in a society or organization believe they can control the outcomes of their actions.

Fatalism has been identified as a dimension of societal culture (Aycan et al., 2000). Fatalism, however, has a negative connotation. *Locus of Control*—a construct originally developed by Rotter (1966) to describe an aspect of personality—was adopted in the present study as a cultural dimension as it may

be less value-laden. It may also be better conceptualized as a continuum between two opposite poles. It is defined as “the extent to which individuals in a society or organization believe they can control the outcomes of their actions.” An internal locus of control characterizes cultures in which individuals believe they have much control over the outcomes of their actions. External locus of control at the opposite pole of this dimension is descriptive of a culture in which individuals believe they have only limited control over the outcomes of their actions due to the influence of supernatural powers, fate, or some powerful others.

In the following we briefly review the literature on culture and decision making with a special angle on the sub-Saharan African context.

2. CULTURE AND DECISION MAKING IN ORGANIZATIONS: EARLIER WORK

Peterson et al. (2003) propose that societal culture shapes the context of group decision making in organizations. The GLOBE Study on the interrelationships between culture and organizational leadership in societies around the world showed that valued leadership attributes are contingent on dimensions of cultural values (House et al., 2004). The results of the study provide support to the thesis that societal culture has a significant effect on organizational cultural practices.

Schein (1985, 2004) asserts that shared basic values (Schein prefers the term *basic assumptions*) operating at the deepest level of a group’s culture are extremely difficult to change because they tend to be taken for granted and to be non-debatable. The questioning of shared basic assumptions destabilizes an individual’s cognitive and interpersonal world causing much anxiety and defensiveness.

Lachman *et al.* (1994), and indirectly also Kanungo and Jaeger (1990) and Mendonca and Kanungo (1994), have emphasized the importance for organizational effectiveness of the congruence between value assumptions underlying organizational processes and the basic values espoused by a society. Since managers and employees will not be able to align their shared basic values with management practices developed in a different cultural context, organizations need to ensure that the value assumptions underlying management practices are congruent with the basic values in the society.

A growing body of evidence demonstrates that culture affects the process of decision making in organizations in many ways. The evidence suggests that in a specific cultural context a particular form of participative decision making is more appropriate than others (Sagie and Aycan, 2003; Dorfman et al., 2004), some sources of guidance are preferred in event management (Smith et al., 1995, 2002), and some conflict management approaches favored over others (Smith et al., 1998). Understanding such relationships may help to increase

organizational effectiveness and employee commitment by encouraging the adoption of culturally appropriate organizational processes and practices.

The influence of culture on information use in decision making in organizations has been investigated in only a few studies, and sub-Saharan Africa is not represented in this research. In view of the limited understanding of the ways in which culture affects information use in decision making in sub-Saharan Africa and elsewhere in the developing world, there is a need for research to address this gap.

2.1 ORGANIZATIONAL CULTURE AND DECISION MAKING IN SUB-SAHARAN AFRICA

Formal organizations in sub-Saharan Africa have been described as being predominantly hierarchical with centralized decision making and limited communication between organizational levels (Montgomery, 1987; Kiggundu, 1989; Blunt and Jones, 1992; Jackson, 1999; Prime, 1999). In a cross-cultural study investigating the sources of guidance used by middle managers when dealing with everyday decisions, Black African managers from six African nations reported relying heavily on formal rules and procedures, and with the exception of Nigeria, they also reported strong reliance on superiors (Munene et al., 2000). However, they were reluctant to consult with their subordinates. Munene and colleagues argued that turning to subordinates would not be compatible with the African value profile as it would involve treating them as potential equals.

The results of the GLOBE Study which included five sub-Saharan African countries (Namibia, Nigeria, Zambia, Zimbabwe, and South Africa, with separate samples for Black and White South Africans) seem to contradict these findings (House et al., 2004). In relation to current practices, Black African managers as a cluster scored only slightly higher than Western countries on Power Distance. Furthermore, power distance does not appear to have been a salient feature of the consensus seeking traditional African societies of the past (Ayittey, 1991; Bourdillon, 1976/1991; Gyekye, 2002; Jackson, 2004).

In the GLOBE Study, societies in sub-Saharan Africa scored average on the dimension of Uncertainty Avoidance at a similar level with North America. Manifestations of high uncertainty avoidance include strong resistance to change (Sully de Luque and Javidan, 2004). African formal organizations particularly in the public sector have been described as powerfully change resistant (Blunt and Jones, 1992).

Ethnography and cross-cultural research have provided consistent evidence on the collectivist nature of traditional sub-Saharan African societies (Hofstede, 1991; Munene et al., 2000; Gyekye, 2002; House et al., 2004). Persons socialized in a collectivist culture tend to prioritize at the workplace the maintenance of harmonious relations and avoid engaging in actions that would

threaten the face of others (Ting-Toomey, 1988; Maznevski and Peterson, 1997; Schein, 2004).

The results of a cross-cultural study of value dimensions by Noorderhaven and Tidjani (2001) suggest that religion is very important in all the African countries included in the study (Cameroon, Ghana, Senegal, South Africa, Tanzania and Zimbabwe). This finding is consistent with the evidence from ethnographic literature which indicates that the presence of supernatural powers is pervasive in traditional sub-Saharan African cultures (Gyekye, 2002; Binet, 1970; Bourdillon, 1976/1991; Whyte, 1997). A belief in the ability of supernatural powers to influence events may lead to a cultural emphasis on adjustment to situations and acceptance of the status quo.

3. THE STUDY SETTING

The study was conducted in the Nouna Health District, a rural area in north-western Burkina Faso. The estimated population of approximately 300,000 was composed of fifteen ethnic groups living predominantly on subsistence agriculture and cattle rearing. A low level of school attendance was reflected in an illiteracy rate of over 80 percent.

In the early 90s, the government committed itself to a decentralization process which was still ongoing at the time the fieldwork of the study was conducted. Health districts had the responsibility for the management of the primary health care network, while authority for decision making in the health sector had partly been devolved to the level of health centers and the communities they served. Health center directors were required to hold monthly meetings with management committees that included community representatives.

In addition to a high morbidity and mortality in Burkina Faso, priority problems identified by the Ministry of Health included a limited access of the population to health services and a generally low quality of services that were constrained by a weak institutional capacity (Ministère de la Santé, 2000).

Following the integration of community health programs in 1992, a unified routine health information system was designed for reporting both primary health care and hospital statistics (Ministère de la Santé, 2005). In the Nouna Health District, monitoring visits to health centers were undertaken biannually by district level facility supervisors to provide assistance in the analysis of performance statistics and in the search for solutions to identified problems.

Burkina Faso has been included in a few comparative studies of societal and organizational culture. In a study by Smith et al. (1996) of the values of 8,841 employees working in business organizations located in 43 nations, Burkina Faso scored particularly high on measures associated with collectivism. A survey on management and leadership styles across fifteen African countries showed that managers in Burkina Faso perceived their organizations to be fairly

control oriented but not as being particularly results oriented (Jackson, 2004). Control orientation implies a very hierarchical and highly centralized management, an authoritarian leadership style, and reliance on many strict rules. Managers' perception of the current situation contrasted with their ideal of a highly people and results oriented management. Managers expressed a low tolerance for uncertainty in their work. They believed they had a moderate degree of influence over their own achievements.

4. METHOD

This explorative study focused on the influence of organizational culture on the use of routine health information in management and planning within the government health services at the district and health facility levels in the Nouna Health District. For the purposes of the present study, *use of routine health information in decision making* was defined as "a commitment to action based on information generated from routine health data."

The objectives of the study were (1) to identify cultural factors influencing the use of routine health information in decision making, and the ways in which they affect information use; (2) to identify organizational practices that are associated with those cultural factors and that influence information use in decision making; and (3) to explore, together with interviewees, potential strategies for overcoming cultural constraints to the use of routine health information in the management of the health services.

Health managers were interviewed individually on the influence of culture on the use of routine health information in planning and management using a conversational strategy within a general interview guide approach. The interview guide was developed on the basis of the literature review. However, due to the large number of issues included in the interview guide, it was not possible to explore all of them with each respondent. The interviews were also guided by the views of the respondents and the emerging research questions.

Managers in the District Health Department may be expected to rely more on information in making decisions as compared to managers working at the primary health care level. Thus, managers of health facilities located in the proximity of the district capital may have been more exposed to an information culture than managers working in a more isolated rural environment. Also, the use of information in decision making and the cultural determinants of it may vary by gender, professional category, ethnicity, and religious affiliation of managers.

The intention was to select a heterogeneous sample of 20 managers for the interviews in relation to the aforementioned variables with a view to collecting information that is representative of the range of values, attitudes and behaviors of health center managers relevant to information use. However, of 27 health center directors in the Nouna Health District, 13 did not meet the inclusion

criteria of the study because they had served for less than six months in their current post. One interview was cancelled after two failed attempts to meet a health center director. The final distribution of interviewees according to management level was four members of the District Health Management Team, three managers of the district hospital, and 13 health center directors.

With two exceptions, the managers were interviewed at their workplace. The interviews took on average 75 minutes. They were tape-recorded and carried out by the first investigator in French which is the language used in official communication in Burkina Faso. Transcribed interviews were coded and analyzed by the first investigator using the software ATLAS.ti 5.0 (Scientific Software Development GmbH, Berlin).

The study protocol was accepted by the ethical review committees of both the Nouna Health Research Center and Heidelberg University. The fieldwork was conducted during two one-month periods between September and December 2007. Data collection for both study components occurred simultaneously.

5. RESULTS

The health managers who were interviewed in the study were all nationals of Burkina Faso, and their median age was 30 years. The only female health manager in the District was included in the sample. The interviewees represented nine ethnic groups. 50% were Muslim, 40% were Roman Catholic, 5% Protestant, and one interviewee maintained exclusively indigenous religious beliefs. Nearly all of the managers had completed secondary school. The health center directors were nurses, and of the three physicians in the sample one was a specialist doctor. The sample included both health center directors from facilities that were within easy access of the District Health Department as well as several managers working in relatively remote and hard-to-reach locations.

The managers at all levels were familiar with the routine health information system. 18 interviewees had been introduced to the health information system during their pre-service training, and the managers had also acquired skills in data analysis during monitoring visits or some type of in-service training activity.

The results of the content analysis of the interviews are reported below separately for each dimension of organizational culture that was investigated in the study.

5.1 PERFORMANCE ORIENTATION

The content analysis of the interviews suggested that the extent to which routine health data were analyzed and used in management and planning in health

facilities varied considerably. The use of routine health data at the district hospital was limited because of problems in data collection and the resultant poor quality of the data.

Interestingly, the reasons given by the respondents for the low coverage of health interventions were mostly unrelated to the quality of health services. Yet, the responses of a few interviewees suggest that deficiencies in the quality of services including failure to meet people's non-medical expectations were a significant problem.

The perceived causes of unsatisfactory uptake of the health services were mirrored in the preferred strategies of health center directors for addressing the root causes. A frequently adopted strategy was to raise awareness among community members of the benefits of health interventions. The emphasis seemed to be on advocacy rather than on promoting two-way communication with community members.

Many respondents shared the view that health managers, and health workers more generally, were interested in improving the performance of the health services. For some respondents, achieving organizational objectives and improving performance seemed to be a priority as evidenced by the following quote:

What we are looking for is performance. It is true that we are more or less called on to rub along with each other because we form a community. This involves certain African values. But at work we expect performance.

—Member of the District Health Management Team (P11, 95)

As an incentive for health workers, the District Health Department had adopted at the turn of the century the practice of rewarding annually the health centers with the best performance. The majority of managers who were interviewed on this incentive scheme agreed that it motivated the health staff to improve performance. Public recognition of the health team's efforts appeared to be valued more highly by health center directors than the financial reward. On the other hand, negative social evaluation of poor performers may also have acted as a powerful incentive for health managers and workers to maintain satisfactory standards of performance. The rewarding of the entire team of health workers rather than individuals was generally considered to be appropriate.

5.2 POWER DISTANCE

The responses of health center directors suggest that they perceived the power distance between themselves and their subordinates to be low. The opinions of several interviewees were suggestive of a higher power distance between health centers and the District Health Department which could impose decisions on

health centers and require health center directors to take measures to improve performance.

The capacity to use routine health data in decision making at health centers seemed to be influenced by the degree of their managerial autonomy as perceived by the health center directors. Some health center directors who believed the management committees of health centers had a high degree of autonomy reported using data effectively to identify performance deficiencies and to improve performance. In contrast, a few health center directors who perceived the authority in decision making as being centralized transmitted the performance statistics to the district without taking measures themselves to address performance deficiencies.

Several interviewees emphasized the importance for the performance of health facilities of good communication between a superior and a subordinate within a facility, and also between health center directors and the members of the District Health Management Team. Managers who were interviewed on the subject assured that communication with their subordinates was good. However, some health center directors were dissatisfied with the communication with the District Health Management Team. They complained, among others, that some members of the District Health Department did not listen sufficiently to their views during supervision visits. Instead of taking the time to consider the explanations of the health team for identified performance deficiencies, a failure to achieve set performance targets could be interpreted by the supervisors as being the result of an insufficient effort by the health workers. Many health center directors wished that the District Health Management Team would listen more carefully to the views of the health workers in the field and that it would take their views into consideration.

In any event, ideally they [the members of the District Health Management Team] would listen much more to us.

—Health Center Director (P12, 109)

The interviewees were inquired about the appropriateness of giving negative feedback to superiors. Several interviewees felt that their subordinates did not hesitate to question their opinions, whereas the experience of one manager was mixed. The willingness of subordinates to provide negative feedback was seen to be influenced by the receptiveness of their supervisor to criticism. However, only some of the managers seemed comfortable providing negative feedback themselves to their superiors.

Interviewer: *[I]f there are problems with the level [above you in the organizational hierarchy], do you also try to analyze a bit the problems together? Or do you just say that you are not pleased and leave it [at that]?*

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Interviewee: *No, I only remind them. I don't say, [in Burkina Faso] one doesn't say to a boss that I'm not pleased. One only mentions, it's a reminder.*

—Health Center Director (P7, 385: 388)

The interviewees maintained that managers at health facilities usually engage their subordinates in decision making. Health center directors in particular emphasized the importance for the successful implementation of planned activities of making decisions jointly with their subordinates.

If you make the decision on your own, even if it is a good one, if people are not involved, you will not feel the consequences, you will not be able to implement.

—Health Center Director (P9, 353)

Many health center directors complained that the District Health Management Team did not give them enough opportunities to participate in discussions prior to making important decisions that affected them. Some health center directors expressed frustration over the imposition of decisions by higher administrative levels and wished to be more involved in discussions on matters that concern them. A few respondents mentioned that because of imposition, the introduction of one intervention had met with resistance by those who were responsible for implementing it.

Whenever something new [is introduced], we are ordered to implement it. (P13, 481)

Interviewees were inquired about the tendency of some individuals to attribute problems such as the low coverage of interventions to external causes rather than to deficiencies in the quality of service provision. The majority of managers interviewed on the subject explained that in the local context it is difficult to identify deficiencies in one's own performance at work.

I say, that is the main weakness, in other words we don't manage to be self-critical. That's it. We blame everything on others. (P5, 171: 173)

Interviewer: *Are the heads of departments willing to confront openly the problems they identify in the departments?*

Interviewee: *We are aware that not all managers are willing to do so.* (P19, 126: 127)

An attempt was made to uncover some reasons for the purported limited capacity of some individuals for critical self-assessment. On the basis of the interviews, it did not seem to be essentially a competence issue. The difficulty in

critically assessing one's own performance may be due to a fear of being evaluated negatively by others.

One respondent who seemed particularly insightful suggested there is an association between the limited capacity of individuals for critical self-assessment and the level of authoritarianism prevalent in traditional societies. He explained that in some ethnic groups in Burkina Faso it is unacceptable to overtly challenge the views and decisions of community leaders who are considered to be infallible. In these societies, children are conditioned to accept that their father is always right. At the other extreme are societies in which power is not concentrated in leaders. In such societies, children may question their father's views and decisions.

The insightful respondent believed that the type of culture in which individuals are brought up influences the behavior of both managers and subordinates within formal organizations. Individuals who have been conditioned in a culture emphasizing the need to respect the opinions of leaders tend to hold similar attitudes at the workplace. Managers with such a background are not inclined to undertake self-assessment of performance or to welcome constructive criticism by employees. Analogously, employees who have been socialized in an authoritarian culture would have a tendency to avoid giving negative feedback to their superiors. In contrast, managers and employees who have been conditioned in a less authoritarian culture are usually more willing to assess their own performance and to search for the root causes of identified problems.

If there is, for example, someone who has such a culture [where leaders are never in the wrong], you see, in that case if at the workplace he is the department head, it is difficult for him to allow rummaging all possible sources of deficiency, the non-attainment of [standards of] performance because at some point it may reveal also his deficiencies ... (P2, 275)

The capacity for self-evaluation of performance of some managers did not seem to have been constrained by cultural factors. The detailed account by one interviewee of the analytical process that is usually undertaken by the health team in his health center to identify the causes of unsatisfactory performance lent credibility to his view that it is not difficult to evaluate one's own performance at work.

According to some interviewees, the difficulty in identifying deficiencies in one's own performance highlighted the need for periodic supervision and monitoring of peripheral health facilities by members of the District Health Management Team. The visits were said to help detect problems by providing an outsider's view of the activities. In the opinion of one respondent, health facilities also need some support from higher levels in the organization in the identification of the causes of problems.

One respondent suggested that an external facilitator may also be needed to overcome communication barriers between community members and health

center staff. Not only may some health workers find it difficult to invite critical feedback from the community on the quality of the health services, but community members themselves may hesitate to provide such feedback directly to health care providers. According to the experience of the respondent, a district level supervisor can effectively help overcome such communication barriers.

5.3 UNCERTAINTY AVOIDANCE

The issue of complexity and unpredictability of the environment was explored in only five interviews. Two managers seemed to cope well with the unpredictability of the environment, whereas two interviewees experienced the uncertainties as being quite problematic. Managers said they often relied on a manual on management procedures when making decisions. Of those interviewed on the subject, nearly all were of the opinion that generally speaking managers were willing to take the initiative to solve problems with a view to improving the performance of the health services. Respondents believed that the majority of managers and health workers were open to change.

5.4 COLLECTIVISM

With one exception, the interviewees maintained that ethnicity had not affected interpersonal relations among health personnel adversely. Ethnic heterogeneity was even said to contribute positively to the atmosphere at the workplace by occasionally being the subject of well-intentioned joking.

The managers attached high importance to harmonious interpersonal relations at work. The maintenance of harmonious relations was variously described as being of vital, fundamental, and of paramount importance to the performance of the health services. Poor interpersonal relations would affect adversely communication among staff and the capacity to identify and solve problems.

Many interviewees emphasized the importance of teamwork and the fostering of a team spirit for organizational performance, particularly at the level of health facilities. According to the respondents, effective work teams were characterized by shared objectives, open communication between team members, and joint decision making and problem solving.

The need of employees to contribute to group discussions and to decision making seemed to emerge from the content analysis as a salient cultural factor that has potential implications for information use. Some interviewees highlighted the importance in the local context of giving subordinates the opportunity to express their opinions and of taking those opinions into consideration in decision making. Openness and inclusiveness of decision making seemed highly important for the performance of work teams at health

centers. Failure to give the opportunity for each member of a work team to voice his or her opinions and to take them into consideration were said to result in subordinates becoming frustrated and disinterested in collaborating with others.

Due to the behavior of [health center directors], some [health workers] feel frustrated. Either one is not given the opportunity to express oneself or ... his opinions are not taken into consideration. As a result he feels frustrated. And one can no longer expect results from a frustrated worker. Because when someone is frustrated, he is totally indifferent. No matter what happens, he would not feel much concerned. (P3, 331: 337)

Interviewees were of the opinion that in order to succeed as a manager, one has to foster harmonious interpersonal relations at the workplace and at the same time to encourage subordinates to attain organizational objectives. If harmony is lacking, performance will suffer. However, the need to maintain harmonious interpersonal relations at the workplace must be balanced with the need to achieve organizational objectives. When performance is unsatisfactory, managers may in some cases have to take decisive measures to enhance productivity even at the risk of creating tensions in relationships.

Managers seemed to be quite willing to address problems involving the performance of an employee. However, many interviewees confirmed that in the local context it is very important to avoid causing other persons to lose face. Persons should not be embarrassed, offended or humiliated, particularly in public. Consequently in discussing the unsatisfactory performance of a subordinate, for example, managers must take great care to avoid face threatening. When an employee loses face, the result may be a reluctance to collaborate with peers and poor performance at work. Nevertheless, the description by one health center director of the manner in which problems are sometimes discussed in large management meetings convened by the District Health Department suggests that face threatening may occasionally be used to induce subordinates to improve performance and to encourage compliance with regulations.

The responses suggest that a manager who wishes to give negative feedback on the performance of her subordinate would need to make a special effort to make the employee understand that only his or her performance is being critically evaluated and not the subordinate as a person. A manager should substantiate her criticism with facts. Provided that she would give negative feedback in an appropriate fashion, the subordinate could rest assured that she is not being criticized as a person.

5.5 GENDER EGALITARIANISM

The gender distribution of health managers and decision makers in the Nouna Health District was extremely skewed. According to the interviewees, the lack of women in management positions within the formal health services was largely due to women's obligations towards their families which often prevented them from accepting to become managers.

The interviewees attested to the low status of women in society. In the male dominated communities, it is commonplace for women not to participate in decision making even regarding matters concerning their own health. According to some interviewees, it is often unacceptable for women to be involved in activities outside of the home if other men are present. When they would be allowed to participate to meetings with men, in many societies they would tend to remain silent.

The local health authorities had encouraged communities to elect women to management committees of health centers, but men in the communities were said to usually object to women's participation to management committee meetings.

In 2007, health centers were required to make an inventory of civil society associations within their catchment area and to hold quarterly meetings with the associations. However, only a minority of health centers seemed to have managed to establish functional mechanisms to have a genuine dialogue with women. Some of the interviewed health center directors had not attempted to find ways to obtain the views of women on the health services or their explanations for the low uptake of the health services.

[I]t is perhaps better to have men's opinion because even when we inquire from women, they won't even be able to speak in the [health centers]. I mean, it would be very difficult indeed for them to express themselves, to say what their problems are.

—Member of the District Health Management Team (P5, 99)

5.6 LOCUS OF CONTROL

With one exception, those who were interviewed on the subject maintained that many health workers believed in the existence of ancestral spirits. Yet, respondents were of the opinion that health workers did not have a tendency to passively adjust to situations even when they believed in the ability of supernatural powers to influence events. Instead, they said health workers thought that the quality of the health services can be improved through their own actions. One manager, however, thought fatalism was prevalent among health workers who believed that much of what happens to them in life is the result of

the will of God or some spirits. He explained that the belief that they lacked control over events leads to a passive attitude to problems.

Ten interviewees were asked about the attitude of health workers in relation to the death of a patient. In the opinion of the majority of respondents, the faith and beliefs of health care professionals do not influence their behavior at the workplace as they were expected to have internalized during their pre-service training a scientific worldview in relation to the etiology and treatment of illness. Interviewees who shared this view contended that health workers would not tend to believe that a maternal death, for example, was due to the will of God or caused by some other supernatural force.

Two respondents, however, maintained that in spite of their formal training, some health workers continued to believe in the capacity of supernatural forces to cause illness. The respondents thought this belief could affect negatively the interest of health workers to try to identify deficiencies in the quality of health care that was provided to a patient who died at a health facility.

6. DISCUSSION

The results of the study indicate that a fairly strong performance orientation in the organizational culture at the level of the District Health Department had not translated to evidence-informed and results-oriented decision making at every health facility.

The results suggest the existence of a negative relationship between high power distance on the one hand, and participation in decision making and open communication. However, the majority of health center directors expressed a desire for more participatory decision making. Some interviewees mentioned that a lack of proper consultation of health workers on the ground prior to the introduction of an intervention had contributed to resistance to change. Such resistance can be expected to affect negatively the interest of health care providers to monitor the implementation of a new intervention with the use of performance indicators and to utilize the generated information to improve performance. This suggests that in a context where subordinates aspire for a lower level of power distance, maintaining a considerable degree of inequality between superiors and subordinates with respect to power and authority may affect information use negatively by limiting the opportunities of subordinates to participate in decision making.

Some health center directors expressed frustration at the inadequate communication with facility supervisors. A high level of power distance may be expected to affect negatively the use of routine health information to improve performance by managers if their superiors interpret performance data, identify the causes of problems flagged by the statistics, and recommend corrective action on their behalf instead of acting primarily as facilitators for these processes.

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Some managers were not comfortable providing negative feedback to their superiors. Such behavior bears a similarity to the fear of employees to express disagreement with their managers. The extent of that fear was one of the three measures used by Hofstede (1980) to evaluate the degree of power distance in countries. The results of the interviews also suggest that managers in the study area differed in their willingness to engage their subordinates in an assessment of their own performance and a search for the underlying causes of problems. One interviewee believed that managers and subordinates who had been conditioned in an authoritarian culture emphasizing the need to respect the opinions of leaders tended to hold similar attitudes at the workplace. Thus, the reluctance of some managers to undertake a self-assessment of performance jointly with their subordinates, and refraining from providing negative feedback to superiors may be partly manifestations of power distance. The avoidance of performance assessment is likely to impact negatively the reliance of managers on routine health data to inform decisions.

On the basis of the results, we were unable to identify a relationship between uncertainty avoidance and information use. The significant variation in the attitudes of managers in relation to the complexity and unpredictability of the environment suggests the existence of large individual differences among managers in their tolerance of uncertainty. There did not seem to be a strong tendency among managers and health care providers to oppose change.

The results of the interviews suggest that to be effective, managers must focus simultaneously on task accomplishment (Performance function) and the maintenance of work group harmony (Maintenance function). This PM-type leadership which was established by Misumi and Peterson (1985) as being characteristic of effective leaders in Japan and Hong Kong would therefore seem to contribute to leader effectiveness also in the study area.

The high importance attached to the maintenance of harmonious interpersonal relations and face saving at the workplace, the perception that relationship-maintenance and task-performance leadership behaviors are intimately related, and the appropriateness of rewarding the performance of work teams rather than individual achievement are characteristic of organizations that are collectivist in orientation (Gelfand et al., 2004). PM-type leadership is expected to enhance the use of information to improve performance by encouraging the achievement of objectives that are shared by the work team. The results also suggest that the analysis and use of data in management and problem solving are more effective in well-functioning work teams as compared to teams in which communication and collaboration among team members are inadequate.

In the GLOBE Study, Participative leadership was viewed as contributing to outstanding leadership in the Sub-Saharan Africa cluster (Dorfman et al., 2004). The value in traditional African societies of consultation, conferring and participation in decision making has been emphasized (Bourdillon, 1976/1991; Gyekye, 2002). In traditional political institutions in many societies in sub-Saharan Africa, everyone was welcome to freely express their opinions which

were taken into consideration before making decisions based on consensus. The results of the interviews suggest that in the study area, such openness and inclusiveness in decision making are highly important particularly for the effective functioning of work teams at health centers. Insufficient engagement by health center directors of team members in discussions and decision making would be expected to impact information use negatively as subordinates would become disinterested in making a collaborative effort to improve performance.

A relationship between gender egalitarianism and information use had not been anticipated. Aspects of a health system that are related to gender egalitarianism include the likelihood that women occupy management positions, the extent to which it provides equal opportunities for men and women to participate in decision making, and the responsiveness of the system to both men's and women's expectations (Gilson et al., 2007; Sen et al., 2007). In comparison with men, the generally weak engagement of women in the development of the health services in the study area was interpreted as an indication of fairly low gender egalitarianism within the health system.

The responses of the majority of interviewees suggest that the organizational culture was characterized by an internal locus of control.

In summary, five dimensions of organizational culture were identified as influencing the use of routine health information in decision making: performance orientation, power distance, collectivism, gender egalitarianism, and locus of control. In light of the results of the study, these dimensions of organizational culture seem to be related to five organizational practices influencing information use. The relationships between the cultural dimensions, organizational practices, and information use by individual managers are suggested in the conceptual framework depicted in Figure 1.

In the conceptual framework, organizational practices are hypothesized to act as mediators of the influence of organizational culture on information use. The organizational practices influencing information use probably also affect each other. These interactions would need to be investigated further.

The extent of adoption by health managers of new organizational practices promoted by the District Health Department may have been affected by the degree of congruence between the value assumptions underlying those practices and the basic assumptions espoused by the societies of origin of the managers (Kanungo and Jaeger, 1990; Lachman et al., 1994). Deeply ingrained value assumptions may have conflicted with the basic assumptions underlying organizational practices and may have prevented some managers from using information effectively to assess and improve performance. The continuous exposure of managers to the influence of the local societal culture is likely to enhance the effect of societal culture on organizational practices (Fischer et al., 2005).

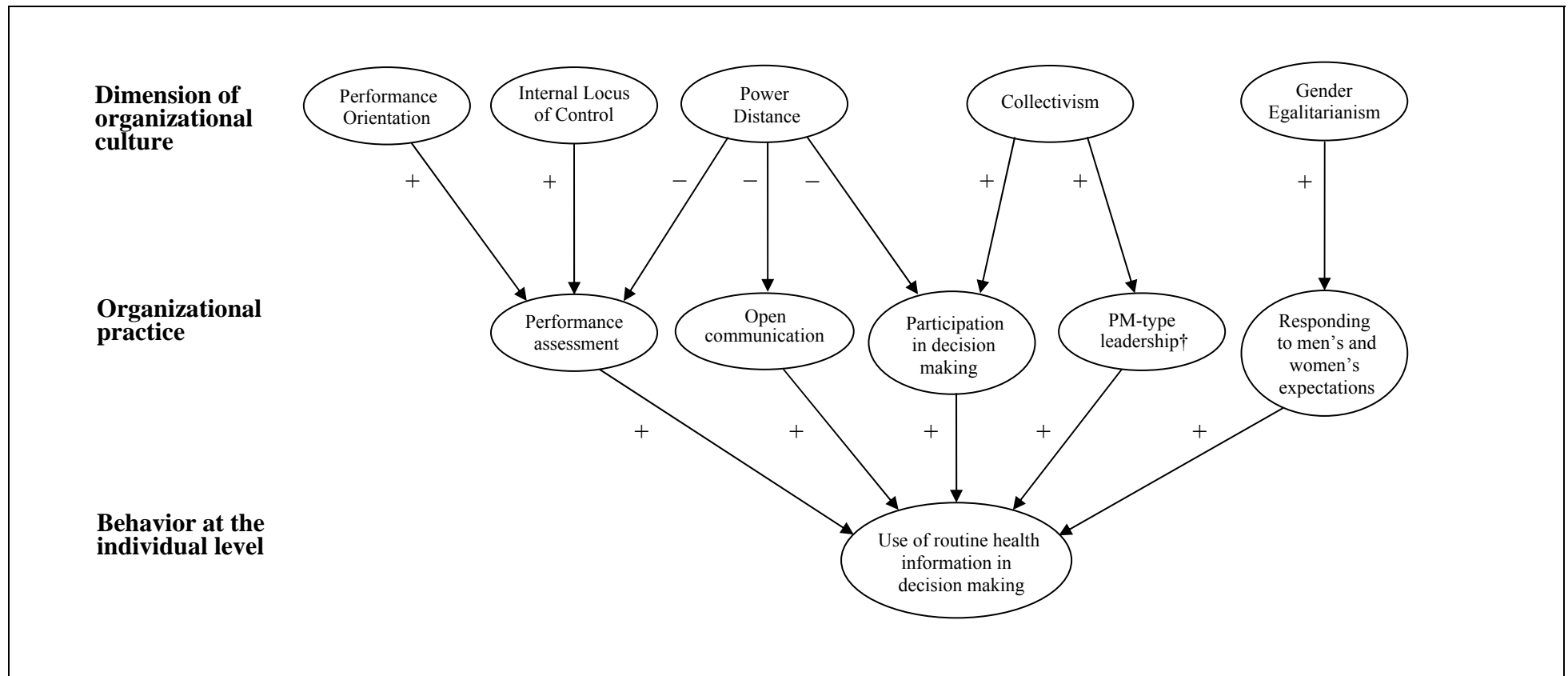


Figure 1. Conceptual framework on the suggested relationships between cultural dimensions at the organizational level, organizational practices, and use of routine health information in decision making at the individual level within the formal health sector in Nouna Health District in Burkina Faso. (The design of the figure is adapted from Fischer et al., 2005.)

Note: A minus sign denotes a negative relationship between variables, e.g. power distance at an organizational level is expected to lead to less participation in decision making; a plus sign denotes a positive relationship, e.g. participation is likely to lead to more use of information in decision making. See text for further explanations.

† PM-type leadership: a leadership style in which task-performance (P) and relationship-maintenance (M) leadership behaviors are intimately related.

In addition to cultural diversity among the societies in which the interviewees were conditioned, the relative stability of basic values in society may help to explain the uneven success of the District Health Department in inculcating a culture of information use (Inglehart, 2006; Schein, 1985). Yet, the results of the interviews can also be interpreted as indicating that it is possible to influence the tacit assumptions of individuals.

Where health facilities do not manage to use routine health information effectively to solve problems on their own, the participation of an external facilitator may make it easier for the health team to confront problems openly as a group. However, instead of establishing the causes of problems herself and of prescribing solutions, she should act as a mentor for the work team in a process of joint problem-solving.

Information use could probably be increased by building the skills of managers in PM-type leadership through the provision of formal training and on-the-job coaching. However, the effectiveness of capacity building in enhancing information use may be limited in the case of managers who have been socialized in an authoritarian culture. Their basic assumptions of the relationship between a leader and a subordinate may constrain their ability to undertake critical self-assessment of performance and to confront problems openly with their subordinates. For this reason, in selecting managers the sensitivity of individuals to criticism should be evaluated and their capacity for self-assessment emphasized.

The importance in the local context of conferring and participation in decision making has significant implications for information use in management. The responses of the interviewees suggest that information use may be increased by providing managers and employees more opportunities to express their opinions in their interactions with their superiors and in work teams, and by taking their opinions into consideration in decision making.

A greater participation of women in the management committees of health centers and also in quality assurance efforts in the facilities would increase women's capacity to influence the development of the health services and to hold health authorities accountable. These factors would give additional incentives for health care providers to use information effectively to meet women's needs for health care. The possibilities of engaging representatives of women's associations in the management committee meetings could be explored as a way of overcoming gender barriers to women's direct participation in decision making. The responsiveness of the health system to women's expectations may also be increased by encouraging women to accept management positions in the District. To this end, the District Health Management Team would need to involve female employees in the identification of practical ways for helping women reconcile managers' duties with the obligations of family life.

Methodological limitations of the study include social desirability and recall bias. The use of a single coder in the content analysis of interviews increased the likelihood of investigator bias. Additionally, we recognize that the possibilities

of uncovering basic assumptions at the deepest level of culture by way of one-off individual cross-cultural interviews are limited.

Nearly 50 percent of health center directors in the Nouna Health District met the exclusion criteria of the study. Since the values, attitudes and behaviors of the excluded managers relevant to information use may have differed significantly from those who were interviewed, caution should be exercised in extrapolating the findings to the study population. The findings may be applicable in the health sector to similar rural environments in Burkina Faso, and also to other sectors of government that rely intensively on routinely collected data to assess and improve system performance. However, extending the application of the findings beyond the study population to such contexts within Burkina Faso should be treated as working hypotheses to be tested.

The effectiveness of the recommended strategies for increasing the use of routine health information in decision making could be evaluated by conducting an intervention study in Burkina Faso. Given the significant differences between societal cultures in sub-Saharan Africa (Bayili, 1998; Pirttilä-Backman et al., 2004; Jackson, 2004), further research is needed on the relationships between dimensions of organizational culture and information use in other parts of Africa. Such research could include an assessment of the relevance in other contexts of the suggested strategies for enhancing evidence-informed decision making.

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