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Technical Paper 3

Health Worker Motivation in Jordan and Georgia: A Synthesis of Results

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Partnerships
for Health
Reform



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The Partnerships for Health Reform (PHR) Project seeks to improve people's health in low- and middle-income countries by supporting health sector reforms that ensure equitable access to efficient, sustainable, quality health care services. In partnership with local stakeholders, PHR promotes an integrated approach to health reform and builds capacity in the following key areas:

- > *better informed and more participatory policy processes in health sector reform;*
- > *more equitable and sustainable health financing systems;*
- > *improved incentives within health systems to encourage agents to use and deliver efficient and quality health services; and*
- > *enhanced organization and management of health care systems and institutions to support specific health sector reforms.*

PHR advances knowledge and methodologies to develop, implement, and monitor health reforms and their impact, and promotes the exchange of information on critical health reform issues.

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Abstract

Health worker motivation has the potential to have a large impact on health systems performance, yet little is known about the key determinants and outcomes of motivation in developing and transition countries. This study, conducted in Jordan and Georgia (at two hospitals each), used a three-pronged approach to data collection: 1) a contextual analysis, 2) a 360 degree assessment, and 3) in-depth analysis focused on the individual determinants and outcomes of the worker's motivational process. A wide range of psychometric scales was used to assess individual differences, perceived contextual factors and motivational outcomes (feelings, thoughts and behaviors). Although the two countries have very different cultural and socio-economic environments, many similarities existed among key determinants between the two countries: self-efficacy, pride, management openness, job properties, and values had a significant impact on motivational outcomes in both countries. The differences in results between the two countries highlight the importance of local culture on motivational issues, and the need to tailor motivational interventions to the specific needs of the workforce within specific groups of each culture. The power of financial rewards and adequate salary is significant. But the data suggests a number of potential non-financial mechanisms for improving worker motivation. The research conducted as part of this study was exploratory in nature: no other similar studies of health worker motivation in developing or transition countries have been conducted. Initial findings provide key insights into motivational factors and indicate range of interventions that could be implemented.

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Foreword

Part of the mission of the Partnerships in Health Reform Project (PHR) is to advance “knowledge and methodologies to develop, implement, and monitor health reforms and their impact.” This goal is addressed not only through PHR’s technical assistance work but also through its Applied Research program, designed to complement and support technical assistance activities. The program comprises Major Applied Research studies and Small Applied Research grants.

The Major Applied Research topics that PHR is pursuing are those in which there is substantial interest on the part of policymakers. But only limited hard empirical evidence exists to guide policymakers and policy implementers. Currently researchers are investigating six main areas:

- > Analysis of the process of health financing reform
- > The impact of alternative provider payment systems
- > Expanded coverage of priority services through the private sector
- > Equity of health sector revenue generation and allocation patterns
- > Impact of health sector reform on public sector health worker motivation
- > Decentralization: local level priority setting and allocation

Each Major Applied Research Area yields working papers and technical papers. Working papers reflect the first phase of the research process. The papers are varied; they include literature reviews, conceptual papers, single country-case studies, and document reviews. None of the papers is a final product; rather, they are intended to further the research process—shedding further light on what seemed to be a promising avenue for research or exploring the literature around a particular issue. While they are written primarily to help guide the research team, they are also likely to be of interest to other researchers, or policymakers interested in particular issues or countries.

Ultimately, the working papers will contribute to more final and thorough subjects of research work, such as multi-country studies and reports presenting methodological developments or policy relevant conclusions. These more polished pieces will be published as technical papers.

All reports will be disseminated by the PHR Resource Center and via the PHR website.

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This paper and its companion report synthesizing results from the two study countries (Bennett et al., 2001) reflect the culmination of a number of workshops, studies, and reports. Consequently we owe considerable debts to many people.

First we would like to thank the many individuals in the study countries who contributed to the research in some way. In Jordan, Dr Lonna Milburn and Dr Reem Qarrain played key roles in conducting the studies. Furthermore the study could not have been implemented in Jordan without the efforts of the PHR Scholars, their mentors, and Ministry of Health Research Participants. Our thanks to both of these groups. Hospital directors Dr Zuheir Teif and Dr Salim Malkawi are especially thanked for facilitating the work upon which this report is based, as are all the staff at their hospitals who generously gave of their time to support this effort.

In Georgia Dr David Gzirishvili was co-principal investigator for the study. Ia Kutaladze and Ia Shekrladze, the consultant psychologists to the project, provided valuable advice throughout. We would also like to thank the Institute for Polling Management, which conducted the fieldwork very efficiently. Particular thanks go to the directors and staff of the two study hospitals.

Professor Jim Buchanan and Dr Barbara Stillwell from the World Health Organization gave valuable comments on earlier versions of this paper. We would also like to thank all the participants at the workshop on Health Sector Reform and Health Worker Motivation at the Partnerships for Health Reform headquarters in Bethesda, Maryland, in 1998, where the seeds for this study were planted.

Executive Summary

This paper describes the Partnerships for Health Reform (PHR)'s Major Applied Research on determinants and outcomes of health worker motivation conducted in Jordan and the Republic of Georgia.

Worker motivation can be defined as an individual's degree of willingness to exert and maintain an effort towards organizational goals. It is an internal psychological process that is affected by the organizational and larger societal context. Because of the labor-intensive nature of the health sector, worker motivation has a significant impact on health systems performance. Yet, little is known about the key determinants and outcomes of motivation in developing and transition countries. This study sought to learn more about central determinants of worker motivation from two countries. The broad goal is to better understand what can be done to increase worker motivation.

Methods: In each country, two study hospitals were chosen to represent the range of hospital environments: large central teaching hospital and smaller community hospital. A three-pronged approach to data collection was developed to provide data on the multiple levels of motivational determinants:

- > A contextual analysis examined historical, social, and organizational facts that characterize the general working environment through interviews with key informants.
- > A 360 degree assessment examined perceptions about the specific work environment held by workers themselves, approximately 100/country; by supervisors, approximately 30/country; by managers, seven/country; and by patients 40-85/country. Qualitative and quantitative questions were administered using a structured interview guide.
- > An in-depth analysis focused on the individual determinants and outcomes of the worker's motivational process, using a quantitative self-administered questionnaire on a sample of approximately 500 workers/country

Confirmatory factor analysis was employed to test reliability of psychometric scales used, analysis of variance tested differences between demographic groups (hospital, profession, gender and age), and hierarchical forced entry linear regression measured the association between motivational determinants and motivational outcomes.

Study contexts: Jordan and Georgia offer two very distinct contexts for studying worker motivation. Both countries are experiencing economic decline and falling values of salaries. Georgia has gone through rapid, dynamic, and often poorly planned reforms at the sectoral level. Jordan's reforms remain mainly in the conceptualization phase. Jordan still maintains many aspects of traditional Arab culture, which places high values on family, men, and hierarchy. In contrast, Georgia lived under Soviet domination for many decades, which has created a society more oriented towards equality among the sexes, less deference to age, and at least while under "occupation," orientation to larger societal goals.

Motivational variables studied: A total of six motivational outcomes were studied. Three represented affective and cognitive responses: general job satisfaction, organizational commitment,

and cognitive motivation. Three others represented behavioral responses: conscientiousness, getting along with others, and timeliness. In addition to the four demographic variables, 12 determinants categorized as individual differences or perceived contextual factors were measured: motivational control, self-efficacy, desire for work achievement, emotional control, job preferences, work locus of control, pride, organizational citizenship behavior, management support, resource availability, bureaucratic efficiency, and motivational job properties.

Findings: Affective and cognitive motivation levels were similar between the two countries and remained close to a neutral rating of 3 (on a 5 point scale). Worker assessment of their own behavior differed. Jordanian workers averaged a rating over 4.2. Georgian worker self-ratings ranged from 2.4 to 3.5.

Demographic variables had varying effects in Jordan and Georgia. In Georgia, only hospital had any significant effect on any motivational outcomes, and only for affective and cognitive outcomes. In contrast, in Jordan, profession and age had significant impacts on affective, cognitive and behavioral responses, and hospital and gender also impacted affective motivation.

Regression analysis examining the effects of motivational determinants beyond the effects of demographic variables found key determinants (accounting for 5 percent or more of variance) of affective and cognitive motivation to include:

- > Jordan: self-efficacy, work locus of control, pride, organizational citizenship behavior, management support, resource availability, and motivational job properties
- > Georgia: self-efficacy, attitudes to change, pride, management support, and motivational job properties.

Large contributors to worker-assessed behaviors included:

- > Jordan: work locus of control and motivational job properties
- > Georgia: attitudes to change and motivational job properties.

Differences in motivational determinants related to demographic variables were found in both countries. However, significant differences related to age and gender, particularly prevalent in Jordan, were almost non-existent in Georgia. Although differences among professional groups were seen in both countries, in Jordan, it was the nurses and sometimes allied health professional staff that had lower levels than medical and service/administrative staff. In Georgia, unskilled workers were significantly lower.

Conclusions: These findings point to areas of intervention that might affect motivational outcomes. Although the two countries have very different cultural and socio-economic environments, there were many similarities among key determinants between the two countries: self-efficacy, pride, management openness, job properties, and values had a significant impact on motivational outcomes in both countries.

The differences found for results between the two countries also highlight the importance of local culture on motivational issues, and the need to more fully consider the local workforce and to tailor motivational interventions to the specific needs of specific groups within each culture.

The power of financial rewards and adequate salary is a substantial factor. But the data suggests a number of potential non-financial mechanisms for improving work motivation. Associations between potentially modifiable worker attitudes (e.g., self-efficacy) and motivational outcomes are significant determinants. By enhancing worker attitudes and competencies (e.g., by facilitating worker sense of accomplishment and contribution), hospitals may be able to substantially improve worker motivation.

Two types of interventions stand out as potentially low (recurrent) cost and organizationally feasible in most settings: communication and job design. These two interventions would affect self-efficacy, work locus of control, attitudes to change, and perceptions of management support and job characteristics.

The research conducted as part of this study was exploratory in nature: no other similar studies of health worker motivation in developing or transition countries have been conducted. The further development of research methods on worker motivation should be a priority to develop more refined research tools, including better tested scales and constructs. However, these initial findings provide key insights into motivational factors and indicate range of interventions that could be effectively implemented.

1. Introduction

1.1 Health Worker Motivation

Motivation in a work context can be defined as an individual's degree of willingness to exert and maintain an effort towards organizational goals. It is a set of psychological processes that influences workers' allocation of personal resources towards those goals, which in turn affect workplace effectiveness and productivity (Kanfer, 1999). Work motivation refers to an unobservable set of psychological processes that cannot be seen or measured directly. That is, motivation is not an attribute of the individual or the organization: rather, it results from the transaction between individuals and their work environment (see e.g., Kanfer, 1990; Mitchell, 1997).

Health sector performance is critically dependent on worker motivation. Health care is highly labor-intensive, and thus, service quality, efficiency, and equity are all directly mediated by workers' willingness to apply themselves to their tasks. While ensuring resource availability and worker competencies are essential to good service delivery, they are not sufficient in themselves to ensure desired worker performance. Worker performance is also dependent on the workers' willingness to come to work regularly, work diligently, be flexible, and carry out the necessary tasks (Hornby and Sidney, 1988).

Many countries are in the process of designing and implementing health system reforms. Several of these initiatives include the use of incentives, targeted both at health care organizations and individuals working in the health sector, to promote both efficiency and quality of care. However, as discussed in Franco et al., (forthcoming), it is critical to have a clearer understanding of the various factors affecting worker motivation before designing reforms which are intended to, explicitly or implicitly, affect motivation.

Work motivation exists when there is alignment between individual and organizational goals: when achievement of organizational goals is associated with personally desired outcomes, such as a sense of achievement or monetary gain. While it is not possible to measure motivation directly, it is possible to measure the inputs (or determinants) and the outcomes of the motivational process. Two interrelated psychological streams operate in the work motivation process (Kanfer, 1999):

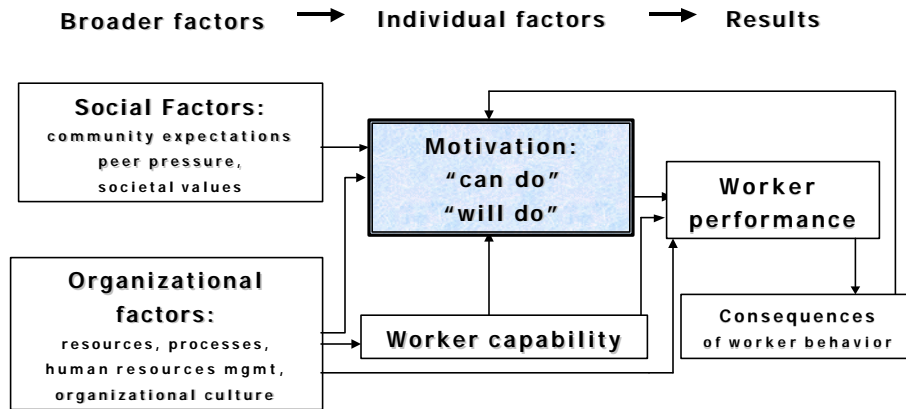
- > The "will do" component: the extent to which workers adopt organizational goals
- > The "can do" component: the extent to which workers effectively mobilize their personal resources to achieve joint goals

Determinants of worker motivation can affect one or both of these streams. These determinants, along with worker capability and organizational inputs, lead to the major outcome of the motivational process: worker behavior or performance. Other motivational outcomes include workers' emotional and cognitive responses to the work context, which in turn affect motivation.

Because work motivation is a transactional process, there are broader factors (outside the individual) that impact on worker motivation (Franco et al., forthcoming). Organizational factors that define the work environment include resource availability and efficient processes, human resource management practices, and organizational culture. However, the organization and the individual

worker are also part of a broader society that influences their goals and values through community expectations, peer pressure, and social values. Figure 1 below presents a graphic representation of the complex play of forces that influence motivation.

**Figure 1:
Determinants of Health Worker Motivation**



1.2 The Research Study

“Low” health worker motivation is a commonly cited problem in many countries, but it is not well studied. Although a body of mostly non-health specific research about worker motivation in the United States and Europe exists, there is almost no research that examines health worker motivation in developing country contexts. Much of the existing research focuses on a limited number of the broad range of motivational outcomes and determinants. The research reported in this paper sought to learn more about important determinants of health worker motivation in two countries, with the broad goal of increasing understanding about what can be done to increase worker motivation. Specific objectives of the overall study included:

- > understand the major determinants and outcomes of worker motivation in developing country public sector health facilities (hospitals);
- > suggest recommendations for changes in hospital practices and workforce regulations;
- > develop operational tools that could be used in other settings to identify and analyze problems related to health worker motivation.

This study was conducted simultaneously in Jordan and the Republic of Georgia. In each country, two public hospitals were selected as study sites.

1.3 Objectives of This Paper

This paper focuses on the first of the above research objectives by presenting results from the two country studies regarding determinants and outcomes of worker motivation. The paper also discusses interventions that could effectively target key motivational determinants, although these are discussed in more depth in country-specific papers (see for example, Franco et al., 2000b, Bennett et

al., 2000b). The third research objective, developing operational tools, is addressed in a separate paper (Bennett et al., 2001).

The next two sections will briefly describe the research methods used and the study contexts in both countries. The following section, 4, will present study findings related to outcomes and determinants of motivation. Section 5 explores possible interventions or strategies to enhance motivation, describes worker suggestions for possible interventions and discusses how these differ from or resemble those that can be deduced from the study data. Section 6 draws some conclusions.

2. Research Methods

Fieldwork for this two-country study was conducted between October 1999 and August 2000. In each country, two public hospitals were selected as study sites: one large central teaching hospital and one small, less well-resourced community hospital. These facilities were not meant to provide a representative sample of public hospitals, but were chosen to explore the range of public hospital contexts in both countries. It should be noted that motivational issues at primary care level may differ from those found at hospital level.

A three-pronged approach to data collection was developed to provide data on all three levels of motivational determinants: individual, organizational and socio-cultural.

- 1. Contextual analysis:** The determinants of worker motivation originate at many levels, 1) the socio-cultural and environmental context, 2) the context of the broader health care sector, 3) the immediate organizational work context and 4) the individual level. Therefore, the first step was to undertake an analysis of each level. Building upon a conceptual framework previously developed by the authors (Bennett and Franco, 1999) a checklist for the conceptual analysis was developed, which encompassed the above listed levels, focusing in particular on human resource management practices.
- 2. The 360 degree assessment:** The second phase of study questioned hospital staff about the major factors associated with worker motivation. Two key defining characteristics of this stage were that the questionnaires used combined both quantitative and qualitative survey techniques and that the questionnaire was adapted so that respondents reflected upon issues affecting the stakeholder groups of which they were members. The groups included the type of worker (physician, nurse etc) and the level of respondent (manager, supervisor, worker). Hence the title 360 degree assessment. The questionnaire covered (i) perception of hospital goals (ii) attitudes towards hospital environment and culture (iii) perception of characteristics of fellow workers (iv) possible effects on performance of different work conditions and (v) interventions to improve motivation. While the survey used items previously used in research on work motivation in the United States, it did not use pre-defined scales. Additional items were added to reflect knowledge about local conditions and factor analysis was used to develop composite scales.
- 3. The in-depth phase:** This segment relied solely upon the use of quantitative structured surveys and was targeted only at workers (as opposed to managers). It used a battery of psychological scales compiled both from the literature and the 360 degree assessment to provide profiles of both determinants of motivation and outcomes of motivational processes. It included work behavior and affective and cognitive outcomes. Scales were predefined in the instrument. In addition, the supervisor of each respondent was identified and requested to complete a very brief form appraising the work behavior of the respondent. The items on this work behavior scale were identical to that used for workers themselves.

Table 1 below presents a summary description of the methods, sampling, content and analysis of these three phases. More details on the research methods can be found in Bennett et al. (2001).

Most of the scales for the in-depth analysis were well-tested, but had been applied mainly in the United States. Several additional scales were developed to address issues identified through the 360 degree assessment or local discussion. Scales were adapted for use in the specific country contexts through discussions with the local research team and on the basis of information gathered during prior phases of the study. Internal reliability of scales was examined using Cronbach's alpha and most scales had acceptable alpha levels, (see Annex A). Bennett et al. (2001) provide a more in-depth discussion of the methodological issues involved in adapting scales for use in developing countries.

Please note that although each country study was designed from the same set of data collection instruments, some modifications and additions were made to adapt the instruments to the local context. Only identical data available from both studies will be presented here, with very few exceptions.¹

Because hospitals employ a wide variety of workers, from janitor to specialized surgeon, workers were sampled by professional grouping. In Jordan, this grouping was divided into medical staff, nursing staff, allied health professional staff, and service/administrative staff. In Georgia, the latter category was further divided into administrative and unskilled staff.

The data presented in this report are derived primarily from the third phase of study (the in-depth analysis), although they also draw upon other phases where appropriate. In particular the following section (Section 3) draws upon findings of the contextual analyses (Bennett and Gzirishvili, 2000; Ghandour et al., 2000) and 360 degree assessments (Bennett et al., 2000a; Franco et al., 2000a) to analyze the study contexts.

¹ Full results for each country are presented in a series of working papers and technical reports. Jordan: Ghandour et al. (2000); Franco et al. (2000a), Franco et al. (2000b); Georgia: Bennett and Gzirishvili (2000); Bennett et al. (2000a); and Bennett et al. (2000b).

Table 1: Summary of Research Methods Used in the Three Data Collection Phases

Phase	Purpose	Methods	Sample (per country)	Content	Analysis
Contextual analysis	Better understanding of broader cultural, societal and organization factors (facts)	Qualitative interviews and document review	Key informants at hospital and Ministry of Health level	Historical, social and organizational information about the general working environment	Qualitative analysis
360 degree assessment	Understand potentially key motivational determinants from various perspectives	Qualitative and quantitative questions using structured interview guide	Small samples All managers (7) Supervisors (≈30) Workers (≈90) Patients (40-85)	Perspectives on hospital and worker characteristics, understanding of hospital goals, stimulating factors for good performance and possible interventions for enhancing motivation	Factor analysis of hospital and worker characteristics Analysis of variance for differences between levels of staff, types of staff and hospitals for: goals, hospital and worker characteristics, factors stimulating motivation, and potential interventions to enhance motivation Qualitative analysis of open ended responses
In-depth analysis	Understand the relationship between various determinants and outcomes of motivation at the individual level	Quantitative questionnaire (self-administered in group sessions) for workers and their supervisors	Large samples stratified by professional category and hospital Workers (≈500) (including supervisory information)	Determinants: values/work ethic, expectations, personality factors, individual differences, organizational culture, organizational and job characteristics Outcomes: behavioral, affective and cognitive responses	Confirmatory factor analysis of determinant and outcome scales Analysis of variance for differences between demographic groups on determinants and outcomes of motivation Hierarchical forced-entry regression of determinants on motivational outcomes

3. The Study Contexts

The two countries chosen for this study provide two very distinct contexts for studying worker motivation. Although both countries are experiencing economic decline and falling values of salaries, there are many differences. Jordan still maintains many aspects of traditional Arab culture, which places high values on family, men, and hierarchy. Although Jordan has planned many changes or developments for improving health sector functioning, few reforms are beyond the conceptualization stage. In contrast, Georgia has lived under Soviet domination for many decades, which has created a society more oriented towards equality among the sexes, less deference to age, and at least while under “occupation,” orientation to larger societal goals. Since the collapse of the Soviet Union, the Republic of Georgia has gone through rapid, dynamic, and often poorly planned reforms at the sector level.

At the hospital level in both Georgia and Jordan, public hospitals are experiencing some shortages of drugs, supplies and equipment needed to continue the level of quality services to patients they have provided in the past. Staff at all four study hospitals complained about material resources and the frustrations they have trying to do a good job without everything they need. Quantity was a more acute problem in Georgia, whereas staff in Jordan was more concerned about the quality of equipment and supplies.

At the level of human and physical resources, several differences exist between these two countries. The Georgian public sector, like most of the former Soviet Union, has an oversupply of both physicians and hospital beds. Both Georgian hospitals had excess staffing and average bed occupancy rates of around 30 percent. In contrast, Jordan has shortages of physicians, nurses, and other critical health professionals in the public sector, and the two study hospitals averaged 80 percent bed-occupancy rates.

Human resource management: In both Jordan and Georgia, many current human resource management practices do not facilitate good worker performance and motivation. Jordan’s public sector is characterized by a civil service code that regulates recruitment, selection, performance appraisal, and promotions. Current implementation has led to appointments of inappropriate staff, promotions not based on merit, and performance appraisals that do not reflect relative performance levels or performance improvement/staff development. It should be noted however, that only part of the problem lies in the recently updated codes. Most problems result from how the codes are applied.

In Georgia, despite measures to give hospital management greater autonomy, the pattern of excessive staffing continues. While during the Soviet period there were extremely structured processes for recruitment and promotion, there now appear to be few transparent processes for recruitment, no system of performance appraisal and little opportunity for promotion. The only possibility of promotion is to Head of Department level for physicians (and a few more responsible posts for other staff such as Head Nurse). Formal payments for physicians and nurses are based solely on quantity of services delivered, and are made to staff on a fee-for-service basis (with no account for seniority). Payments to other staff are generally salary based but often adjusted to reflect activity level (e.g., bed occupancy rate) in their department, or the hospital as a whole.

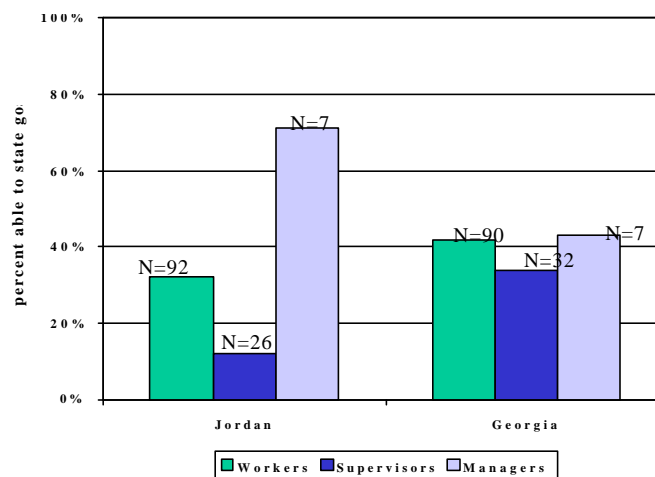
In both countries, income levels are quite low. In Jordan, salary increments based on grade are minor. In Georgia, formal payment is very low, and staff depend on informal payments for about half

their income. Informal payments vary widely within professional categories as well as among categories.

Clarity of organizational goals: Worker motivation depends critically on alignment between the goals of the individual workers and the goals of the broader organization. Workers must perceive a match between their personally desired outcomes (personal work goals) and those pursued by the organization, if the organization’s goals are to have a positive impact on worker behavior, and ultimately on performance.

In our interviews, it became apparent that none of the study hospitals had explicitly stated and clearly communicated goals, although senior management often suggested several hospital goals. The issue of goals was further explored in the 360 degree assessment where respondents were asked about the goals of the hospital where they were worked. Figure 2 illustrates the percentages of hospital staff that could clearly articulate a hospital goal. Qualitative responses indicated that many staff did not really understand the concept of an organizational goal: a large percentage of staff outlined various functions of the hospital (what the hospital does), rather than what the hospital is trying to achieve. In Jordan, a majority of workers and supervisors mentioned providing health services and providing curative care.² Although the sample of managers was small, managers were better able to articulate goals, citing providing excellent health care, low cost and accessible health services. In Georgia, there were fewer differences between levels of staff. Over a third of staff mentioned providing high quality health services, others suggested functions (such as making patients healthy) rather than goals.

Figure 2: Ability of Hospital Staff to Articulate Hospital Goal



Responses in both countries indicate that hospital goals and mission were rarely explicitly discussed with staff, although they may be discussed with supervisors. In one Jordanian hospital, the director had set a specific goal of reducing patient length of stay, but only a few staff members cited this as a goal.

Variations in staff perceptions: The 360 degree assessments explored similarities and differences in perceptions among differing levels of staff. Workers were asked to respond about

² The data from the 360 degree assessment do not provide any explanation for the lower scores among supervisors. However, using a broader interpretation of supervisor that would include some of the worker sample, the percentage of “supervisors” who can identify a goal is no very dissimilar to that of workers.

themselves and their co-workers, supervisors about workers in their work unit, and managers about hospital staff in general.

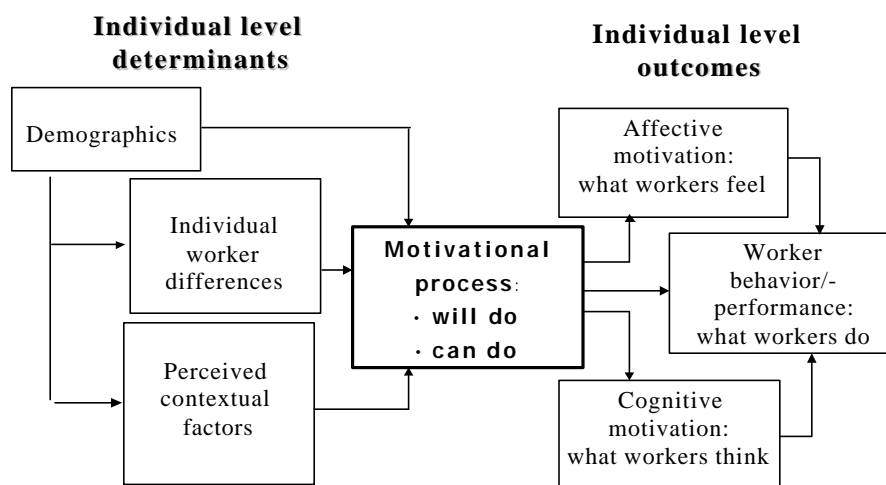
Both country studies examined a series of hospital and worker characteristics: pride/reputation, career opportunity, social environment, management openness/supportiveness, availability of modern equipment, adequacy of pay, working atmosphere, and job qualities.³ In neither Jordan or Georgia were there any significant differences among levels of staff about worker characteristics. Significant differences were found in both countries related to perceptions of management openness, with managers finding themselves more open than did workers and supervisors. In Georgia, career opportunities and adequacy of pay also showed significant differences, with workers and supervisors having similar, lower perceptions on career opportunities, and supervisors having higher perceptions about pay. In Georgia, supervisors stood out as different, often having a lower perception than managers and workers. In Jordan, the pattern was more clearly hierarchical (although the differences were not always statistically significant): workers rating the situation the lowest, followed by supervisors, with managers rating the situation the highest.

³ Contents of scales were not always identical in the two country studies.

4. Motivational Factors Operating at the Individual Level

Worker motivation is an individual, internal process. The internal motivational process can be visualized as a series of inputs (determinants) which lead to certain motivational outcomes. Figure 3 presents a graphic display of this concept.

Figure 3: Internal Worker Determinants and Outcomes of Motivation



4.1 Motivational Outcomes

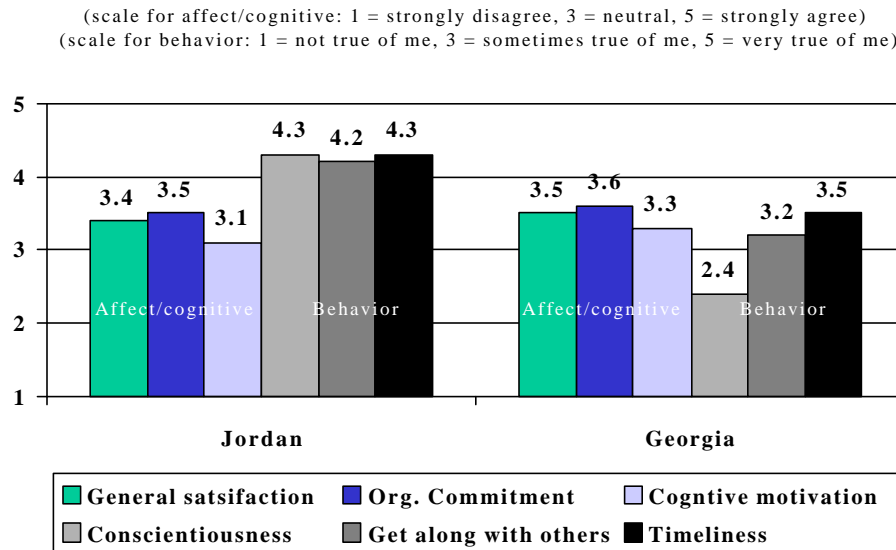
Motivational outcomes or responses were measured in three ways: 1) Behavioral – what workers do; 2) Emotional or affective – what workers feel; and 3) Rational or cognitive – what workers think. Results presented here include six measures of motivational outcomes:

- > *Affective outcomes: General job satisfaction* (Taylor and Bowers, 1972); Satisfaction with pay, co-workers, supervisors, management and job overall; and *Organizational commitment* (Allen and Meyer, 1990). Common values, proud to work there, inspiring place to work.
- > *Cognitive outcomes: Cognitive motivation* (Aiken and Hage, 1966): Satisfaction with autonomy, progress towards professional goals, and recognition as a professional by superiors.
- > *Behavioral outcomes* (Kanfer): *Conscientiousness*: Careful, reliable, hard-working, good job knowledge, doing what needs to be done; *Getting along with others*: Relations with co-workers and supervisors, maintaining a positive attitude; and *Timeliness*: Punctual, rarely absent, and focus on work at work.

In this study, the performance/behavioral outcomes focused on a generic set of work behaviors. Work behavior refers to general work actions, manner, and conduct that reflect diligence in work and consideration in the work environment. Work performance refers to a measure of the quantity or quality of goods or services produced. The wide range of professionals being sampled rendered comparable measurement of worker performance difficult.⁴

Figure 4 below shows the levels of motivational outcomes for the two countries. Affective and cognitive motivational levels in the two countries are quite similar, and remain close to neutral rating of 3. However, worker assessment of their own behavior in the workplace differed, with Jordanian hospital worker average ratings over 4.2, while Georgian worker self-ratings do not exceed 3.5. Differences in assessments of behavior measures in Georgia are difficult to interpret without additional qualitative work⁵.

Figure 4: Motivational Outcomes in Jordan and Georgia



The absolute levels of these motivational outcome measures, for the purpose of this study, are less important than the analysis of the factors or determinants contributing to them.

4.2 Effects of Motivational Determinants on Motivational Outcomes

As shown in Figure 3, three categories of individual level motivational determinants were examined in this study:

- > Demographics: hospital where employed, profession, gender and age

⁴ The behavior scales were also calculated, using data from supervisors on these same items for the same sample of workers. Results differed significantly from workers' self-assessed behavior. However, the patterns of differences also varied between the two countries, with Jordanian supervisors rating workers lower than the workers did, while Georgian supervisors rated them higher. Further discussion of this situation is available in Bennett et al. (2001).

⁵ The researchers had some concerns about the validity of the performance measures in the Georgian context. These concerns are explained in Bennett et al. (2001).

- > Individual worker differences: values, expectations, work-related personality, emotional personality, other differences
- > Perceived contextual factors: worker perceptions (not necessarily fact) of organizational culture, as well as organizational and job characteristics

In addition to the four demographic variables, a total of twenty-eight determinant scales were measured between the two countries. However, local adaptations of the instruments in the two countries rendered some scales less comparable across countries and other scales were applied in only one of the countries. Thus, 12 scales have been retained for the comparative tables. Where other scales had a significant impact on motivational outcomes, they will be addressed in the text.

4.2.1 The Effects of Demographics on Motivational Outcomes

Table 2 below presents the percentage of variance explained by the four demographic variables resulting from forced entry linear regressions. Hospital had a relatively large impact on affective and cognitive motivation in Georgia, but little impact in Jordan. In contrast, in Jordan, profession, gender and age accounted for variance for the affective and cognitive outcomes and for interpersonal work behaviors.

Table 2: Variance Accounted for* by Demographic Variables Entered as a Single Model (Jordan/Georgia)

Dependent Variables	Hospital	Profession	Gender	Age
Self-assessed performance				
Conscientiousness	--/--	--/--	--/--	--/--
Get along with others	--/--	1.1%/--	--/--	2.9%/--
Timeliness	--/--	--/--	--/--	--/--
General satisfaction	1.7%/1.0%	1.1%/--	0.7%/--	4.1%/--
Organizational commitment	--/8.5%	2.7%/--	4.7%/--	5.2%/--
Cognitive motivation	--/3.4%	1.0%/--	--/--	6.4%/--

--" = no significant effect on motivational outcomes
 * calculated as the square of the part correlation

The contributions of demographic factors to variation in motivational outcomes were examined more closely through an analysis of variance and the Scheffe test. In Jordan, for motivational outcomes where demographics had a significant impact, nurses and allied health professional staff, females and staff under 35 years of age had significantly lower motivational outcomes than other groups. For hospital, only general satisfaction showed any significant difference, with staff at the smaller community hospital being more satisfied. In Georgia, in contrast, only hospital had any significant effect on motivational outcomes. The central hospital staff had higher levels of general satisfaction, organizational commitment and cognitive motivation than staff at the smaller community hospital.

4.2.2 Key Individual and Perceived Contextual Factors as Determinants of Motivation

Separating out the effects of other motivational determinants from those of demographic factors was done using linear multiple regression analysis, with demographic variables entered as the base model in all regressions. Additional models included scales associated with particular motivational constructs. For all motivational determinant scales for which significant coefficients were found, the square of the part correlation was computed, which reflects the additional variance explained by this particular variable. The following lists the six constructs (in **bold**), and the specific scales grouped under them (in *italics*) for the regression analysis:

- > **Work-related personality:** *Motivational control* (Kanfer and Ackermann, 2000): Ability to keep oneself on task and finish what needs to be done; *Self-efficacy* (Brett and Yogeve, 1988): Degree of confidence in ability to do the job, to cope with changes, to feel that things are under control at work; *Desire for work achievement* (Helmreich and Spence, 1978): Desire to perform well, work hard, improve.
- > **Emotional personality:** *Emotional control* (Kanfer and Ackermann, 2000): Ability to separate emotional state from getting work done.
- > **Individual differences:** *Job preferences* (Warr et al., 1979): Desire for autonomy, feedback, ability to achieve something worthwhile, ability to complete in job; *Work locus of control* (Spector, 1988): Degree to which one believes that external forces determine achievement (other people, “fortune”).
- > **Organizational culture:** *Pride* (developed for this study): Feeling of pride related to working in that hospital (reputation, good service); *Co-worker organizational citizenship behavior* (Podsakoff et al., 1997): Co-worker behaviors in terms of teamwork, communication, support for each other and support for the organization.
- > **Organizational characteristics:** (all developed for this study): *Management support/openness*: Scale used in Jordan emphasized degree of comfort saying what one thinks about how the hospital or work unit is managed and perception of how management would respond to potentially negative comments. The scale used in Georgia addressed management openness and the extent to which management is perceived to support workers in their jobs; *Resource availability*: Perception of adequate materials, equipment and supplies to perform well; *Bureaucratic efficiency*: Perception that bureaucratic processes and rules do not impede performance
- > **Job characteristics:** *Motivational job properties* (Edwards et al., 1999): Perception that the job allows for achievement, challenges, use of a variety of skills, advancement and security.

Identical data from both countries were available for nine of the 12 scales. The three scales on organizational characteristics were not identical, due to adaptation to the local context. However, they have been included in comparative tables because differences between the scales were not great.

Table 3 below presents the percentage variance explained by the 12 determinants (beyond demographic variable contributions). The left-hand value in each box is from the Jordan data and the right-hand one from the Georgia data. Shaded values indicate contributions to variance of 5 percent or greater.

Table 3: Percentage Variance in Motivational Outcomes, Accounted for by Independent Variables Making Significant Contributions (Jordan/Georgia)

Determinants	General job satisfaction	Org'l commitment	Cognitive motivation	Conscientiousness	Getting along	Timeliness
INDIVIDUAL DIFFERENCES						
Work-related personality						
Motivational control						
Self-efficacy	--/--	--/--	--/--	3.7%/--	--/--	1.0%/--
Desire for work achievement	12.2%/--	8.4%/5.0%	9.7%/0.8%	--/--	2.2%/0.9%	--/--
	--/--	--/4.1%	--/0.9%	--/--	--/--	--/2.6%
Emotional personality						
Emotional control	1.1%/1.2%	2.3%/--	1.0%/--	3.0%/--	4.0%/--	1.7%/--
Individual differences						
Job preferences	--/--	1.1%/3.4%	--/--	--/--	2.7%/--	3.2%/--
Work locus control	7.2%/--	6.3%/1.5%	6.1%/--	6.4%/--	0.9%/0.9%	--/--
PERCEIVED CONTEXTUAL VARIABLES						
Organizational culture						
Pride	3.8%/1.6%	17.6%/15.4%	10.3%/0.8%	--/--	1.4%/--	--/1.5%
Org'l behavior	9.8%/0.9%	--/--	2.1%/--	--/--	3.7%/1.5%	1.2%/--
Organizational characteristics**						
Mg't support	6.2%/2.5%	6.0%/6.7%	4.5%/1.4%	--/--	2.8%/6.3%	--/--
Resource availability	3.7%/0.9%	4.2%/1.1%	7.3%/--	--/--	--/--	--/--
Bureaucratic efficiency	0.8%/--	0.5%/--	1.2%/--	--/--	1.7%/--	--/--
Job characteristics						
Motivational job properties	22.9%/2.1%	20.8%/20.2%	26.3%/2.6%	1.2%/2.3%	6.7%/5.1%	1.5%/2.6%

-- means no significant effect on motivational outcomes

** Scales in this category did not contain identical items but do measure similar constructs

Examining Table 3 indicates that many hypothesized determinants did in fact have an impact on motivational outcomes. Table 3 also highlights the complexity of worker motivation and the myriad of factors that can facilitate or impede motivation.

The studied determinants generally had a stronger impact on affective and cognitive outcome measures than on behavioral outcomes. All sub-categories of determinants had at least one significant impact on satisfaction, commitment and cognitive motivation. In contrast, getting along with others was the only behavioral measure that was impacted by all sub-categories. It should be noted that there were some questions of the cultural appropriateness of some of the behavioral measures in Georgia: the excess capacity and staff patterns did not render timeliness (working hard and quickly) high priority for worker behavior.

Contributions of these determinants were generally larger in Jordan than in Georgia, sometimes strikingly so. Self-efficacy in Jordan, for example, significantly impacted on a wide range of motivational outcomes. In Georgia, however, it only affected organizational commitment.

Findings presented in Table 3 are limited to scales that were measured in both countries. But, both country studies included additional scales not measured in both countries. For example, very different scales were used to reflect work values. In Jordan, work value this scales were derived from a set of Islamic work ethic scales (Abu-Saad, 1998). In Georgia, scales were developed locally to reflect work as a means to self-respect and social respect. The Georgia survey also included scales on attitudes to change (Judge et al., 1999) and financial rewards (locally developed). Table 4 presents contributions to variance for those scales whose impacts were significant. Again, variance greater than 5 percent are shaded.

Table 4: Percentage Variance in Motivational Outcomes for Variables Available Only in One Country

Determinants	General Job Satisfaction	Org'l Commitment	Cognitive Motivation	Conscientiousness	Getting Along	Timeliness
JORDAN						
Values						
Value of good work	--	1.4%	--	0.9%	1.1%	1.9%
Effort orientation	1.7%	3.1%	3.5%	1.8%	1.3%	0.7%
GEORGIA						
Values						
Self-respect	--	2.1%	1.8%	--	--	--
Social respect	--	1.6%	--	--	--	--
Individ. differences						
Attitudes to change	3.2%	6.6%	2.2%	--	--	6.5%
Org'l characteristics						
Financial rewards	3.3%	--	--	--	--	--

Table 4 highlights the role of values on motivation, particularly for organizational commitment and cognitive motivation in both countries. The greater level of impact of values in Jordan may reflect the greater extent of testing of these scales (Abu-Sad, 1998), whereas Georgian scales were locally developed for this study. Of particular note are the large contributions of attitudes to change in Georgia on motivational outcomes. The attitudes to change scale captured the extent to which the respondent felt comfortable with change processes and perceived them to have potentially positive effects, and would reflect how well workers would have been able to cope with the enormous changes that have taken place in the health sector in Georgia.

Summarizing the results in Tables 3 and 4, the largest contributors to affective and cognitive motivation (what workers feel and think) included:

- > **Jordan:** Self-efficacy, work locus of control, pride, organizational citizenship behavior, management openness, resource availability, and motivational job properties;
- > **Georgia:** Self-efficacy, attitudes to change, pride, management support, and motivational job properties.

Large contributors to worker-assessed behaviors included:

- > **Jordan:** Work locus of control and motivational job properties;
- > **Georgia:** Attitudes to change, management support, and motivational job properties.

4.3 Demographics and Their Effects on Motivational Determinants

With somewhat large effects of demographic variables on motivational outcomes, examination of the effects of demographics on motivational determinants was also explored. The relevance of such analysis is based on understanding the homogeneity or lack of homogeneity among the worker population. In both countries, demographics impacted on motivational determinants. Table 5 below presents statistically significant differences among demographic variables as measured through an analysis of variance (and the Scheffe test where significant differences were found among groups). This table presents groupings of scales under constructs, and summarizes results from non-identical scales as well (e.g., values, expectations).

Table 5: Presence of Significant Differences in Motivational Determinants among Demographic Groups

CONSTRUCTS	JORDAN				GEORGIA			
	Hosp.	Prof.	Gender	Age	Hosp.	Prof.	Gender	Age
INDIVIDUAL DIFFERENCES								
Values		√	√		√	√		
Expectations			√			√		
Personality		√	√	√	√			
Individual differences			√	√	√	√		
PERCEIVED ORGANIZATIONAL FACTORS								
Org'l culture	√	√	√	√	√	√		√
Org'l characteristics	√	√	√	√		√		
Job characteristics		√	√	√		√		

√ = significant differences among groups (p <= 0.05)

Significant differences related to gender and age were particularly prevalent among motivational determinants in Jordan, with women and younger workers consistently having lower ratings. In contrast, there were almost no differences related to gender or age in Georgia.

Differences among professional groups were frequent in both countries. In Jordan, nurses and allied health professional staff rated themselves lower than medical and services/administrative staff for motivational job properties or management support. However, nurses alone had the lower ratings for self-efficacy, pride, and resource availability. In Georgia, medical and nursing staff showed significantly higher levels than unskilled workers in the following categories: Self-respect, shame for poor performance, motivational control, pride, organizational citizenship, work preferences, and intrinsic job interest. The differences between professional groups varied between the two countries. In Jordan, large differences emerged in worker perceptions of self-efficacy (perception of one's ability to do the job at hand) among nurses and allied health professionals. However, no such differences were identified in Georgia. In contrast, stronger distinctions were seen in desire for work achievement (desire to do well at work) in Georgia than in Jordan.

In Jordan, differences between hospitals were seen only in perceived organizational factors (with the smaller community hospital staff rating themselves higher on pride, bureaucratic efficiency, and management support). However, hospital played a more significant role in Georgia, where ratings varied between the two hospitals among individual differences scales (social respect, locus of control, emotional control, and desire for work achievement and attitudes to change). As there were no real differences in staffing stability and length of employment between the two Georgian hospitals, it is probable that these findings reflect real differences in the kind of people employed at the two hospitals. It appeared likely that the more prestigious teaching hospital attracted staff who had a stronger sense of their professional identity and thus greater desire for work achievement and more positive attitudes towards change etc. The only significant difference between the two hospitals where staff at the teaching hospital rated themselves lower was on locus of control.

Of note is the lack of major differences among demographic groups in either country related to job preferences (desire for autonomy, feedback, ability to achieve something worthwhile, and ability to complete in job). In Jordan where differences among demographic groups were common, no differences between hospitals, profession, gender or age were seen for job preferences. In Georgia, significant differences emerged only among professional groups for job preferences. Both job preferences and desire for work achievement had very high ratings by workers in both Jordan and Georgia, over 4 on a 5 point scale; the only other determinant scales reaching 4 were those measuring values and expectations.

5. Where Can We Intervene?

The framework in Figure 1 outlined the various levels of influence on worker motivation, which can impact on both the “can do” and the “will do” components. The “will do” component of motivation emerges from a worker’s perceptions of: 1) The personal value of devoting one’s resources to the job (work ethic), and 2) The personal value (intrinsic and extrinsic rewards) of achieving higher levels of performance. The “can do” component reflects the workers’ perceptions of the likelihood of accomplishing the desired level of job performance. The following paragraphs discuss the susceptibility of these various determinants to management intervention.

Individual differences: Some “individual differences” are less susceptible to management intervention, as they are relatively enduring characteristics of the individual: i.e., emotional control, motivational control. Others related to personal values, such as job preferences, work attitudes and work locus of control are formed by the acculturation of the individual within his/her larger societal context. Some individual characteristics can be enhanced through direct, appropriate management action. For example, work self-efficacy can be increased: 1) if workers are given tasks they are trained to do, 2) when clear expectations are communicated about how tasks should be performed, and 3) if workers receive feedback about their performance so they know what to improve. Interventions such as appropriate recruitment/selection criteria, clearly communicated job descriptions and standards, and systems for developmental appraisals can increase worker self-efficacy.

Determinants related to values and perceptions are more deeply conditioned by societal values and beliefs. However, changes in organizational culture, management practices and communication can shape these. For example, work locus of control, the worker’s perception of how much their positions and salary is a function of their own efforts, can be modified if transparent systems for promotions and pay are implemented. It is also significant if jobs are designed to give workers appropriate levels of autonomy.

Perceived contextual variables: Workers’ perceptions of contextual variables can also be changed through management intervention. Increasing worker pride is possible when recognition is developed, both internal (to the hospital) and external (with the community). Greater organizational citizenship behavior can be achieved by recognizing and rewarding workers for such behavior and encouraging more teamwork. Organizational characteristics of management support can be increased through more open transparent communication. Job characteristics can be improved through better job design, modifying jobs so that individual workers can feel a sense of accomplishment, autonomy, feedback and achieve self-worth.

Results highlighted in the previous sections indicate a number of determinants that affect what workers feel, think and do. The following discussion will summarize findings from the statistical data analysis, as well as present data on workers’ own assessment of potential interventions.

5.1 Areas for Interventions Emerging from Results of the Statistical Analysis

Table 6 highlights those determinants that appear to have the largest effect on motivational outcomes from the two countries. As noted earlier, there were differences between the countries, but also many similarities. Effects of determinants on outcomes were stronger in Jordan than in Georgia, but the overall patterns were not so different. Examination of the strongest relationships indicates some possible intervention areas.

Table 6: Determinants Accounting for Variability in Motivational Outcomes

DETERMINANT	Affective		Cognitive		Behavior	
	Jordan	Georgia	Jordan	Georgia	Jordan	Georgia
INDIVIDUAL DIFFERENCES						
Work-related personality	+++	+++	+++	+	+++	++
Emotional personality	+++	+	+		+++	
Individual differences	+++	++	++		+++	+
PERCEIVED CONTEXTUAL VARIABLES						
Org'l culture	+++	+++	++	+	++	+
Org'l characteristics	+++	+++	+++	+	++	+++
Job characteristics	+++	++	+++		+++	+++

+++ = more than one scale and/or >=5%; ++ = 1-4% contribution; + = <= 1% contribution

Although the statistical analysis does not indicate specific interventions, it does point to areas where interventions might have an effect on motivational outcomes. Several key determinants stood out from the data: 1) self-efficacy, 2) work locus of control, 3) attitudes to change, (measured in Georgia only) 4) organizational pride, 5) management support, and 6) motivational job properties. Many of these determinants can be improved through appropriate recruitment, job design (including job descriptions and standards), and better practices in management communication.

5.2 What Workers Tell Us About What Would be Effective

During the 360 degree assessment, workers in both countries were asked to rate a series of potential interventions on a scale of 1 (not effective) to 4 (very effective) for enhancing motivation. Resulting “effective” interventions show some similarities and some differences from interventions that might be developed based on the statistical analysis of motivational determinants and outcomes. Table 7 shows the highest rated interventions in the two countries:

Table 7: Interventions Rated Effective by Workers for Enhancing Motivation

Jordan (rated 3.50+)	Georgia (rated 3.25+)
Better, more up-to-date material	Fair income distribution
Fair policies on pay	Improved physical working conditions
Fair policies on promotion	Recognition/appreciation of good work
Improved physical working environment	Establishing financial incentives for good work
Better medical records	Emphasizing doing things correctly
Assisting workers with child care	Better, more up-to-date material
Fair policies on attendance	Assisting workers with child care
More opportunities for teamwork	Assisting workers with personal problems
Better job and task definition	Development of professional skills
Assisting workers with transportation	Assisting staff with transportation
Emphasizing doing things correctly	

It should be noted that workers responded to their own interpretation of the term “motivation,” which is probably interpreted to mean “satisfaction.”

In Georgia, payment concerns dominated the list of effective interventions. In Jordan, pay issues were somewhat less prominent, although this is at least in part because options were not as explicitly linked to financial aspects in the Jordan questionnaire.

In Georgia, a further ranking of interventions (based on a slightly different list⁶) produced the following results: increased income, more transparent pay systems, improved equipment, improved work conditions, and increased opportunities to develop skills, with the first two standing out significantly from the others.

Differences among professional groups were seen for some of these interventions. In Georgia, physicians rated childcare, teamwork, autonomy, time with supervisors, and development of professional skills more effective than other groups of workers. The high rating among physicians for childcare is particularly interesting: it reflects the high ratio of female physicians in Georgia and the fact that nurses with small children are likely to give up work due to their low income. But doctors with small children continue to work. In the further ranking done in Georgia in the third phase of the study, physicians were more interested in fair and transparent income distribution, while other professional groups ranked increased income higher. Most worker responses here fall under what Herzberg (1959) would call “hygiene” factors, which, if not present, will lead to worker dissatisfaction, problems with retention, absenteeism, and lack of work effort. A second set of questions asked workers to rate factors that would stimulate good performance. The results can be found in Table 8 below. In Jordan, nurses rated emphasis on doing things correctly and timeliness as less effective than did than other groups. Factors listed are those with highest ratings, in order of average scores across all workers in that country: for Jordan, these are those factors rating 4.5-4.8 on a 5 point scale; in Georgia, those rated 4.2-4.8.

⁶ This further enquiry into the effectiveness of alternative interventions was undertaken during the third and final stage of the research (the in-depth analysis). The list of possible interventions was refined based upon qualitative comments received during the 360 degree assessment.

Table 8: Factors that Stimulate Good Performance

Jordan	Georgia
Income Opportunities for advancement Opportunities for training Good supervisors Opportunities to learn new skills Adequate lighting and ventilation Pleasant co-workers	Good supervisors Income Appropriate equipment and infrastructure Pleasant co-workers Prestige associated with hospital Interesting work environment Working with patients

The lists in this table indicate some of what Herzberg called “motivating” factors: Those that stir individuals to perform well. In Georgia, many of these factors relate to the social environment and relations between supervisors and co-workers. In Jordan, there were more elements related to achievement and skill development. These differences also reflect the larger organizational context, where workers in Georgia have less demanding workloads than in Jordan.

What is striking about these results is the absence of job characteristics or job design. The statistical analysis indicated that job design had a large effect on motivational outcomes in both countries, particularly for affective and cognitive outcomes, but also to a lesser degree to behavioral outcomes. However, in Jordan, even *general* job descriptions are not yet available in the Ministry of Health in Jordan. Thus, workers may not be aware of or know the effectiveness of organizational and job design interventions because they have no personal experience with them, nor great clarity about their own job responsibilities.

6. Conclusions

The results of these two country studies do not provide a definitive answer to the question “how do we motivate health workers?” but they do provide insight into motivating factors. Although the two countries have very different cultural and socio-economic environments, there were many similarities among key determinants between the two countries: self-efficacy, pride, management openness, job properties, and values had a significant impact on motivational outcomes in both countries. These are similar to findings from the United States (Pinder, 1998), and suggest that a number of features of the current organizational context might be modified to create a work environment that more effectively enhances work motivation (Morrison et al., 1997); Blankertz and Robinson, 1997; Vinokur-Kaplan et al., 1994).

The differences found for results between the two countries also highlight the importance of local culture on motivational issues. For example, individual differences in motivational determinants were significantly related to gender and age in Jordan, but not in Georgia. In both countries there were significant differences among professional groups, but not in the same way. These findings highlight the need to more fully consider the local workforce and to tailor motivational interventions to the specific needs of specific groups within each culture.

Although income is probably a large determinant of satisfaction in both countries, there were also significant associations between potentially modifiable worker attitudes (e.g., self-efficacy) and motivational outcomes. Although not minimizing the power of financial rewards and adequate salary, the data suggest a number of potential non-financial mechanisms for improving work motivation. By enhancing worker attitudes and competencies (e.g., by facilitating worker sense of accomplishment and contribution), hospitals may be able to substantially improve worker motivation.

Two types of interventions stand out as potentially low (recurrent) cost and organizationally feasible in most settings: communication and job design. Workers mentioned neither of these interventions, but these two interventions address key determinants associated with positive motivational outcomes: self-efficacy, work locus of control, attitudes to change, perceptions of management support, and job characteristics.

Evidence in support of the need for better organizational communication was seen in the 360 degree assessments and the contextual analyses indicated the lack of clearly articulated goals, and inability of many workers (especially at lower levels) to state goals. In addition, hospital workers in Jordan and Georgia did not have job descriptions. Performance appraisals were not conducted or not used to provide feedback to workers. Workers perceived their managers to be less open than the managers perceived themselves. Finally, the importance of attitudes to change in Georgia highlights the importance of communication, particularly in an environment that is currently changing or about to change.

Increasing the motivational properties of jobs is another key area for intervention. Key aspects of job design include skill variety (doing several different kinds of tasks), allocating work such that workers can see their contributions to a result, task significance (doing work that has social value), autonomy (ability to control one’s work), and feedback (receiving information about performance). Three major job design strategies for enhancing these job properties are job enrichment, job enlargement and job rotation. Within the health field, some aspects of job design are regulated by

profession or constrained by regulation, but much of work and task distribution is within the purview of unit managers.

Although these interventions address a range of key determinants, their actual design and implementation will need to be adapted to the specific needs of individual groups of workers. Results from both Georgia and Jordan indicate that there are significant differences between professional groups, in both motivational determinants and outcomes. Worker motivation is an important determinant of worker behavior and performance, and thus an important consideration in the design of micro and macro level organizational reforms.

Results from this two-country study provide insights into key factors for workers' willingness to exert effort towards organizational goals. The research conducted in this study was exploratory in nature: no other similar studies of health worker motivation in developing or transition countries were identified during the literature review, and therefore there exists no well-accepted methods. Some of the findings presented here (particularly those relating to worker behavior) should be interpreted with some caution. As discussed in Bennett et al. (2001), further development of research methods on worker motivation should be a priority. It is possible that more refined research tools, including better tested scales and constructs, might lead to slightly different findings. However, this initial/exploratory research has provided key insights into motivational factors, highlighted important differences between sub-groups of workers, and indicated some avenues for interventions to enhance motivation.

Annex A: Reliability of Motivational Scales

Cronbach Alpha's for Motivational Determinant Scales Used in Analysis

Motivational Constructs	Jordan	Cronbach Alpha	Georgia	Cronbach Alpha
INDIVIDUAL DIFFERENCES				
Expectations	Personal/social consequences	0.72	Personal/social consequences	0.86
Values/work ethic	Work as a virtue	0.81	Work as a means to self-respect	0.71
	Values work orientation	0.70	Social respect through work	0.62
	Effort orientation	0.56		
Work-related personality	Motivational control	0.63	Motivational control	0.61
	Self-efficacy	0.66	Self-efficacy	0.58
	Desire for achievement	0.74	Desire for achievement	0.67
Emotional personality	Emotional control	0.71	Emotional control	0.58
Individual differences	Locus of control	0.61	Locus of control	0.61
	Job preferences	0.62	Job preferences	0.74
			Attitudes to change	0.64
PERCEIVED CONTEXTUAL DIFFERENCES				
Organizational culture	- Pride	0.79	Pride	0.83
	- Organizational citizenship	0.89	Organizational citizenship	0.77
Organizational characteristics	- Management openness	0.42	-Management support	0.77
	- Resource availability	0.54	Resource availability	0.60
	- Bureaucratic efficiency	0.31	Bureaucratic efficiency	0.48
			Salary/Income	0.80
Job characteristics	- Motivational properties of job	0.77	- Motivational properties of job	0.80
	- Job skill variety	0.70	-Social interaction on job	0.42
	- Job autonomy	0.67	- Intrinsic interest	0.75
	- Job feedback	0.35	- Job feedback	0.74
	- Job task identify	0.61	- Job task identity	0.61

Cronbach Alpha's for Scales Used in Outcomes Analysis

Motivational construct	Jordan	Cronbach alpha	Georgia	Cronbach alpha
Affective and cognitive outcomes	General work satisfaction	0.73	General work satisfaction	0.71
	Intrinsic work satisfaction	0.86	Intrinsic work satisfaction	0.79
	Extrinsic work satisfaction	0.67	Extrinsic work satisfaction	0.60
	Organizational commitment	0.91	Organizational commitment	0.84
	Cognitive motivation	0.86	Cognitive motivation	0.78
Worker-assessed performance	Conscientiousness	0.86	Conscientiousness	0.86
	Getting along	0.73	Getting along	0.75
	Timeliness & attendance	0.50	Timeliness & attendance	0.60
Supervisor assessed performance	Conscientiousness	0.91	Conscientiousness	0.90
	Getting along	0.86	Getting along	0.83
	Timeliness & attendance	0.82	Timeliness & attendance	0.73

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