Exploring the relationship between engagement, performance, and retention of health workers delivering HIV/AIDS services in Tanzania

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This research protocol was produced for review by the United States Agency for International Development (USAID) by University Research Co., LLC (URC) and was authored by Adbul Naser Ikram and Edward Broughton of URC. This study is being carried out under the USAID Health Care Improvement Project, which is managed by URC under Contract Number GHN-1-03-07-00003-00. The views expressed do not necessarily reflect those of USAID or the United States Government.
1. Summary
This study seeks to develop a validated tool to measure health workers’ engagement with their work, and to examine the relationships between health worker engagement, performance, and retention. It builds on the Health Care Improvement (HCI) project’s previous assessments of health worker engagement in Niger, Tanzania and Zambia over the past two years, using a combination of quantitative and qualitative methods to develop validated tools for reliable and robust measurement of engagement and its relationship with facility-level performance and employee retention that could serve as a resource for future health worker development activities, programs and stakeholders.

2. Introduction and Literature Review
One of the major global challenges to providing quality health care in developing countries is the severe shortage of qualified health professionals. Fifty-seven countries have been identified as human resources for health crisis countries (WHO, 2006). Qualified health care workers are in short supply despite high demand, particularly in rural areas. The HIV epidemic has further strained many health systems in Africa that are already overburdened and grappling with a limited number of health professionals. As anti-retroviral drugs (ARVs) have become more widely available, enabling HIV patients to live longer and healthier lives, the number of clients seeking care and treatment continues to climb while a shortage of health workers persists in Africa.

Many health workers in developing countries are paid low wages, work in harsh conditions and often have not received the necessary training and supplies to perform. Health workers in these situations often become demoralized, and as a result, may either leave their positions in search of something easier or more profitable or become disengaged in their work. Traditional approaches to motivating and retaining health workers, such as providing financial and non-financial incentives (e.g. paying higher salaries or providing occasional training), have been shown to have limited impact and do not always result in closing these motivational gaps. Around the world, health care delivery organizations have struggled to implement effective and sustainable solutions that are targeted to specific root causes of low motivation, poor performance, and high turnover.

Recently, however, the concept of “engaging” employees in their work – a concept common in the corporate human resources sector - offers a new way of thinking about managing human resources for health (refer to attached literature review summary for further details). Engagement has been defined as “a heightened emotional connection an employee feels for
his/her organization that influences him/her to exert greater discretionary effort to the work." The Gallup Work Place Audit defines engagement as “the individual's involvement and satisfaction with as well as enthusiasm for work.”

When exploring engagement and its relationship with performance and retention, it is important to differentiate engagement from motivation and job satisfaction. Motivation can be defined as "the willingness to exert and maintain an effort towards organizational goals." Job satisfaction is often defined as "the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs." While motivation and job satisfaction are both key components of engagement, the concept of engagement also encompasses employees’ loyalty, psychological connection and commitment to the organization. In this study, engagement has been defined through a multi-stakeholder process as follows:

‘An engaged health worker proactively self-improves and applies their competencies to provide quality services with commitment, ethics and care to achieve organizational goals.’

Extensive research conducted in the US, Japan, and the UK in service industries and client-facing roles has shown that if a person is “engaged” in his or her job, he or she performs better, and the productivity of the organization improves significantly. In the health care industry, research conducted by Gallup and other organizations in the US shows that increased engagement among nurses results in increased patient satisfaction, better nurse retention and higher morale, lower avoidable mortality and complication rates, improved clinical measures such as reduced infections and reduced medication errors. Another study found positive relationships between unit-level employee engagement and performance measures including customer loyalty, productivity, and patient safety incidents. Engagement has also been related to improvement

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on measures of absenteeism and turnover (or turnover intentions), suggesting that enhancing engagement might help health care organizations to improve employee retention.\textsuperscript{8}

However, there is a lack of operational research on health worker engagement in a developing country context, and its implications for retention, performance and health outcomes remain unclear. The vast majority of research on employee engagement has taken place in high-income countries, and it is unknown whether the domains included in existing tools adequately measure the factors that might affect engagement in the Tanzanian country context. Also, an extensive literature review conducted by this research group of existing studies of employee engagement has found no tools that capture both factors that influence engagement and characteristics of engagement, and very little research explicitly measuring the links between engagement, facility-level performance, and employee retention (see attached). Particularly in countries where critical shortages of health workers challenge health care organizations' ability to provide quality care, it is important to understand how different dimensions of engagement relate to employee performance and retention so that interventions can be developed to help them retain an engaged and productive health workforce.

### 3. Statement of the problem

Given the potential significance of health worker engagement for performance and retention and the absence of research in HRH crisis countries, further research is warranted to examine the relationship between engagement, performance and retention, build on HCI’s preliminary assessments of health worker engagement,\textsuperscript{9,10} and identify how this knowledge may be applicable to HRH management, development and planning in Tanzania. If, as shown in studies conducted in high-income countries, increased engagement does in fact lead to improved health worker performance and retention, it is essential that tools exist that enable the assessment of health worker engagement that is adequately considers the relevant characteristics of engagement and factors that influence engagement. With this knowledge, MOH officials, NGOs, site managers and others involved in supporting health providers can focus efforts on improving health worker engagement, which will enable improvements in the quality of care and create a health workforce more inclined to remain in their jobs.

The study seeks to fill this gap in knowledge and develop an understanding of health worker engagement in the provision of HIV services by addressing the following research questions:

- What defines health worker engagement?
- How can we measure a health worker’s engagement in their work?
- What factors influence the engagement of a health worker?
- What is the relationship between health worker engagement and performance?
- Is engagement a predictor of an employee’s intent to remain in their job (retention)?

4. Rationale

Given the lack of evidence on employee engagement in the Tanzanian and other low income country settings, this study seeks to define and measure health worker engagement, factors that influence engagement, and to examine the relationships between engagement, performance and retention among health workers in Tanzania.

Previous studies have focused either on factors influencing engagement (e.g. Gallup tool) or characteristics of engagement, whilst this study examines both. Previous studies have also been completed in middle and high income country contexts whilst this will be the first study of employee engagement, performance and retention in Tanzania. This study adds value to the research conducted on health worker engagement to date by building understanding of the key characteristics of engagement and factors in health workers’ environments that influence engagement in order to help health system leaders to develop interventions that address the aspects of health worker engagement that are most likely to result in improved performance and retention.

If a positive relationship is found between engagement and retention, the MOH can institute a policy of implementing the engagement tool in facilities to assess and improve health worker engagement. This would enable HR managers and supervisors to focus efforts on specific aspects of engagement that are low in order to improve retention rates and productivity levels, thereby establishing more successful retention policies.

Regional and district health officers and site managers could improve their capacity to manage human resources by understanding:

- The importance and relevance of engagement
- How to assess engagement
- What factors of engagement affect performance and retention

The results of this study will have a wide application and be of relevance to all countries committed to strengthening HRH. This study may have major implications for HRH
management and planning, offering a new approach for improving health worker retention, productivity and performance by focusing on engagement of staff. The findings from this study could be used to identify strategies to make existing retention and performance mechanisms more effective and enable health care facilities to develop and maintain a committed and high-performing health workforce.

5. Objectives
The broad goal of this study is to further explore engagement among health workers in Tanzania and to gain a better understanding of the relationship between engagement and health worker performance. To those ends, the study has three specific objectives:

1. To develop a validated tool to measure engagement of health workers
2. To explore the relationship between engagement and health worker performance
3. To explore the relationship between engagement and retention

6. Methodology, to include data collection instruments
This study employs mixed quantitative and qualitative methods to develop a validated health worker engagement tool, and examine the relationships between engagement, performance, and retention, and whether engagement is a reliable predictor of performance and/or an employee's intent to remain in their position. A research team including representatives of MOHSW, MUHAS, and NIMR has worked with URC in the tool development and will also participate in data collection, entry, and analysis.

Tool Development
A working definition of health worker engagement was developed based on literature review and experience at a consensus meeting of stakeholders (including MOHSW and health workers) in Tanzania in August 2011. The August 2011 meeting also identified and reached consensus on characteristics of an engaged health worker and factors influencing engagement. This was used to as the basis for the development of initial items (characteristics of engagement and factors that influence engagement) at a meeting of research team members and partners in September 2011. The group identified the following characteristics of engagement:

Table 1. Characteristics of health worker engagement

<table>
<thead>
<tr>
<th>Professionalism</th>
<th>Involvement/empowerment</th>
<th>Motivation</th>
<th>Accountability</th>
<th>Dedication</th>
<th>Team player</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Life long learning</td>
<td>1. Feels there are clear goals and expectations</td>
<td>1. Willing to work</td>
<td>1. Responsible</td>
<td>1. Devoted</td>
<td>1. Team builder</td>
</tr>
<tr>
<td>2. Caring</td>
<td></td>
<td>2. Enthusiastic</td>
<td>2. Reliable</td>
<td>2. Loyal to organization</td>
<td>2. Help team members</td>
</tr>
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</table>
They also identified the following factors influencing engagement:

1. Health worker’s attitudes to change
2. Health worker’s knowledge and skills (competencies)
3. Job recognition and reward
4. Job security
5. Job task variety
6. Job work-life balance
7. Job supervision, coaching, mentoring
8. Facility adequacy of resources (HR, equipment, supplies)
9. Facility culture of continuous quality improvement

Items addressing each of these factors were revised in consultation with the literature and consolidated by members of the research team in Tanzania and the US into a draft engagement tool. The research team also developed a draft interview script for the qualitative portion of the study and a questionnaire soliciting facility-level performance data at each facility where health workers will be surveyed for the engagement study. The engagement tool also included demographic questions and items about health workers’ length of employment at the facility and about their intent to remain in their jobs.

The draft health worker engagement tool, qualitative interview script, and the facility questionnaire were reviewed by a panel of Tanzanian and international health workforce experts to assess content validity. The expert panel feedback was incorporated into the revised tools. The tools were piloted with health workers in Tanzania, the target audience for this study, to assess content and face validity of items. Their feedback was used to further refine the tools. The validated tools are attached in Appendix I.
After initial validation is complete, the engagement tool, qualitative interview guide, and facility level questionnaire will be translated into Kiswahili using validated methods:

1. A team of 2 individuals fluent in English and Kiswahili will translate the tools from English to Kiswahili. They will develop separate translations, which will be compared and incorporated to develop initial drafts of the Kiswahili tools.
2. A second team of 2 individuals fluent in English and Kiswahili will back-translate the Kiswahili draft tools into English. They will develop separate translations, which will be compared and incorporated.
3. A team of 2 English-speaking individuals will review and compare with the original English tools.
4. The first translation team will incorporate feedback from step 3 into revised versions of the Kiswahili draft tools.
5. A team of 2 Kiswahili-speaking individuals will review and complete the revised Kiswahili tools to give additional feedback.
6. The first translation team will incorporate any feedback from the Kiswahili-speaking reviewers into the final Kiswahili tools.

The Kiswahili versions of the engagement tool, qualitative interview guide, and facility level questionnaire will be used for all study data collection.

Data Collection
Data collectors will be trained on how to use engagement tool, the qualitative interview script, and facility-level questionnaire to gather information on performance indicators at a one-day training session in January 2012. All study tools will be tested in the field with the data collectors before study data collection begins.

Data for the study will be collected in facilities providing HIV/AIDS services in 6 regions of Tanzania (Dar es Salaam, Morogoro, Iringa, Mtwara, Tabora and Kigoma). Health facilities will be selected randomly within each region and facility type (tertiary hospital, referral hospital, clinic, health center, etc.). Pairs of trained data collectors will visit the selected facilities in January and February 2012 to distribute the engagement tool and facility-level questionnaire and to conduct qualitative interviews with the informed consent of facility managers and health workers. Within each randomly selected facility, health workers representing different cadres will be invited to participate in the study and complete a survey. Data collectors will seek to invite the participation of all health workers at each facility providing HIV care and treatment clinic (CTC) and prevention of mother-to-child transmission (PMTCT), as well as up to 5 workers providing acute medical services. The engagement tool and facility-level questionnaire are self-
administered and will be fill out anonymously by selected health workers in each facility. The expected sample size for the engagement tool is 800 health workers, determined based on power calculations indicating that a minimum sample of 783 is required to achieve a power (0.8) to detect small effect size differences between groups (r=0.1).

To supplement the engagement tool and facility-level questionnaire, the data collectors will conduct qualitative interviews with 42 purposively selected health workers and management staff (7 per region—1 in a regional hospital, 2 in district hospitals, 2 in health centers and 2 in dispensaries) in order to understand how the relationship between performance and engagement and the relationship between engagement and retention is perceived by different actors. Within each pair of data collectors, one data collector will serve as the interviewer, and the other as the note-taker for each qualitative interview. Interviews will be tape recorded and transcribed for analysis.

Data Analysis
Data from the engagement tool and the facility-level questionnaire will be entered into a secure Microsoft Excel database in the URC Tanzania office. It will be validated by checking a random 10% sample of the electronic data against the original hard-copy questionnaires. We plan to analyze the quantitative data using Principal Components Analysis (PCA) to identify latent variables to examine the relationship between engagement and performance. We will also analyze the study data using cluster analysis to examine potential variation in engagement between different demographic groups, cadres of health workers, health facility type, etc.

We will assess the construct validity of factors and items in the engagement tool by testing for factor reliability (Chronbach’s alpha), factor loading (eigenvalues) and inter-item correlation. We will apply the validated constructs in analyses of the relationships between engagement, performance and retention. We will also use the findings to finalize and publish the engagement tool (e.g. deletion of items that load poorly to factors) for future use.

The audio files from each qualitative interview will be transcribed and validated by the interviewer and the note taker as soon as possible after each interview is complete. Transcripts will be analyzed to identify themes, nature and properties of the perceived relationship between engagement and performance and engagement and retention. These findings will be used to develop a deeper and more detailed interpretation of the findings of the quantitative analyses and understanding of how factors are perceived to affect characteristics of engagement.

7. Personnel, CVs
**Principal Investigators:**
Co-Principal Investigator: Joseph Kundy, MD
Co-Principal Investigator: Tana Wuliji, PhD BPharm

**Other Study Personnel:**
Mercy Mpwata
Dr. Anna Nswilla
Dr. Sokoine Kivuyo
Leah Masselink, PhD
Dr Darius Rweyemamu, PhD

Study personnel CVs are attached in Appendix II.

**8. Budget and Budget Justification**
The budget and budget justification are detailed in Appendix III.

**9. Ethical consideration: (Obtaining verbal/ written informed consent: Obligations of investigators and sponsors, benefits and risks of study participation, recruitment, cultural values, and confidentiality measures)**

A verbal briefing alongside an information sheet about the study will be given by the data collectors to all health workers invited to participate in this study. Health workers will be given the opportunity to ask questions and will be able to keep a copy of the information sheet for their reference. Written informed consent will be obtained from all participants in the study before data collection begins. (English and Swahili versions of the consent form are attached in Appendix IV.) Participation is voluntary and potential participants will be given the right to opt out of the study at any time, or out of any aspect of data collection (engagement tool, facility-level questionnaire or qualitative interview) with no consequences.

The co-PIs and the research team will agree not to divulge, publish, or otherwise make known to unauthorized persons or to the public any information obtained in the course of this study that could identify the persons who participated in the study. The research team and data collectors will sign written agreements stating their agreement to keep all data collected and any information which could potentially lead to the identification of any study participant confidential and secure.

This study will provide no direct benefit to participants, and no monetary or non-monetary compensation will be provided. It is hoped, however, that the research will provide researchers and policymakers with insight into health worker engagement that can be used to develop
policies and plans that improve the work environment for all health workers and quality of health care in countries with HRH challenges.

The study is designed to pose no more than minimal risks to study participants. It is always possible that participants could feel embarrassed, suffer loss of social standing, or both, if they were to make sensitive remarks and if those remarks were to find their way into public discourse. However, the research team will take several steps to minimize these risks including training of data collectors on interviewing and confidentiality. The engagement tool and facility-level questionnaire will be filled out anonymously, and qualitative interviews will be conducted outside of the hearing of health workers’ coworkers, supervisors or clients.

Hard-copy questionnaires will be stored securely at the URC Tanzania Office in Dar es Salaam. Quantitative data will be stored in a secure electronic database, and qualitative interview notes will be kept on password-protected files. Signed informed consent forms will be stored in a locked file separately from other study data and held at the URC Tanzania Office in Dar es Salaam.

10. Limitations of the study
The study has several limitations:

1. Selection bias—because data will be collected only from health workers who are willing to participate in the study, it is possible that workers who agree to participate are different from those who refuse in ways that could bias the study findings. (In other words, it is possible that workers who are more engaged in their work already would be more likely to participate in a study about engagement than those who are less engaged.)

2. Selection bias—it is also possible that workers who agree to participate in the study work in facilities that are different in ways that affect engagement from those who refuse to participate.

3. Because the study is cross-sectional, data on retention are collected by asking workers to self-report their intentions to leave their jobs. We have no way of capturing actual behavior, which might differ from intentions.

4. The qualitative interviews will be conducted by data collectors who might not have previous training in qualitative research, so it is uncertain how the quality of the interview data will affect analysis.

11. Dissemination of research results
We plan to disseminate the results of this project in two ways:
We plan to produce three peer-reviewed journal articles. The first will focus on the methodology of the engagement tool development and the validated engagement tool, and the second will describe the results of our analyses of study data, including the relationship between engagement and performance, the relationship between engagement and retention, and the factors that influence both relationships. The third will be a methodology paper focusing on the use of interview scripts to collect qualitative data by data collectors without previous qualitative research training.

12. Institutional ethical clearance, if any
We are seeking ethical approval from the National Institute for Medical Research (Tanzania). Additionally, the protocol will undergo University Research Co.’s internal ethics review process.