

# Primary Health Care Initiatives (PHCI)

## Quality of Work Life in the Ministry of Health, Government of Jordan (Pre-test Phase)

2002

*Prepared by:*

**Richard A. Yoder, PhD, MPH**

*With collaboration from*

**Ali Arbaji, MD, MPA**

**Salah Mawajdeh, MD, DrPH**

**Dr. Clara Siam, MD**

**Dr. Mai Al-Saoub, MD**

**Dr. Hiam Al-Yousef**



Abt Associates Inc. ■ 4800 Montgomery Lane, Suite 600, Bethesda, MD 20814 ■  
Tel: 301/913-0500 ■ Fax: 301/652-3916

*In collaboration with:*

University of Colorado ■ Initiatives, Inc. ■ TransCentury Associates



*Funded by:*

United States Agency for International Development

**Quality of Work Life in the Ministry of Health,  
Government of Jordan  
(Pretest Phase)**

***2002***

**Contract No:** 278-C-99-00-00059-00  
**Project No.:** MAARD No. OUTNMS 106  
**Submitted to:** Ministry of Health

---

# Table of contents

<b>List of Tables and Exhibits .....</b>	<b>iii</b>
<b>Appendices.....</b>	<b>vi</b>
<b>Acknowledgments .....</b>	<b>vii</b>
<b>Abbreviations .....</b>	<b>viii</b>
<b>Executive Summary .....</b>	<b>ix</b>
1. Purpose and Objectives .....	ix
2. Methodology .....	ix
3. Findings .....	xi
3.1 Quality of Work life for Medical staff: MOH and UNRWA .....	xi
3.2 Quality of Work life for Support staff: MOH and UNRWA .....	xii
3.3 Quality of Work life by medical staff occupational group: MOH and UNRWA.....	xiii
3.4 Determinants of job satisfaction.....	xv
3.5 Concluding implications .....	xv
3.5.1 MOH medical staff.....	xvi
3.5.2 MOH support staff .....	xvi
<b>1. Introduction.....</b>	<b>1</b>
1.1 Background .....	1
1.2 Purpose and Objectives .....	1
<b>2. Methodology .....</b>	<b>2</b>
2.1 A conceptual model .....	2
2.2 Study design .....	3
2.3 Sample selection.....	5
2.4 Calculating weights .....	6
2.5 UNRWA Sampling.....	6
2.6 Variables and indicators.....	7
2.7 Data collection.....	9
2.8 Data Analysis .....	9
<b>3. Findings.....</b>	<b>11</b>
3.1 Background variables .....	11
3.1.1 MOH medical staff .....	11
3.1.2 MOH support staff.....	12
3.1.3 UNRWA medical staff.....	13

3.1.4 UNRWA support staff .....	14
3.2 Quality of Work life by job category: MOH and UNRWA .....	16
3.2.1 Medical staff.....	16
3.2.1.1 QWL among physicians: MOH and UNRWA .....	17
3.2.1.2 QWL among dentists: MOH and UNRWA .....	18
3.2.1.3 QWL among midwives: MOH and UNRWA.....	19
3.2.1.4 QWL among nurses: MOH and UNRWA.....	19
3.2.2 Support staff: MOH and UNRWA .....	21
3.3 Quality of Work life by work life dimension: MOH and UNRWA.....	22
3.3.1 Medical Staff.....	22
3.3.1.1 Job Satisfaction .....	22
3.3.1.2 Participation in decision-making .....	23
3.3.1.3 Morale and motivation .....	24
3.3.1.4 Economic well-being.....	25
3.3.1.5 Supervision .....	27
3.3.1.6 Staff development and skill use .....	28
3.3.1.7 Organizational Climate.....	29
3.3.1.8 Appointments, promotions and transfers.....	30
3.3.1.9 Clarity of policies, goals and procedures.....	32
3.3.1.10 Work group relations.....	33
3.3.1.11 Centralization of decision-making .....	34
3.3.1.12 Performance and discipline.....	35
3.3.2 Support staff .....	37
3.3.3 Summary of scores and ranking of attitudes of support staff towards QWL dimensions .....	37
3.3.4 Job satisfaction .....	37
3.4 Determinants of job satisfaction: MOH .....	40
3.4.1 Medical staff.....	40
3.4.2 Determinants of job satisfaction among MOH support staff.....	42
<b>4. Summary and Implications.....</b>	<b>45</b>
4.1 Medical staff: MOH and UNRWA .....	45
4.2 Support staff: MOH and UNRWA .....	47
4.3 Determinants of job satisfaction.....	48
4.4 Implications .....	48
4.4.1 MOH medical staff.....	48
4.4.2 MOH support staff.....	49

---

## List of Tables and Exhibits

Table 1: Attitudes of MOH and UNRWA Medical staff towards 12 Quality of Work Life dimensions* .....	xi
Table 2: Attitudes of MOH and UNRWA Support staff towards 12 Quality of Work Life dimensions* .....	xii
Table 3: Attitudes of MOH medical staff towards 12 dimensions of work life* .....	xiii
Table 4: Attitudes of UNRWA medical staff towards 12 dimensions of work life* .....	xiv
Exhibit 1: Project Evaluation Framework.....	2
Exhibit 2: QWL Study Design Structure .....	4
Table 2.1: MOH health facilities and sample by region and type of facility .....	5
Table 3.1.1: Characteristics of MOH medical staff* .....	11
Table 3.1.2: Sample statistics of selected control variables, MOH medical staff .....	12
Table 3.1.3: Sample characteristics of MOH support staff* .....	12
Table 3.1.4: Sample statistics of selected control variables, MOH support staff .....	13
Table 3.1.5: Sample characteristics of UNRWA medical staff* .....	13
Table 3.1.6: Sample statistics of selected control variables, UNRWA medical staff.....	14
Table 3.1.7: Sample characteristics of UNRWA support staff* .....	14
Table 3.1.8: Sample statistics of selected control variables, UNRWA support staff .....	15
Table 3.2.1: Attitudes of MOH and UNRWA Medical staff towards 12 Quality of Work Life dimensions*.....	16
Table 3.2.2: Attitudes of MOH and UNRWA physicians towards 12 Quality of Work Life* .....	17
Table 3.2.3: Attitudes of MOH and UNRWA dentists towards 12 Quality of Work Life* .....	18
Table 3.2.4: Attitudes of MOH and UNRWA midwives towards 12 Quality of Work Life* .....	19
Table 3.2.5: Attitudes of MOH and UNRWA nurses towards 12 Quality of Work Life* .....	20
Table 3.2.6: Attitudes of MOH and UNRWA Support staff towards 12 Quality of Work Life dimensions*.....	21
Table 3.3.1: Job satisfaction scores by Occupation, MOH.....	22
Table 3.3.2: Job Satisfaction scores by occupation, UNRWA .....	23
Table 3.3.3: Participation scores by medical occupation, MOH .....	23
Table 3.3.4: Participation scores by occupation, UNRWA .....	24
Table 3.3.5: Morale and motivation scores by medical occupation, MOH .....	24

Table 3.3.6: Morale and motivation scores By occupation, UNRWA .....	25
Table 3.3.7: Economic well-being scores by medical occupation, MOH .....	26
Table 3.3.8: Economic well-being scores By occupation, UNRWA.....	26
Table 3.3.9: Mean supervision scores by medical occupation, MOH .....	27
Table 3.3.10: Supervision scores by Occupation, UNRWA.....	27
Table 3.3.11: Staff development and skill use scores by medical occupation.....	28
Table 3.3.12: Staff development and skill use scores by medical occupation, UNRWA.	29
Table 3.3.13: Organizational Climate scores by medical occupation.....	29
Table 3.3.14: Organizational climate scores by Occupation, UNRWA .....	30
Table 3.3.15: Appointment, Promotion and Transfer Scores by medical occupation, MOH	30
Table 3.3.16: Appointments, promotions and Transfer scores by occupation, UNRWA	31
Table 3.3.17: Clarity of policies, goals and procedures mean scores by medical occupation, MOH.....	32
Table 3.3.18: Clarity of policies, goals and Procedures by occupation, UNRWA.....	33
Table 3.3.19: Work Group Relations mean scores by medical occupation, MOH.....	33
Table 3.3.20: Work group relations score By medical occupation, UNRWA.....	34
Table 3.3.21: Centralization of decision-making by medical occupation, MOH .....	34
Table 3.3.22: Centralization of decision-making Scores by occupation, UNRWA .....	35
Table 3.3.23: Attitudes towards weak performance and discipline, MOH.....	36
Table 3.3.24: Performance and discipline scores by occupation, UNRWA .....	36
Table 3.3.25: Attitudes of support staff towards 12 QWL dimensions, MOH .....	37
Table 3.3.26: Mean job satisfaction scores by gender, MOH.....	38
Table 3.3.27: Mean job satisfaction by marital status, MOH .....	38
Table 3.3.28: Job satisfaction scores by social status, MOH.....	38
Table 3.3.29: Job satisfaction scores by Governorate, MOH .....	39
Table 3.3.30: Relationship between job satisfaction and selected control variables, MOH	39
Table 3.4.1: Work related determinants of job satisfaction, MOH medical staff .....	40
Table 3.4.2: Work related determinants of job satisfaction when including control variables, MOH medical staff.....	41
Table 3.4.3: Determinants of job satisfaction among MOH support staff.....	43
Table 3.4.4: Determinants of job satisfaction among MOH support staff when including control variables.....	44
Table 4.1: Attitudes of MOH medical staff towards 12 dimensions of work life* .....	45
Table 4.2: Attitudes of UNRWA medical staff towards 12 dimensions of work life* .....	46
Table 4.3: Attitudes of MOH and UNRWA Support staff towards 12 Quality of Work Life dimensions*.....	47

Table A3.1.1: Distribution of males and females of MOH medical staff, unweighted and weighted.....	59
Table A3.1.2: Marital status of MOH medical staff, unweighted and weighted.....	59
Table A3.1.3: Income of MOH medical staff, unweighted and weighted.....	59
Table A3.1.4: Education of MOH medical staff, unweighted and weighted.....	60
Table A3.1.5: Social status of MOH medical staff, unweighted and weighted.....	60
Table A3.1.6: Years in civil service of MOH medical staff, unweighted and weighted ..	60
Table A3.1.7: Years worked in current location of MOH medical staff, unweighted and weighted.....	61
Table A3.1.8: Years since last promotion of MOH medical staff, unweighted and weighted.....	61
Table A3.1.9: Occupation of MOH medical staff, unweighted and weighted .....	61
Table A3.1.10: Distribution of MOH medical staff by Governorate, Unweighted and weighted.....	62
Table A3.3.1: Job Satisfaction medical occupation: MOH .....	63
Table A3.3.1: Participation mean scores by Governorate, MOH .....	64
Table A3.3.2: Mean participation scores by income group, MOH.....	64
Table A3.3.1: Attitudes towards participation in decision-making by medical occupation, MOH .....	65
Table A3.3.1: Attitudes towards morale and motivation by medical occupation.....	66
Table A3.3.1: Attitudes towards economic well-being by occupation .....	67
Table A3.3.1: Attitudes towards supervision by medical occupation .....	68
Table A3.3.1: Attitudes towards staff development and skill use by medical occupation	69
Table 3.3.1: Attitudes towards Organizational Climate by medical occupation .....	70
Table A3.3.1: Attitudes towards appointments, promotions, and transfers by medical occupation .....	71
Table A3.3.1: Attitudes towards clarity of policies, goals, and procedures by occupation	72
Table A3.3.1: Attitudes towards work group relations by medical occupation.....	73
Table A3.3.1: Agreement that decision-making is decentralized by medical occupation.	74
Table A3.3.1: Agreement that weak performance and need for corrective action is not a problem by medical occupation.....	75

---

# Appendices

Appendix 1: Quality of Work Life Survey Questionnaire.....	50
Appendix 2: Detailed tables of background variables .....	59
Appendix 3: Cross tabulations of medical occupations and job satisfaction.....	63
Appendix 4: Participation scores by Governorate and Income group .....	64
Appendix 5: Cross tabulations between participation and medical occupation .....	65
Appendix 6: Cross tabulations between morale and motivations, and, medical occupation	66
Appendix 7: Cross tabulations between economic well-being and medical occupation ...	67
Appendix 8: Cross tabulations between supervision and medical occupation .....	68
Appendix 9: Cross tabulations between staff development and skill use and medical occupation .....	69
Appendix 10: Cross tabulations between organizational climate and medical occupation	70
Appendix 11: Cross tabulations between appointments, promotions and transfers and medical occupation .....	71
Appendix 12: Cross tabulations between policies, goals and procedures and medical occupation .....	72
Appendix 13: Cross tabulations between work group relations and medical occupation .	73
Appendix 14: Cross tabulations between centralized decision-making and medical occupation .....	74
Appendix 15: Cross tabulations between performance and discipline and medical occupation .....	75

---

## Acknowledgments

As is usual in a study of this type, there are numerous people and institutions who have contributed in meaningful ways. Special thanks go to Dr. Sa'ad Kharabsheh and Dr. Taher Abu-Samen in the Ministry of Health with assistance in designing the study and facilitating the work. The many discussions that were held with MOH research counterparts, Dr. Clara Siam, Dr. Mai Al-Saob and Dr. Hiam Al-Yousef, were stimulating and important. Mr. Khamis Raddad, from the Department of Statistics, was invaluable in the sampling design.

To the administrative and field staff of UNRWA, deep appreciation is expressed for graciously allowing a sample of their health facility employees to be used as a control group, and in facilitating that process.

In particular, thanks go to Dr. Ali Arbaji and Dr. Salah Mawajdeh; their strong skills in research methodology and knowledge of the health system and culture were invaluable in developing the survey instruments, designing the study, sampling, and all the key areas of completing a research study.

Lastly, thanks go to the 274 medical and support staff of the MOH and the 49 UNRWA medical and support staff for taking the time to complete the questionnaire. It is our hope that the eventual outcome of this study will be improvements in the quality of their work life, leading to improvements in the health status of the people of Jordan.

---

# Abbreviations

DOS	Department of Statistics
HCM	Health Communication and Marketing
JD	Jordanian Dinar
MMIS	Health Management Information System
MOH	Ministry of Health
MRO	Market Research Organization
N	Number of subjects in the population
n	Number of subjects in the sample
QWL	Quality of Work life
PHC	Primary Health Care
CHC	Comprehensive Health Care
PHCI	Primary Health Care Initiatives
QA	Quality Assurance
SPSS	Statistical Package for the Social Sciences
UNRWA	United Nations Relief and Works Agency
USAID	United States Agency for International Development

---

# Executive Summary

## 1. Purpose and Objectives

The broad purpose of the overall study is to evaluate the impact of improvements in quality of services expected from the six PHCI project interventions on various dimensions of the quality of work life in the MOH and different dimensions of client satisfaction. This report presents the findings of the first phase of the study and has two primary objectives:

- To measure and assess the quality of work life in the MOH with special attention to provider satisfaction.
- to identify the determinants of job satisfaction among MOH officials working in the Governorates.

## 2. Methodology

This study is a quasi-experimental design in which there is random selection of respondents as well as a pre-test and post-test with two control groups: UNRWA health facility employees and employees of “non-certified” MOH health facilities. A stratified two-stage cluster sampling design was used where the first stage involved selection of the health facilities (98 in the sample: 75 PHCs and 23 CHCs) while the second stage involved selection of the employees from each of the sampled facilities (274 medical and support staff). Weighting of the sample, using expansion weights methods, was done so that the sample mirrors as closely as possible the population from which it was drawn. This sampling method leads to a confidence level of 95 percent with a precision level of five percent. For UNRWA, a random sample of employees, stratified by medical and support staff, was drawn from all thirteen of their health facilities providing a full set of services.

Twelve variables, or dimensions, were used in this study to examine different aspects of the Quality of Work life (QWL) among health sector workers. These dimensions, and their definition, are as follows:

- **Job satisfaction:** the extent to which employees are satisfied with their jobs.
- **Participation in decision-making:** the extent to which employees feel they participate in decisions that affect their work.
- **Morale and motivation:** the extent to which employees are motivated to work and feel a common sense of purpose and loyalty to their work; *esprit de corps*
- **Centralization of decision-making:** the extent to which employees feel decisions made in the field must be approved by a senior official at MOH headquarters or by a senior supervisor.

- **Supervision:** the extent to which employees feel their supervisor insists on high quality work, provides good support and guidance, solves problems, and is fair.
- **Staff development and skill use:** the extent to which employees feel their jobs make good use of their skills and training, and that they have the opportunity to improve their skills.
- **Appointments, promotions and transfers:** the extent to which employees are satisfied with the opportunities available for career advancement, and that appointments, promotions and transfers are done equitably.
- **Economic well-being:** the extent to which employees feel that their salary and benefits are adequate and fair, and that they have job security.
- **Organizational climate:** the extent to which employees feel there is an atmosphere of co-operation in the Ministry and that senior management is serious about correcting problems.
- **Performance and discipline:** the extent to which employees feel that discipline is a problem in the ministry, that poor performance is not tolerated, and that effective corrective action is taken against poor performance.
- **Clarity of policies, goals and procedures:** the extent to which employees are satisfied with the level of clarity of policies, goals, and procedures.
- **Work group relations:** the extent to which employees who work under the same supervisor relate well to each other, are able to resolve differences, and provide mutual support and encouragement.

Each of these 12 different dimensions of work life was derived from a composite index consisting of three to 14 questions. Each question used a Likert-type summated rating scale where employees responded to a ten-point “Strongly Disagree” to “Strongly Agree” scale. The values from each index question were combined into a single composite score for each of the 12 work life dimensions. Unlike most studies of this nature that use a five or seven point Likert scale, this study used a ten-point scale in order (a) to have a more discriminating measure with which to compare changes over the life of the project, and (b) to allow for use of more rigorous statistical techniques, such as regression analysis, that is possible with interval or ratio level data

In addition to the 12 main work life dimensions or variables, eleven biographical and background variables were included as a means of controlling for extraneous affects on the main variables. These included:

- Age
- Gender
- Years of education
- Salary – monthly net
- Marital status
- Years worked in government
- Years worked in employee’s current location
- Years since employee’s last promotion
- Governorate – in which employee is working

- Job category: medical staff and paramedical/support staff
- Job title for medical personnel: physician, dentist, midwife and nurse
- Social status: occupation was used as the proxy variable, and included five categories:

Data collection was contracted out to the Market Research Organization and was done during the period of March 5-22, 2000.

### 3. Findings

#### 3.1 Quality of Work life for Medical staff: MOH and UNRWA

The data in Table 1 show the mean QWL scores of all MOH and UNRWA medical staff (doctors, dentists, midwives and nurses) for all 12 Quality of Work Life dimensions. For the MOH the dimensions that have the most favorable attitudes are job satisfaction (7.30), morale and motivation (6.61), and the quality of supervision (6.52). The least favorable attitudes are with economic well-being (salary, benefits and job/income security) with a mean score of 4.75, MOH practices with respect to tolerating poor performance and taking corrective action with a mean score of 4.81, and the extent to which decision-making is centralized (5.22).

**Table 1: Attitudes of MOH and UNRWA Medical staff towards 12 Quality of Work Life dimensions\***

Work life Dimension	MOH (Intervention) (n = 599)	UNRWA (Control) (n = 49)
Job satisfaction	7.30	7.54
Participation in decision-making	5.70	5.55
Morale and motivation	6.61	6.89
Centralization of decision making	5.22	5.30
Supervision	6.52	7.10
Staff development and skill use	6.43	7.03
Appointments, promotions and transfers	5.70	5.65
Economic well-being	4.75	5.37
Organizational climate	5.71	5.44
Performance and discipline	4.81	5.84
Clarity of policies, goals and procedures	5.31	6.03
Work group relations	5.29	6.55

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

For UNRWA, the work life dimensions that had the most favorable attitudes were job satisfaction (7.54), supportive supervision (7.10), and staff development and skill use

(7.03). Least favorable attitudes were with the extent to which decision-making is centralized (5.30), economic well-being (5.37), and organizational climate (5.44).

Note that if the six interventions of the PHCI project have the hypothesized impact, there should be significant improvements in the mean scores of the 12 QWL dimensions for the MOH employees. The absence of significant improvements among UNRWA employees (the control group) will give support for the significant improvements in MOH scores being caused by the project interventions.

### 3.2 Quality of Work life for Support staff: MOH and UNRWA

The data in Table 2 show the quality of work life scores for MOH and UNRWA support staff.

**Table 2: Attitudes of MOH and UNRWA Support staff towards 12 Quality of Work Life dimensions\***

Work life Dimension	MOH (intervention group) (n = 2611)	UNRWA (control group) (n = 74)
Job satisfaction	7.14	7.40
Participation in decision-making	5.93	5.63
Morale and motivation	6.49	6.83
Centralization of decision making	4.95	4.63
Supervision	6.81	6.87
Staff development and skill use	6.73	6.90
Appointments, promotions and transfers	5.53	4.86
Economic well-being	4.93	5.81
Organizational climate	5.85	5.33
Performance and discipline	5.44	5.88
Clarity of policies, goals and procedures	5.09	5.74
Work group relations	5.24	6.19

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

On the basis of the data shown in Table 2, three observations are made for MOH support staff.

- MOH support staff has relatively favorable attitudes towards (a) their jobs, (b) the quality of supervision, (c) staff development and skill use, and (d) morale and motivation.
- MOH support staff has the least favorable attitudes towards (a) economic well-being, (b) the extent to which decision-making is centralized, and (c) the extent to which policies, goals and procedures are clear. At the same time, each of these fall in the “neutral” range – neither favorable nor unfavorable.

- The overall mean score of 5.84 indicates that the MOH medical staff have neither favorable nor unfavorable attitudes towards the quality of their work life. This is slightly higher than the mean of MOH medical staff (5.78)

In addition, for UNRWA support staff, three observations are made on the basis of data shown in Table 2.

- UNRWA support staff has relatively favorable attitudes towards (a) their jobs, (b) staff development and skill use, (c) the quality of supervision, and (d) morale and motivation.
- UNRWA support staff has the least favorable attitudes towards (a) the extent to which decision-making is centralized (b) the way in which appointments, promotions and transfers are handled, and (c) organizational climate. However, each of these fall in the “neutral” range - neither favorable nor unfavorable.
- The overall mean score of 6.01 indicates that the UNRWA support staff has neither favorable nor unfavorable attitudes towards the quality of their work life. This is slightly higher than the mean of UNRWA support staff (5.84).

### 3.3 Quality of Work life by medical staff occupational group: MOH and UNRWA

Table 3 shows quality of work life scores for each occupation group of the MOH medical staff.

**Table 3: Attitudes of MOH medical staff towards 12 dimensions of work life\***

<b>Work life dimension</b>	<b>Physicians n = 352</b>	<b>Dentists n = 105</b>	<b>Midwives n = 96</b>	<b>Nurses n = 45</b>	<b>Average n = 599</b>
Job satisfaction	7.19	7.35	7.83	6.86	7.30
Participation in decision-making	5.59	5.79	5.96	5.80	5.70
Work motivation	6.60	6.39	6.90	6.62	6.61
Centralization of decision making	5.15	5.07	5.30	5.89	5.22
Supervision	6.43	6.43	6.82	6.74	6.52
Staff development and skill use	6.49	6.43	6.56	5.80	6.43
Appointments, promotions and transfers	5.71	5.66	5.93	5.15	5.70
Economic well-being	4.65	4.47	5.36	4.87	4.75
Organizational climate	5.65	5.38	6.24	5.80	5.71
Performance and discipline	4.81	4.83	4.74	4.95	4.81
Clarity of policies, goals and procedures	5.21	5.19	5.72	5.49	5.31
Work group relations	5.29	4.98	5.50	5.57	5.29

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

The data shown in Table 3 indicate that:

- MOH medical staff, as a group, has relatively favorable attitudes towards their (a) jobs, (b) morale and motivation, and (c) quality of supervision.
- MOH medical staff, as a group, has the least favorable attitudes towards (a) economic well-being, (b) MOH practices with respect to tolerating weak performance and discipline, and (c) the extent to which decision-making is centralized. However, these all fall in the “neutral” range – neither favorable or unfavorable.
- The overall mean score of 5.78 indicates that the MOH medical staff have neither favorable nor unfavorable attitudes towards the quality of their work life.
- Examination of QWL scores by MOH medical occupation shows that midwives have the highest overall quality of work life by having the largest number of high scores (9 of 12).
- On the other hand, the data indicate that MOH dentists appear to have the lowest overall quality of work life by having the largest number of low scores (7 of 12).

Table 4 summarizes QWL scores for all each UNRWA medical occupation.

<b>Table 4: Attitudes of UNRWA medical staff towards 12 dimensions of work life*</b>					
<b>Work life dimension</b>	<b>Physicians (n = 24)</b>	<b>Dentists (n = 9 )</b>	<b>Midwives (n = 10 )</b>	<b>Nurses (n = 9)</b>	<b>Average (n = 49)</b>
Job satisfaction	7.60	7.73	7.53	7.24	7.54
Participation in decision-making	5.10	6.48	6.10	5.51	5.55
Morale and motivation	6.90	7.46	6.50	6.93	6.89
Centralization of decision making	5.33	5.58	5.52	4.80	5.30
Supportive supervision	7.00	7.88	6.73	7.29	7.10
Staff development and skill use	7.10	7.72	7.17	6.22	7.03
Appointments, promotions and transfers	5.73	6.79	5.45	4.89	5.65
Economic well-being	5.71	5.54	5.15	4.61	5.37
Organizational climate	5.21	6.96	5.58	4.92	5.44
Performance and discipline	6.19	5.28	5.50	5.63	5.84
Clarity of policies, goals and procedures	5.92	7.11	5.33	6.41	6.03
Work group relations	6.60	6.78	6.40	6.46	6.55

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

From the data shown in Table 4, several observations can be made.

- UNRWA medical staff, as a group, has relatively favorable attitudes towards their (a) jobs, (b) the quality of supervision, (c) staff development and skill use, (d) morale and motivation, and (e) work group relations.
- UNRWA medical staff, as a group, has the least favorable attitudes towards (a) the extent to which decision-making is centralized, (b) economic well-being, and

- (c) organizational climate. However, these all fall within the “neutral” range – neither favorable nor unfavorable.
- The overall mean score of 6.19 indicates that the UNRWA medical staff has neither favorable nor unfavorable attitudes towards the quality of their work life.
  - Examination of QWL scores by UNRWA medical occupation shows that dentists have the highest overall quality of work life by having the largest number of high scores (10 of 12).
  - On the other hand, the data indicate that UNRWA nurses appear to have the lowest overall quality of work life by having the largest number of low scores (6 of 12).

### **3.4 Determinants of job satisfaction**

Determinates of job satisfaction was assessed using regression analysis in order to identify what QWL dimensions are most important in contributing towards job satisfaction. The results of this can be used to give direction the MOH in knowing what work life dimensions to emphasize in order to enhance job satisfaction.

For the MOH medical staff, the four significant determinants of job satisfaction are the following QWL dimensions:

- Morale and motivation,
- Supervision,
- Appointments, promotions, and transfers, and
- Economic well-being.

For the MOH support staff, there are six determinants of job satisfaction that are statistically significant:

- morale and motivation,
- quality of supervision,
- participation in decision-making,
- economic well-being,
- performance and discipline, and,
- work group relations.

### **3.5 Concluding implications**

The primary purpose of this study is to collect baseline pretest data with which to compare the posttest data at the end of the project in order to assess impact of the project interventions. However, there is still useful information that can be derived from the pretest to improve work life among ministry officials. Thus, the following summary recommendations are offered for consideration by the MOH as a means of improving the quality of work life.

### ***3.5.1 MOH medical staff***

- Develop policies, programs and procedures that will improve those QWL dimensions that have the lowest scores: economic well-being, weak work performance and actions to correct weak performance, and centralized decision-making
- Build on and promote those QWL dimensions leading to relatively high job satisfaction. The four most important dimensions include: (a) morale and motivation, (b) supervision, (c) appointments, promotions, and transfers, and (d) economic well-being. A review of the specific questions in the questionnaire (Appendix 1) composing each of these dimensions will give further guidance.
- In that midwives have the highest score on the largest number of QWL dimensions, conduct further research on how this may be explained and replicate, as appropriate, with other medical staff occupations.
- In that MOH dentists have the lowest average QWL score, give special emphasis to improving those dimensions that have a low score. Since UNRWA dentists have the highest average QWL score, an exploration of the reasons for this may be instructive for MOH dentists.

### ***3.5.2 MOH support staff***

- As with MOH medical staff, develop policies, programs and procedures that will improve those QWL dimensions that have the lowest scores. For the support staff these include: economic well-being (same as medical staff), centralized decision-making (same as medical staff), making more clear the policies, goals and procedures related to the support staff.
- As with the medical staff, build on and promote those QWL dimensions leading to the relatively high job satisfaction scores of support staff. For the support staff, the six most important dimensions include: (a) morale and motivation, (b) supervision, (c) participation in decision-making (d) economic well-being, and (e) work group relations.

In addition to the six recommendations summarized above, a theme common to both medical and support staff is the relatively unfavorable attitudes towards the extent to which decision-making is centralized. Developing and testing, with a control group, a decentralized decision-making model in one or two governorates could be considered.

---

# 1. Introduction

## 1.1 Background

In cooperation with the Hashemite Kingdom of Jordan, USAID/Jordan has developed a program to improve basic primary health care through an integrated package of family health services in which reproductive health, child health, adult health and health prevention and promotion will be delivered by a family health provider team. This project, called Primary Health Care Initiatives (PHCI), is being implemented throughout the country by the international consulting firm Abt Associates, Inc. in cooperation with Ministry of Health.

The project has six major interventions which include: (a) quality assurance, (b) training, (c) health communication and marketing, (d) management information systems, (e) applied research, and (f) renovating and equipping selected facilities. In addition, all primary care facilities will receive a basic set of equipment and supplies while approximately 40 facilities will be physically upgraded. The combination of these inputs is designed to increase access to and quality of health services in Jordan. In turn, this is expected to lead to improvements in client and provider satisfaction as well as more appropriate utilization of health services and, ultimately, improvements in health status indicators. The five-year life of this project presents the opportunity to empirically test the validity of these assumptions. This study, along with the “health status”<sup>1</sup> study, are the primary studies evaluating the overall impact of the project.

## 1.2 Purpose and Objectives

The broad purpose of the overall study is to evaluate the impact of improvements in quality of services expected from the PHCI project interventions on various dimensions of the quality of work life in the MOH and different dimensions of client satisfaction.

This report presents the findings of the first phase of the study and has two primary objectives:

- To measure and assess the quality of work life in the MOH with special attention to provider satisfaction.
- to identify the determinants of job satisfaction among MOH officials working in the Governorates.

The companion report, entitled *Client Satisfaction with Jordan’s MOH Services*,<sup>2</sup> analyzes the level and determinates of various dimensions of client satisfaction with MOH services.

---

<sup>1</sup> Arabaji, Ali, *Utilization of Health Services Delivery and Health Status Study (Pretest Phase)*, Primary Health Care Initiatives, Abt Associates Inc. and Ministry of Health, Government of Jordan, January 2002

<sup>2</sup> Yoder, Richard, *Client Satisfaction with Jordan’s MOH Services*, Primary Health Care Initiatives, Abt Associates Inc. and Ministry of Health, Government of Jordan, forthcoming.

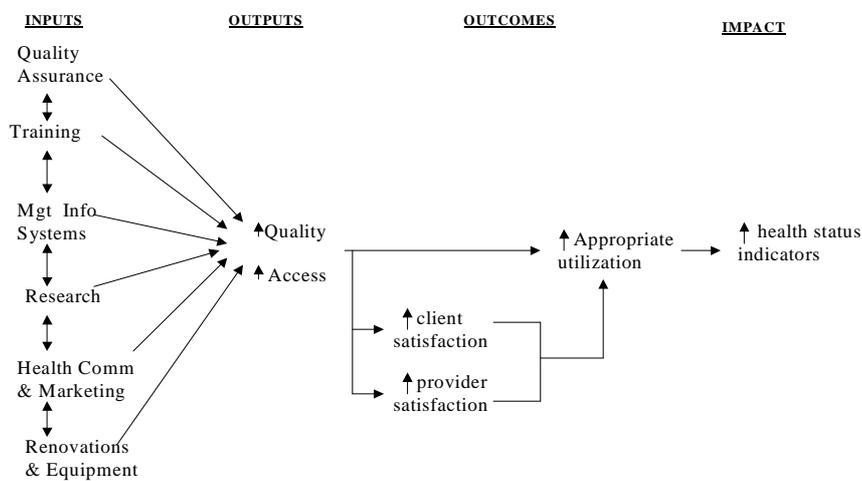
---

## 2. Methodology

### 2.1 A conceptual model

A model for conceptualizing the relationship between project inputs and impact is shown in Exhibit 1.

**Exhibit 1: Project Evaluation Framework**



The project design assumes that inputs of Quality Assurance, training, MIS, etc., will improve access to and quality of health services – two key goals of the project. In turn, this will lead to improvements in client and provider satisfaction as well as appropriate utilization of health services and, ultimately, improvements in health status. The three evaluation research studies will test the validity of these assumptions.

The subject of the current study, Quality of Work life in the MOH, falls under the provider satisfaction component of the model. The “Utilization of Health Services...” study prepared by Arbaji (see footnote 1) is an outcome study and falls under the “appropriate utilization” and the “health status indicators” components of the evaluation framework in Exhibit 1. As can be observed in the framework above, the primary intended outcome, and concern, of the project is improvements in health status indicators.

## 2.2 Study design

*This study is a quasi-experimental design in which there is random selection of respondents as well as a pre-test and post-test with two control groups. This is illustrated as follows:*

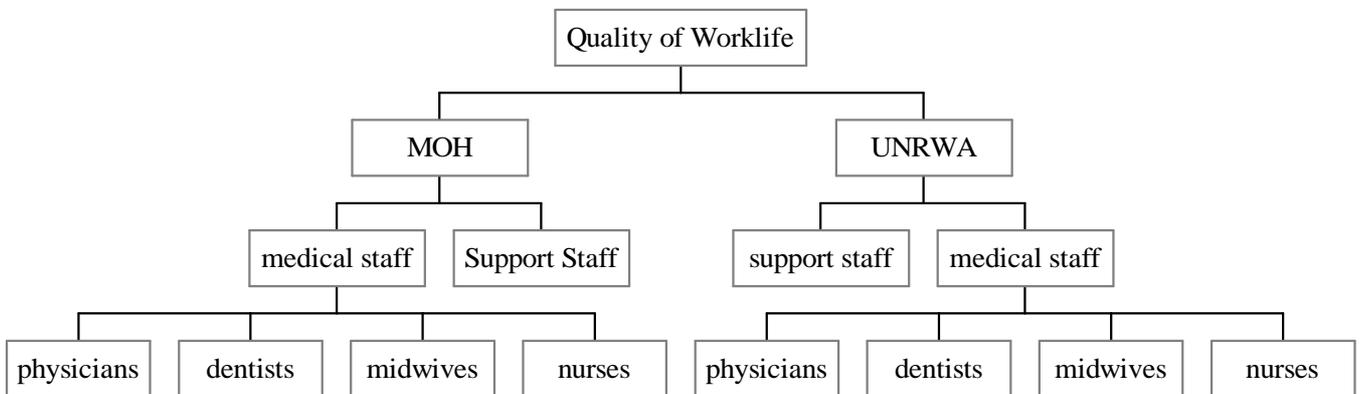
		Sept 2000		May 2004
MOH employees of certified facilities (experimental group):	[R]	O <sub>1</sub>	X	O <sub>2</sub>
MOH employees of non-certified facilities (control group)	[R]	O <sub>3</sub>		O <sub>4</sub>
UNRWA employees (control group):	[R]	O <sub>5</sub>		O <sub>6</sub>

where,

- O<sub>1</sub> = Provider satisfaction scores of MOH employees in certified facilities (experimental group) *before* project interventions
- O<sub>2</sub> = Provider satisfaction scores of MOH employees in certified facilities (experimental group) *after* project interventions
- O<sub>3</sub> = Provider satisfaction scores of MOH employees in non-certified facilities (control group) *before* project interventions
- O<sub>4</sub> = Provider satisfaction scores of MOH employees in non-certified facilities (experimental group) *after* project interventions
- O<sub>5</sub> = Provider satisfaction scores of UNRWA employees (control group) *before* project interventions
- O<sub>6</sub> = Provider satisfaction scores of UNRWA employees (control group) *after* project interventions
- X = PHCI interventions (Q.A., training, research, HMIS, HCM, renovations and equipment). A certification system has been designed to score achievements from the interventions at each health facility on a scale of 0 – 100. When the interventions result in a score of 80% or more, the health facility is considered certified. Health facilities that achieve a score of 40% or less will be considered non-certified.
- R = Random selection of employees

The overall design and structure of the study can also be understood through the diagram shown in Exhibit 2. Comparisons with respect to the QWL dimensions are made at three different levels. First, QWL scores are compared between the MOH and UNRWA. Second, comparisons are made between the medical staff of MOH and UNRWA, followed by support staff comparisons. Lastly, comparisons are made between MOH and UNRWA physicians, MOH and UNRWA dentists, MOH and UNRWA midwives, and MOH and UNRWA nurses. Thus, fourteen sets of comparisons will be made - from the most aggregated level down to the most disaggregated level. Through such a process, more discriminating analyses can be done and more specific areas identified as to where the interventions have, or have not, made a difference. Further, more specific recommendations can be made with respect to improving the quality of work life.

**Exhibit 2: QWL Study Design Structure**



### 2.3 Sample selection

A stratified two-stage cluster sampling design was used. The first stage involved selection of the health facilities while the second stage involved selection of the employees at each of the sampled facilities. For the first stage, the country was divided into its three regions: north, central and south. Within each of these regions, all Primary Health Care facilities (PHCs) and Comprehensive Health Care facilities (CHCs) were listed for inclusion into the sampling frame; this is shown in column 2 and column 3 of Table 2.1.

Of the total 471 facilities used in the sampling frame, 42 were CHCs and 329 were PHCs. From this population of facilities, the sample was drawn systematically using probability proportionate to size methods (column 5 of Table 2.1) and then adjusted slightly to give the final number of facilities, by type, to sample from each stratum (column 5).

**Table 2.1: MOH health facilities and sample by region and type of facility**

Region	Health facility type	Number of Facilities (N)	Sampled Facilities (n)	Adjusted Sample (adj n)
North	CHC	11	6	6
North	PHC	141	30	29
Central	CHC	20	11	11
Central	PHC	124	30	31
South	CHC	11	6	6
South	PHC	64	16	15
Subtotal	CHC	42	23	23
Subtotal	PHC	329	76	75
<b>Total</b>		371	99	98

Sampling of employees, the second stage, was done by first dividing all employees into two groups: (a) physicians, dentists, midwives, and certified nurses, and (b) all other job categories. For both groups, the sample size was determined according to the number of employees in each job category at each facility. If the number was three or less, all were selected. If the number was between four and nine, three individuals were randomly selected from that group. If the number was ten or more, six were randomly selected for inclusion into the sample. The list of all MOH facilities and employees was obtained from the MOH and used to select facilities and employees to include in the sample.

To reduce non-response rate in either of the two categories, two additional individuals from each category were selected to serve as substitutes. Thus, where the total number of staff in each of the two groups allows, two additional individuals were selected to substitute for a sampled employee(s) who were absent the day of the interview. There were up to three revisits to the facility to find the sampled individual or their substitutes. This sampling method leads to a confidence level of above 95 percent with a precision level of five percent.

Using the above methods, PHCI provided MRO with the list of all sampled facilities and sampled employees working in the sampled facilities. The actual interviewing and collection of data was contracted out to the Market Research Organization (MRO).

## 2.4 Calculating weights

In drawing a sample of providers from the population of providers, it is important that this sample mirrors as closely as possible the population from which it was drawn. The most common way of doing this is by weighting the sample of study subjects after they have been drawn. The type of weighting procedure used in this study is expansion weights and is calculated as follows:

$$EW = W^1 * W^2$$

where

EW = the expansion weight for each study subject (provider),

$W^1$  = the expansion weight for each health center selected from the stratum. This is the inverse of the probability of selecting a health center in the stratum. The probability of selecting a health center is calculated by dividing the size of each health center in a stratum by the sum of the sizes of all health centers in the same stratum,

$W^2$  = the expansion weight for each provider selected from each health center. This is the inverse of the probability of selecting a provider in a health center in the stratum. The probability of selecting a provider is calculated by dividing the total number of providers selected in the sample in a facility by the total number of providers in that same facility.

Weighting the sample in this way is designed to reflect the actual number and distribution of cases (providers) in the population.

## 2.5 UNRWA Sampling

According to the 1999 Annual Report of UNRWA,<sup>3</sup> there are 23 health centers in Jordan. Thirteen of these are inside official refugee camps and ten are outside camps. As of 31 December 1999, there were 1,541,000 registered refugees with 278,000 (18%) in ten camps. The majority of the camps are in the Central region; none are in the South. Thirteen of the health centers provided the full set of services and are most similar to those of the MOH. In that the population of the health centers was relatively small, all thirteen facilities were used to select employees for the sample.

UNRWA employees were divided into two groups and selected the same way as was done for the MOH. A total of 49 medical staff (physicians, dentists, midwives and nurses) and 74 paramedical and support staff were sampled from the following health centers: Irbid, Amman New Camp, Jebal Hussein, Baqaa Camp, Zarqa Camp, Marka -

---

<sup>3</sup> United Nations Relief and Works Agency for Palestinian Refugees in the Near East (UNRWA), "Annual Report of the Department of Health 1999", p. 78.

Hittin Camp, Husn - Azmi Al Mufti Camp, Jerash Camp, Suf Camp, Amman Town - Al Weibdeh, Amir Hassan, Quarter, Awajan, and Talbieh Camp. This sampling method leads to a confidence level of above 95 percent with a precision level of five percent.

## 2.6 Variables and indicators

There are 12 variables in this study that measure different aspects, or dimensions, of the Quality of Work Life among health sector workers. While there are a variety of variables that theoretically can be used to measure different aspects of the Quality of Work Life, 12 were selected on the basis of management and organizational theory, similar studies done elsewhere in similar settings, experience in the field, discussions with MOH colleagues, and researchers from two universities in Jordan. These variables, and their definition, are show below:

- **Job satisfaction:** the extent to which employees are satisfied with their jobs.
- **Participation in decision-making:** the extent to which employees feel they participate in decisions that affect their work.
- **Morale and motivation:** the extent to which employees are motivated to work and feel a common sense of purpose and loyalty to their work; *esprit de corps*
- **Centralization of decision-making:** the extent to which employees feel decisions made in the field must be approved by a senior official at MOH headquarters or by a senior supervisor.
- **Supervision:** the extent to which employees feel their supervisor insists on high quality work, provides good support and guidance, solves problems, and is fair.
- **Staff development and skill use:** the extent to which employees feel their jobs make good use of their skills and training, and that they have the opportunity to improve their skills.
- **Appointments, promotions and transfers:** the extent to which employees are satisfied with the opportunities available for career advancement, and that appointments, promotions and transfers are done equitably.
- **Economic well-being:** the extent to which employees feel that their salary and benefits are adequate and fair, and that they have job security.
- **Organizational climate:** the extent to which employees feel there is an atmosphere of co-operation in the Ministry and that senior management is serious about correcting problems.
- **Performance and discipline:** the extent to which employees feel that discipline is a problem in the ministry, that poor performance is not tolerated, and that effective corrective action is taken against poor performance.
- **Clarity of policies, goals and procedures:** the extent to which employees are satisfied with the level of clarity of policies, goals, and procedures.
- **Work group relations:** the extent to which employees who work under the same supervisor relate well to each other, are able to resolve differences, and provide mutual support and encouragement.

Each of these 12 different dimensions of work life was derived from a composite index consisting of three to 14 questions. Each question used a Likert-type summated rating scale where employees responded to a ten-point “Strongly Disagree” to “Strongly Agree” scale. The values from each index question were combined into a single composite score for each of the 12 work life dimensions. Thus, for example, instead of using one question to assess the extent of an employees job satisfaction (such as “Are you satisfied with your job?”), ten questions were used which, when combined into one score, give a more accurate measure of job satisfaction.

Approximately 40 percent of the questions were stated negatively for two reasons: (a) as a means of reducing bias resulting from “inattentive respondents” who may have a tendency to mark the same answer all the way down the page, and (b) research elsewhere indicating that there is a tendency to agree with positively stated questions. The remaining 60 percent of the questions were stated positively. To create a single score for each dimension, all negatively stated questions needed to be reversed and were done so in the following manner: 5 ↔ 6; 4 ↔ 7; 3 ↔ 8; 2 ↔ 9; 1 ↔ 10. A five or seven point Likert scale is often used in surveys such as this; in this study, however, a ten-point scale was used in order (a) to have a more discriminating measure with which to compare change over the life of the project, and (b) to allow for use of more rigorous statistical techniques, such as regression analysis, that is possible with interval or ratio level data

In addition to the 12 main work life dimensions or variables, eleven biographical and background variables were included as a means of controlling for extraneous affects on the main variables. These included:

- Age
- Gender
- Years of education
- Salary – monthly net
- Marital status
- Years worked in government
- Years worked in employee’s current location
- Years since employee’s last promotion
- Governorate – in which employee is working
- Job category: medical staff and paramedical/support staff
- Job title for medical personnel: physician, dentist, midwife and nurse
- Social status: occupation was used as the proxy variable, and included five categories:
  - **Upper middle class:** higher managerial and administrative positions, professionals such as physicians, dentists, pharmacists and lawyers
  - **Middle class:** intermediate managerial, administrative or professional in government, commercial and industrial sectors, officers in armed forces, land owning farmers, executives and managers in skilled industries

- **Lower middle class:** supervisory or clerical and junior administrative or professional positions; draughtsman, equipment operators, supervisor, assistant nurses, non-officer in military
- **Skilled working class:** foreman, carpenter, mechanics, technicians, practical nurses
- **Semi and unskilled working class:** cleaners, laborers, messengers.

The survey instrument, shown in Appendix 1, is a questionnaire consisting of 74 questions and ten biographical and background questions. The 74 questions were randomized so that the respondents were unable to associate specific questions with any of the 12 QWL dimensions. The English version was discussed with MOH colleagues as well as researchers from two Jordanian universities. It was then translated into Arabic and pilot tested among 24 providers randomly selected from both categories of employees. Questions that were redundant, not clearly understood, or questions that did not elicit the intended information were revised or eliminated. The Arabic questionnaire was then back translated into English to verify accuracy and consistency.

For the UNRWA questionnaire, names and terms were adjusted to fit the UNRWA context. Otherwise, it was the same as the MOH questionnaire.

## **2.7 Data collection**

Five teams of interviewers collected the data between 5-22 November 2000. To reduce bias in administering the questionnaire and other forms of non-sampling error, several measures were taken. First, MOH personnel were not used as data collectors. Rather, an independent research firm, Market Research Organization, was contracted for this. Secondly, the questionnaire was self-administered. Questionnaires were distributed at the facilities and, when completed, placed into an envelope that was collected later by the field worker. Thirdly, all questionnaires were completed (a) anonymously to help ensure confidentiality and (b) independently, as a means of avoiding “group think.” Fourthly, and although each question fit under a particular Quality of Work Life dimension, all questions were randomized in the questionnaire and then returned to their original position for data analysis.

## **2.8 Data Analysis**

Following collection of the data, it was entered, coded, and cleaned by the contractor. The contractor did validation and consistency checks. Once the raw data sets were delivered to PHCI, checks were done for various kinds of errors or inconsistencies such as data entry errors, missing data or outliers in the data.

The data were analyzed using a variety of statistical methods. Since the majority of the data was interval scale, analysis of variance and linear regression were used frequently. Mean scores, as opposed to proportions, are given greater use in this study in that they lend themselves more readily to testing differences between the pretest and posttest scores. When F-ratios were found to be significant, the Bonferroni test typically was used to test for significant differences between three or more means. T-tests were used in

multiple regression procedures to test for the independent effect of an independent variable on a dependent variable. Nominal and ordinal scale data, such as marital status or gender, were analyzed using cross tabulations and  $\chi^2$  tests. Statistical Package for the Social Sciences (SPSS) was used to analyze the data.

It should also be noted that in the presentation of the findings, more statistical details (such as statistical tests and significance, standard deviations, confidence intervals, etc.) are included than what is normal. The reason for this is that it is important to leave a clear record for the post-test study so that the various methods can be replicated and results compared, i.e., reliability and validity.

## 3. Findings

### 3.1 Background variables

Before presenting the findings of the various quality of work life (QWL) dimensions, the background variables will be summarized. These background variables, of which there are eleven, were included in the study in order to understand the overall characteristics of the sample as well as to use as controls for extraneous affects on the main QWL variables. First, data for the MOH medical and support staff will be presented, followed by UNRWA medical and support staff. Detailed tables of the background variables are included in Appendix 2.

#### 3.1.1 MOH medical staff

Table 3.1.1 summaries the weighted values of the categorical control variables, with the sum of each variable totaling 599. As the data show, male providers are more than half the total (58.5%) – primarily because of the larger number of male physicians.

The larger share of providers who are married (85.1%) is as expected. In that physicians and dentists are classified as “upper middle class,” and since Jordan’s health care system is doctor oriented, it is no surprise that the largest share of the sample fall in the “upper middle class” group (76.3%).

The relatively sophisticated nature of Jordan’s health care system is supported by the large share of physicians (58.8%) in the sample, along with dentists (17.5%) and midwives (16.1%). This contrasts with staffing patterns typical of low-income country health systems that are dominated by nurses and paramedical staff.

By Governorate, Amman and Irbid have the largest share of the sample at 42.7 percent and 18.3 percent respectively. This is as expected in that the largest share of Jordan’s population is concentrated in these two Governorates.

**Table 3.1.1: Characteristics of MOH medical staff\***

Variable	N	%
<b>Gender</b>		
Male	350	58.5
Female	249	41.5
<b>Marital status</b>		
Married	509	85.1
Single	89	14.9
<b>Social Status</b>		
Upper Middle	457	76.3
Lower Middle	142	23.7
<b>Job Category</b>		
Physician	352	58.8
Dentist	105	17.5
Midwife	96	16.1
Nurse	45	7.6
<b>Governorate</b>		
Amman	256	42.7
Madaba	8	1.3
Zarqa	28	4.6
Balqa	47	7.8
Irbid	110	18.3
Ajloun	11	1.8
Jerash	18	3.0
Mafrq	19	3.1
Karak	41	6.9
Talfileh	18	2.9
Ma’an	30	5.0
Aqaba	15	2.5

\* weighted values; sum of each variable is 599

The remaining background variables are continuous in nature and thus can be summarized by showing means and standard deviations as shown in Table 3.1.2. It should be noted that none of these variables seem to be particularly out of the ordinary.

### 3.1.2 MOH support staff

This section summarizes background variables for MOH support staff. Table 3.1.3 shows the weighted values of the categorical control variables, with the sum of each variable totaling 2611. Unlike MOH medical staff, female providers dominate among support staff with nearly 65 percent of the total.

Since there are approximately 25 categories of support staff, analyses are not done by job category. However, and as shown in Appendix XX, the three largest groups are assistant nurses and practical nurses which, when combined, approximate 44 percent of the total.

Due to the dominance of assistant and practical nurses, the largest share of support staff (90 %) falls in the lower middle and skilled labor social status group.

By Governorate, the distribution of support staff is slightly different from medical staff. Amman and Irbid continue to have the largest share of the sample but at a smaller percentage (27.9 % and 14.7 % respectively) but Karak and Balqa follow close behind with 14.3 % and 10.2 % respectively.

What this suggests is that the two largest population centers are dominated by more highly trained medical staff, while the other governorates have a larger share of less highly trained staff.

**Table 3.1.2: Sample statistics of selected control variables, MOH medical staff**

Variable	N	Mean*	Std. Deviation*
age	599	39	8.1
years of education	599	18	2.7
years worked in Civil Service	599	10	6.0
years worked in current location	599	4.5	4.0
months since last promotion**	406	36	22.2
monthly net salary (JD)	599	397	148.5

\* values are rounded

\*\* excludes those who were never promoted which is 193 or 32% of total

**Table 3.1.3: Sample characteristics of MOH support staff\***

Variable	N	%
<b>Gender</b>		
Male	921	35.3
Female	1690	64.7
<b>Marital status</b>		
Married	2155	82.5
Single	445	17.0
Widowed	12	0.5
<b>Social Status</b>		
Upper Middle	38	1.4
Lower Middle	1556	59.6
Skilled labor	801	30.7
Unskilled labor	216	8.3
<b>Governorate</b>		
Amman	727	27.9
Madaba	71	2.7
Zarqa	130	5.0
Balqa	267	10.2
Irbid	383	14.7
Ajloun	96	3.7
Jerash	77	2.9
Mafraq	155	5.9
Karak	373	14.3
Talfileh	90	3.4
Ma'an	170	6.5
Aqaba	72	2.8

\* weighted values; sum of each variable is 2611

Table 3.1.4 shows the means and standard deviations of the remaining background variables, which are continuous. As with the medical staff, none of these variables seem to be particularly out of the ordinary or depart from expectations. Average years of education are 12, compared with 18 for medical staff, and average salaries are about 60 percent less than medical staff salaries. The remaining variables are comparable.

**Table 3.1.4: Sample statistics of selected control variables, MOH support staff**

Variable	N	Mean*	Std. Deviation*
age	2611	35	6.0
years of education	2611	12	2.9
years worked in Civil Service	2611	12	6.2
years worked in current location	2611	7	5.0
months since last promotion**	1319	39	24.2
monthly net salary (JD)	2611	161	30.8

\* values are rounded

\*\* excludes those who were never promoted which is 1293 or 49.5 % of total

### 3.1.3 UNRWA medical staff

This section summarizes background variables for UNRWA medical staff. All UNRWA statistics are unweighted.

According to the data in Table 3.1.5, and without going into detail, it is simply noted that comparison of UNRWA medical staff background variables with MOH medical staff background variables shows considerable similarities with some minor differences. For example, gender ratios are similar, and both systems are physician oriented; however, UNRWA has a larger proportion of midwives.

**Table 3.1.5: Sample characteristics of UNRWA medical staff\***

Variable	N	%
<b>Gender</b>		
Male	30	61.2
Female	19	38.8
<b>Marital status</b>		
Married	45	91.8
Single	4	8.2
<b>Social Status</b>		
Upper Middle	30	61.2
Lower Middle	19	38.8
<b>Job Category</b>		
Physician	24	49.0
Dentist	6	12.2
Midwife	10	20.4
Nurse	9	18.4
<b>Governorate</b>		
Amman	16	32.7
Zarqa	12	24.5
Irbid	9	18.4
Jerash	6	12.2
Balqa	6	12.2

\* unweighted values; sum of each variable is 49

**Table 3.1.6: Sample statistics of selected control variables, UNRWA medical staff**

Variable	N	Mean*	Std. Deviation*
age	49	41	8.5
years of education	49	18	2.5
years worked in Civil Service	49	9	5.4
years worked in current location	49	4	3.5
months since last promotion**	34	40	45.9
monthly net salary (JD)	49	484	197.6

\* values are rounded and unweighted

\*\* excludes those who were never promoted which is 15 or 31% of total

Table 3.1.6 shows means and standard deviations of the continuous variables. With the exception of salary, all variables are very similar to the MOH medical staff. Average UNRWA medical staff salaries are approximately 18 percent greater than salaries of MOH medical staff.

### 3.1.4 UNRWA support staff

Table 3.1.7 summarizes sample characteristics of UNRWA support staff. As with UNRWA medical staff, the values for the support staff are unweighted.

In general, there are notable differences in UNRWA support staff characteristics from MOH support staff. There is a greater gender balance, more employees who are married, and more who fall in the lower middle social status group. In addition, there appears to be a more even distribution of support staff among the five governorates.

**Table 3.1.7: Sample characteristics of UNRWA support staff\***

Variable	N	%
<b>Gender</b>		
Male	37	50
Female	37	50
<b>Marital status</b>		
Married	69	93.2
Single	5	6.8
<b>Social Status</b>		
Lower Middle	61	82.4
Skilled labor	6	8.1
Unskilled labor	7	9.5
<b>Governorate</b>		
Amman	28	37.8
Zarqa	18	24.3
Irbid	10	13.5
Jerash	12	16.2
Balqa	6	8.1

\* unweighted values; sum of each variable is 74

**Table 3.1.8: Sample statistics of selected control variables, UNRWA support staff**

<b>Variable</b>	<b>N</b>	<b>Mean*</b>	<b>Std. Deviation*</b>
age	74	36	6.6
years of education	74	14	1.4
years worked in Civil Service	74	10	6.5
years worked in current location	74	7	5.4
months since last promotion**	45	52.7	59.6
monthly net salary (JD)	74	273	58.2

\* *values are rounded and unweighted*

\*\* *excludes those who were never promoted which is 29 or 39.2 % of total*

For the continuous background variables, as shown in Table 3.1.8, there is little difference from MOH support staff.

The only exception is monthly salary where the average UNRWA support staff salary is approximately 39 percent more than the average salary of MOH support staff.

## 3.2 Quality of Work life by job category: MOH and UNRWA

The purpose of this section is to present the Quality of Work life scores for the MOH and UNRWA by four job categories of medical staff (physicians, dentists, midwives, nurses) and for the support staff. Comparisons are made within and between the MOH scores and the UNRWA scores. It is this section that will be of particular value when assessing the impact of the PHCI project interventions in that posttest scores for each of the QWL dimensions will be placed parallel to the pretest scores and comparisons can be made and conclusions made.

Section 3.3, on the other hand, examines in greater detail the QWL by assessing each of the 12 QWL dimensions and can be used for making recommendations for improving the QWL.

### 3.2.1 Medical staff

The data in Table 3.2.1 show the mean QWL scores of all MOH and UNRWA medical staff (doctors, dentists, midwives and nurses) for all 12 Quality of Work Life dimensions. For the MOH the dimensions that have the most favorable attitudes are job satisfaction (7.30), morale and motivation (6.61), and the quality of supervision (6.52). The least favorable attitudes are with economic well-being (salary, benefits and job/income security) with a mean score of 4.75, MOH practices with respect to tolerating poor performance and taking corrective action with a mean score of 4.81, and the extent to which decision-making is centralized (5.22).

**Table 3.2.1: Attitudes of MOH and UNRWA Medical staff towards 12 Quality of Work Life dimensions\***

Work life Dimension	MOH (Intervention) (n = 599)	UNRWA (Control) (n = 49)
Job satisfaction	7.30	7.54
Participation in decision-making	5.70	5.55
Morale and motivation	6.61	6.89
Centralization of decision making	5.22	5.30
Supervision	6.52	7.10
Staff development and skill use	6.43	7.03
Appointments, promotions and transfers	5.70	5.65
Economic well-being	4.75	5.37
Organizational climate	5.71	5.44
Performance and discipline	4.81	5.84
Clarity of policies, goals and procedures	5.31	6.03
Work group relations	5.29	6.55
* 1 = very unfavorable attitudes, 10 = very favorable attitudes		

For UNRWA, the work life dimensions that had the most favorable attitudes were job satisfaction (7.54), supportive supervision (7.10), and staff development and skill use (7.03). Least favorable attitudes were with the extent to which decision-making is centralized (5.30), economic well-being (5.37), and organizational climate (5.44).

In general, for nine of the twelve QWL dimensions, UNRWA medical staff has more favorable attitudes than MOH medical staff. This suggests that UNRWA has a more favorable quality of work life than MOH. Job satisfaction and supervision both have favorable ratings for UNRWA and MOH. There is also a common dissatisfaction with the extent of economic well-being and centralization of decision-making among MOH and UNRWA medical staff.

### 3.2.1.1 QWL among physicians: MOH and UNRWA

In addition to examining attitudes of all medical staff combined towards the different QWL dimensions, also examined was the extent to which attitudes varied among the four occupations within the medical staff - physicians, dentists, midwives, and nurses – for both the MOH and UNRWA. The results for physicians are shown in Table 3.2.2.

**Table 3.2.2: Attitudes of MOH and UNRWA physicians towards 12 Quality of Work Life\***

Work life dimension	MOH (Intervention) n = 352	UNRWA (control) n = 24
Job satisfaction	7.19	7.60
Participation in decision-making	5.59	5.10
Morale and motivation	6.60	6.90
Centralization of decision making	5.15	5.33
Supervision	6.43	7.00
Staff development and skill use	6.49	7.10
Appointments, promotions and transfers	5.71	5.73
Economic well-being	4.65	5.71
Organizational climate	5.65	5.21
Performance and discipline	4.81	6.19
Clarity of policies, goals and procedures	5.21	5.92
Work group relations	5.29	6.60
* 1 = very unfavorable attitudes, 10 = very favorable attitudes		

Among MOH physicians, the QWL dimensions that received the most favorable ratings were nearly identical to what was found with all medical staff: job satisfaction, morale and motivation, and staff development and skill use (this being the exception). QWL dimensions receiving the least favorable ratings for physicians included economic well-being, clarity of MOH policies, goals and procedures, and performance and discipline. Among UNRWA physicians, job satisfaction received the most favorable rating (same as MOH physicians) followed by staff development and skill use, and supervision. QWL

dimensions receiving the least favorable ratings included participation in decision-making, organizational climate, and centralized decision-making.

In ten of the twelve QWL dimensions, UNRWA physicians had more favorable attitudes towards their work than did MOH physicians. Exceptions to this were participation in decision-making and organizational climate where MOH physicians had more favorable attitudes.

### 3.2.1.2 QWL among dentists: MOH and UNRWA

The data in Table 3.2.3 show attitudes of MOH and UNRWA dentists towards 12 quality of work life dimensions. MOH dentists have the most favorable attitudes towards job satisfaction, supervision and staff development and skill use (tied), and morale and motivation. They have the least satisfaction with economic well-being, performance and discipline, and work group relations.

**Table 3.2.3: Attitudes of MOH and UNRWA dentists towards 12 Quality of Work Life\***

Work life dimension	MOH (Intervention) n = 105	UNRWA (control) n = 6
Job satisfaction	7.35	7.73
Participation in decision-making	5.79	6.48
Morale and motivation	6.39	7.46
Centralization of decision making	5.07	5.58
Supervision	6.43	7.88
Staff development and skill use	6.43	7.72
Appointments, promotions and transfers	5.66	6.79
Economic well-being	4.47	5.54
Organizational climate	5.38	6.96
Performance and discipline	4.83	5.28
Clarity of policies, goals and procedures	5.19	7.11
Work group relations	4.98	6.78

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

UNRWA dentists, on the hand, have the most favorable attitudes towards supervision, job satisfaction and staff development and skill use. They are least satisfied with performance and discipline, economic well-being and centralized decision-making.

It is of interest to note that UNRWA dentist have more favorable attitudes towards the quality of work life for all 12 dimensions.

### 3.2.1.3 QWL among midwives: MOH and UNRWA

Turning to quality of work life among midwives in the MOH, the data in Table 3.2.4 show that the most favorable attitudes are with job satisfaction (7.83), morale and motivation (6.90) and supervision (6.82). Work life dimensions that are the least favorable are performance and discipline (4.74), centralization of decision-making (5.30) and economic well-being (5.36).

**Table 3.2.4: Attitudes of MOH and UNRWA midwives towards 12 Quality of Work Life\***

Work life dimension	MOH (Intervention) n = 96	UNRWA (control) n = 10
Job satisfaction	7.83	7.53
Participation in decision-making	5.96	6.10
Morale and motivation	6.90	6.50
Centralization of decision making	5.30	5.52
Supervision	6.82	6.73
Staff development and skill use	6.56	7.17
Appointments, promotions and transfers	5.93	5.45
Economic well-being	5.36	5.15
Organizational climate	6.24	5.58
Performance and discipline	4.74	5.50
Clarity of policies, goals and procedures	5.72	5.33
Work group relations	5.50	6.40

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

Among UNRWA midwives, job satisfaction has the most favorable rating at 7.53 followed by staff development and skill use (7.17) and supervision (6.73). Work life dimensions that have the least favorable ratings are economic well-being (5.15), clarity of policies, goals and procedures (5.33), and satisfaction with the way appointments, promotions, and transfers are made (5.45).

Unlike other categories of medical staff, MOH midwives have more favorable attitudes towards dimensions of work life than do UNRWA midwives, i.e., in eight of the twelve QWL dimensions, MOH midwives have more favorable attitudes towards their work than do UNRWA midwives. While reasons for this are not clear, preliminary analysis suggests that part of the reason may be the preferential treatment they receive due to they being on the front lines of family planning and reproductive health activities – a priority among many donors in the health sector providing assistance to the MOH.

### 3.2.1.4 QWL among nurses: MOH and UNRWA

The last group of medical staff examined is nurses. According to the data reported in Table 3.2.5, work life dimensions that have the most favorable ratings for MOH nurses are job satisfaction (7.83), morale and motivation (6.90), and supervision (6.82). Work

life dimensions with the least favorable ratings include performance and discipline (4.74), centralization of decisions making (5.30), and economic well-being (5.36).

**Table 3.2.5: Attitudes of MOH and UNRWA nurses towards 12 Quality of Work Life\***

Work life dimension	MOH (Intervention) n = 45	UNRWA (control) n = 9
Job satisfaction	6.86	7.24
Participation in decision-making	5.80	5.51
Morale and motivation	6.62	6.93
Centralization of decision making	5.89	4.80
Supportive supervision	6.74	7.29
Staff development and skill use	5.80	6.22
Appointments, promotions and transfers	5.15	4.89
Economic well-being	4.87	4.61
Organizational climate	5.80	4.92
Performance and discipline	4.95	5.63
Clarity of policies, goals and procedures	5.49	6.41
Work group relations	5.57	6.46

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

Among UNRWA nurses, the quality of work life dimensions that have the most favorable ratings are, supervision (7.29), job satisfaction (7.24), and morale and motivation (6.93). They are least satisfied with the extent of economic well-being (4.61), extent to which decision-making is centralized (4.80), and the way appointments, promotions and transfers are handled equitably (4.89).

MOH and UNRWA nurses are divided almost evenly in terms of their overall satisfaction with work life dimensions. Specifically, in seven of twelve dimensions of work life do UNRWA nurses have more favorable attitudes than MOH nurses. The three UNRWA nurses. Similarly, two of the three dimensions nurses are most dissatisfied with are the same for both UNRWA and MOH (economic well-being and appointments, promotions and transfers), although the ranking is different.

### 3.2.2 Support staff: MOH and UNRWA

This section presents a summary of the attitudes towards the 12 QWL dimensions of the support staff for MOH and UNRWA. Unlike the medical staff, which was divided into four medical job categories, support staff is presented as one group.

According to the data in Table 3.2.6, the three work life dimensions that have the most favorable ratings for MOH support staff are job satisfaction (7.14), supervision (6.81), and staff development and skill use (6.73). Work life dimensions that have the least favorable ratings are economic well-being (4.93), the extent to which decision-making is centralized (4.95) and the extent to which policies, goals and procedures are clear (5.09).

**Table 3.2.6: Attitudes of MOH and UNRWA Support staff towards 12 Quality of Work Life dimensions\***

Work life Dimension	MOH (intervention group) (n = 2611)	UNRWA (control group) (n = 74)
Job satisfaction	7.14	7.40
Participation in decision-making	5.93	5.63
Morale and motivation	6.49	6.83
Centralization of decision making	4.95	4.63
Supervision	6.81	6.87
Staff development and skill use	6.73	6.90
Appointments, promotions and transfers	5.53	4.86
Economic well-being	4.93	5.81
Organizational climate	5.85	5.33
Performance and discipline	5.44	5.88
Clarity of policies, goals and procedures	5.09	5.74
Work group relations	5.24	6.19

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

Among UNRWA support staff, work life dimensions that have the highest ratings are job satisfaction (7.40), staff development and skill use (6.90), and the quality of supervision (6.87). On the other hand, UNRWA support staff were least satisfied with the extent to which decision-making is centralized (4.63), the way in which appointments, promotions and transfers are handled (4.86), and organizational climate (5.33).

Work life dimensions which support staff are most satisfied are the same for both MOH and UNRWA support staff – although the rankings are not the same. Both MOH and UNRWA support staff share a dissatisfaction with the extent to which decision-making is centralized. Much like the medical staff, UNRWA support staff generally expresses greater satisfaction with the quality of their work life than does MOH support staff in that eight of twelve dimensions are higher for UNRWA staff.

It could also be noted that in comparing MOH medical staff and MOH support staff, two QWL dimensions are in the top three (job satisfaction and supervision); economic well-being and centralized decision-making are shared least favorable dimensions. For UNRWA, the three dimensions with which employees are most satisfied are the same for medical staff and support staff (job satisfaction, supervision, staff development and skill use); dimensions with which the least satisfaction is shown are the same also (economic-well being, centralized decision-making, and organizational climate).

### 3.3 Quality of Work life by work life dimension: MOH and UNRWA

The purpose of this section is to examine in greater detail what was presented in more summary form in Section 3.2. Each of the QWL dimensions will be analyzed. The greatest attention will be focused on the MOH, since UNRWA is included for purposes of a control group. Based on the analysis of this section, recommendations for improving the QWL can be drawn.

#### 3.3.1 Medical Staff

##### 3.3.1.1 Job Satisfaction

Job satisfaction is defined as the extent to which employees are satisfied with the work itself. It is a composite index of ten questions.

As can be seen in Table 3.3.1, the overall job satisfaction score is relatively high with a mean of 7.30. Midwives, with a score of 7.83, had the highest job satisfaction and had scores significantly higher than physicians or nurses. With a score of 6.86, nurses had the lowest job satisfaction followed by doctors at 7.19. The differences in job satisfaction scores are statistically significant between physicians and midwives ( $p = .002$ ) and between nurses and midwives ( $p = .002$ ).

**Table 3.3.1: Job satisfaction scores by Occupation, MOH**

Occupation	Mean	St. deviation	95% CI	
			Lower	Upper
physician	7.19	1.57	7.03	7.36
dentist	7.35	1.67	7.03	7.67
midwife	7.83	1.26	7.57	8.08
nurse	6.86	1.17	6.51	7.21
Total	7.30	1.53	7.18	7.42

Does job satisfaction differ when controlling for education, income, gender, and other control variables? Analysis shows that only monthly income is significantly related to job satisfaction ( $t = -3.83, p < .000$ ), and that is a negative relationship so that as income increases, job satisfaction decreases. Job satisfaction is also related significantly to governorate ( $F = 2.22, p = .012$ ) although there are no significant differences between any pairs of governorates.

Job satisfaction scores by medical occupation for UNRWA are shown in Table 3.3.2. Dentists have the highest job satisfaction while nurses have the lowest. However, none of the differences are statistically significant.

**Table 3.3.2: Job Satisfaction scores by occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	7.60	1.50
dentist	6	7.73	1.20
midwife	10	7.53	.91
nurse	9	7.24	1.50
Total	49	7.54	1.33

Cross tabulations between medical occupation and job satisfaction is shown in Appendix 3, Table A3.3.1.<sup>4</sup> Approximately 76 percent of all medical staff were very either very satisfied or satisfied with their jobs while less than six percent were very dissatisfied or dissatisfied with their jobs.

### 3.3.1.2 Participation in decision-making

Participation in decision-making is the second QWL variable examined. Participation is composite index consisting of seven questions and is defined as the extent to which employees feel they are involved in decisions that affect their work.

As can be seen in Table 3.3.3, overall attitudes towards participation are relatively neutral with a mean score of 5.7. Midwives, with a score of 5.95, had the most favorable attitudes towards the extent of participation in decision-making followed by nurses. With a score of

**Table 3.3.3: Participation scores by medical occupation, MOH**

Occupation	Mean	Std Deviation	95% CI	
			Lower	Upper
physician	5.59	1.75	5.41	5.77
dentist	5.79	1.79	5.44	6.13
midwife	5.95	1.72	5.60	6.30
nurse	5.80	1.25	5.43	6.17
Total	5.70	1.72	5.56	5.84

5.59, nurses had the least favorable attitudes towards participation. However, none of the differences are statistically significant.

Do overall attitudes towards participation vary when controlling for years of education, years worked in government, age, sex, and other such control variables? Three control variables were found to be significantly related to participation: years of education, gender, and social status. Specifically, there was a significant negative relationship between participation and years of education ( $t = -4.13$ ;  $p < 0.001$ ) indicating that as years of education increased amount medical staff, attitudes towards participation became less favorable, and vice versa. Secondly, male medical staff had more favorable attitudes towards participation than females ( $t = 5.85$ ;  $p < 0.001$ ). Thirdly, middle class staff had more favorable attitudes towards participation than did upper class ( $t = -2.39$ ,  $p = 0.02$ ).

<sup>4</sup> For all cross tabulations, the 10 point scale has been condensed to a 5 point scale where the extreme ends of the scale retain the same meaning, i.e., 1 = very unfavorable attitudes and 2 = very favorable attitudes.

For UNRWA, participation scores by medical occupation are shown in Table 3.3.4. Dentists had the most favorable attitudes towards participation in decision-making with a rating of 6.48. Physicians had the least favorable attitudes towards participation with a score of 5.10, reflecting an attitude of neither favorable nor unfavorable. None of these differences in scores were statistically significant.

**Table 3.3.4: Participation scores by occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	5.10	2.08
dentist	6	6.48	1.78
midwife	10	6.10	1.11
nurse	9	5.51	1.20
Total	49	5.55	1.78

Participation in decision-making was also analyzed by Governorate (Karak and Irbid medical staff having the most favorable attitudes towards participation) and income group (the highest income group, i.e., > JD 721 per month, had the most favorable attitudes towards participation); these results are shown in Appendix 4, Table A3.3.1 and Table A3.3.2.

In addition, cross tabulations between participation and medical occupation are shown in Appendix 5, Table A3.3.1. Nearly equal percentages of medical staff are either very satisfied or satisfied with the extent of participation in decision-making (36.5 %), or, are neutral about their attitudes (36.3%). Approximately 27 percent were very dissatisfied or dissatisfied with their jobs.

### 3.3.1.3 *Morale and motivation*

Morale and motivation is the third QWL variable examined. It is a composite index consisting of eight questions and measures the extent to which employees are motivated to work and feel a common sense of purpose and loyalty to their work.

According to the data in Table 3.3.5, the overall level of morale and motivation for all the medical professions is just above the neutral range. It is highest among midwives (6.90) followed by nurses (6.62) and physicians (6.60). Dentists have the lowest level of morale and

**Table 3.3.5: Morale and motivation scores by medical occupation, MOH**

Occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	6.60	1.50	6.44	6.76
dentist	105	6.39	1.57	6.08	6.69
midwife	96	6.90	1.52	6.59	7.20
nurse	45	6.62	1.05	6.31	6.94
Total	599	6.61	1.49	6.49	6.73

motivation at 6.39. None of the differences in the mean scores are significant so it can be concluded that there is no difference between levels of morale and motivation among the four medical occupations ( $F = 1.99, p = .113$ ).

Does the overall level of morale and motivation vary when controlling for variables such as income, education, gender, or years worked in government or in the same location? The analysis found that only governorate in which medical staff worked was significantly related to morale and motivation ( $F = 3.357, p < .001$ ).

Specifically, Kerak had the highest level of morale and motivation (7.18) followed by Irbid (7.08) and Jerash (7.03). The governorates with the lowest level of morale and motivation were Madaba (5.05) followed by Balqa (6.11) and Aqaba (6.31). Statistically significant differences were found with Irbid having higher morale and motivation than Amman ( $p = .02$ ), Madaba ( $p = .01$ ) and Balqa ( $p = .01$ ). In addition, Karak had significantly higher levels of morale and motivation than did Madaba ( $p = .02$ ) and Balqa ( $p = .04$ ).

Cross tabulations were done between morale and motivation, and, medical occupation; the results are shown in Table A3.3.1 of Appendix 6. Overall, approximately 55 percent of all medical staff had high levels of morale and motivation compared with the nine percent that had low morale and motivation.

For UNRWA, morale and motivation scores by medical occupation are shown in Table 3.3.6. Dentists had the highest levels of morale and motivation with a rating of 7.46. Midwives had the lowest levels of morale and motivation with a score of 6.50. None of these differences in scores were statistically significant.

**Table 3.3.6: Morale and motivation scores By occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	6.90	2.09
dentist	6	7.46	.91
midwife	10	6.50	1.40
nurse	9	6.93	1.22
Total	49	6.89	1.69

#### **3.3.1.4 Economic well-being**

This section examines economic well-being for the medical staff as a group as well as for each of the four types of medical staff. Economic well-being is a composite index consisting of eight questions and measures the extent to which employees feel that their salary and benefits are adequate and fair, and that they have job security.

According to the data in Table 3.3.7, economic well-being, with a mean score of 4.75, is ranked the lowest of all 12 QWL variables. On the other hand, a mean score of 4.75 on a 10-point scale suggests that MOH officials fall in the neutral range – neither satisfied or dissatisfied. Dentists, with a mean score of 4.47, are the most dissatisfied, followed by physicians with a score of 4.65. Midwives are the most satisfied with a mean score of 5.36. These differences in mean scores are statistically significant ( $F = 3.94$ ,  $p = .008$ ) with midwives having significantly higher scores than physicians and dentists ( $p < .05$ ).

**Table 3.3.7: Economic well-being scores by medical occupation, MOH**

Economic well-being	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
Physician	352	4.65	2.00	4.44	4.86
dentist	105	4.47	2.28	4.03	4.91
midwife	96	5.36	2.01	4.96	5.77
nurse	45	4.87	1.46	4.43	5.31
Total	599	4.75	2.03	4.59	4.91

Three control variables were significantly related to economic well-being: social status, age, and marital status. Specifically, there was a significant positive relationship between age and economic well-being so that as age increased, attitudes towards economic well-being also increased ( $t = 2.87$ ,  $p = .004$ ). In addition, single MOH officials were significantly more satisfied with their economic well-being than married officials ( $t = -2.508$ ,  $p = .012$ ). Further, medical staff with lower social status were more satisfied with their economic well-being than were medical staff with higher social status ( $t = -3.64$ ,  $p < .001$ ).

Cross tabulations between each medical staff occupation and economic well-being are show in Appendix 7. What the data show is that over two and one-half times as many of the medical staff was dissatisfied or very dissatisfied (48.2%) with their economic well-being as were satisfied or very satisfied with it (18.8%).

For UNRWA medical staff, like MOH medical staff, satisfaction with economic well-being was the lowest of all QWL dimensions. The mean score of 5.37, on the other hand, falls in the neutral range – neither satisfied nor dissatisfied. Physicians were the most satisfied (5.71) while nurses were the least satisfied (4.61) with their economic well-being. None of the differences, however, were statistically significant.

**Table 3.3.8: Economic well-being scores By occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	5.71	1.99
dentist	6	5.54	1.54
midwife	10	5.15	1.12
nurse	9	4.61	1.84
Total	49	5.37	1.77

### 3.3.1.5 Supervision

Supervision is a composite index consisting of fourteen questions and measures the extent to which employees feel their supervisor insists on high quality work, provides good support and guidance, solves problems, and is fair.

As reported in Table 3.3.9, the mean score for supervision is 6.52. While this is the third highest QWL mean score, following job satisfaction and morale and motivation, a score of 6.52 is at the lower end of the satisfied range.

**Table 3.3.9: Mean supervision scores by medical occupation, MOH**

Occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	6.43	1.76	6.25	6.62
dentist	105	6.43	1.90	6.06	6.80
midwife	96	6.82	1.34	6.54	7.09
nurse	45	6.74	1.04	6.43	7.05
Total	599	6.52	1.69	6.38	6.65

Midwives, with a mean score of 6.82, are the most satisfied with the quality of supervision, followed by nurses. Physicians and dentists expressed the most dissatisfaction with their supervision with a score of 6.43 each. However, none of these differences are statistically significant.

When controlling for the background variables, significant relationships were found with monthly salary and governorate. Specifically, monthly salary was negatively related to supervision such that as salary increased, attitudes towards supervision declined, and vice versa ( $t = -2.45$ ,  $p = .01$ ). Although Governorates as a group showed a significant relationship with supervision ( $F = 1.86$ ,  $p = .01$ ), no pairs of Governorates had a significant relationship – primarily because of differences in sample sizes.

Cross tabulations were done between the four groups of medical staff and five categories of supervision with the results shown in Table A3.3.1 of Appendix 8. Overall, approximately 55 percent of the medical staff was satisfied or very satisfied with their supervision while just under 15 percent were dissatisfied or very dissatisfied with it.

For UNRWA, supervision scores by medical occupation are shown in Table 3.3.10. Dentists had the highest levels of satisfaction with supervision with a rating of 7.88. Midwives had the lowest levels of morale and motivation with a score of 6.73. None of these differences in scores were statistically significant.

**Table 3.3.10: Supervision scores by Occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
Physician	24	7.00	1.45
Dentist	6	7.88	.90
midwife	10	6.73	.94
nurse	9	7.29	1.43
Total	49	7.10	1.31

### 3.3.1.6 Staff development and skill use

Staff development and skill use is defined as the extent to which employees feel their jobs make good use of their skills and training, and that they have the opportunity to improve their skills. It is a composite index consisting of three questions.

According to the data in Table 3.3.11, the mean score for all medical staff is 6.43. Of all the QWL variables, this ranks the fourth highest; in absolute terms, however, a score of 6.43 is in the neutral range – neither satisfied nor dissatisfied. Midwives, with a score of 6.56 are most satisfied how their skills are used and staff

**Table 3.3.11: Staff development and skill use scores by medical occupation**

Occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	6.48	1.41	6.34	6.63
dentist	105	6.43	1.22	6.20	6.67
midwife	96	6.56	1.81	6.19	6.92
nurse	45	5.80	1.38	5.38	6.21
Total	599	6.43	1.45	6.32	6.55

development they experience and are followed by physicians (6.48) and dentists (6.43). The group that is the most dissatisfied is the nurses with a score of 5.80. These differences are statistically significant ( $F = 3.30$ ;  $p = .02$ ) with physicians and midwives both having significantly higher scores than nurses ( $p < .05$ ).

Do overall attitudes towards staff development and skill use vary when controlling for variables such as gender, education, marital status, and age? The analysis showed that mean satisfaction scores of two variables were statistically significant: marital status, years since last promotion, years worked in government, and governorate. Medical staff that was married was significantly more satisfied with staff development and skill use (score of 6.511) than was single staff with a score of 5.996 ( $t = 3.09$ ,  $p = .002$ ). Secondly, satisfaction with staff development and skill use increased as the number of years since the last promotion increased ( $t = 3.12$ ,  $p = .002$ ) and as the number of years worked in government increased ( $t = 2.08$ ,  $p = .038$ ). In addition, medical staff of Irbid was significantly more satisfied (mean score = 6.906) with the extent of staff development and skill use than those from Amman (mean score = 6.136) governorate ( $p < .001$ ). Among other governorates, differences in satisfaction scores were not significantly different.

Cross tabulations were done with the results shown in Table A3.3.1 of Appendix 8. Overall, approximately 50 percent of the medical staff was satisfied or very satisfied with the extent of staff development and skill use with 8.9 percent being very dissatisfied or dissatisfied.

UNRWA supervision scores by medical occupation are shown in Table 3.3.12. Dentists had the highest levels of satisfaction with the extent of staff development and skill use with a rating of 7.88. Nurses had the lowest levels of satisfaction with a score of 6.22. None of these differences in scores were statistically significant.

**Table 3.3.12: Staff development and skill use scores by medical occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	7.10	1.75
dentist	6	7.72	.88
midwife	10	7.17	1.05
nurse	9	6.22	1.30
Total	49	7.03	1.49

### 3.3.1.7 Organizational Climate

Organizational climate is defined as the extent to which MOH officials feel there is an atmosphere of co-operation among MOH officials and that senior management is serious about correcting problems. It is a composite index consisting of four questions.

According to the data reported in Table 3.3.13, the overall mean score for organizational climate is 5.71 and ranks fifth among all twelve QWL variables. It also indicates that for all four occupational groups of medical staff fall in the neutral range regarding the extent to which there is a positive or negative organizational climate in the MOH.

**Table 3.3.13: Organizational Climate scores by medical occupation**

Occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	5.65	2.23	5.42	5.88
dentist	105	5.38	2.61	4.87	5.88
midwife	96	6.24	2.21	5.79	6.69
nurse	45	5.80	1.80	5.26	6.34
Total	599	5.71	2.28	5.53	5.89

Midwives, with a mean score of 6.24, are the most satisfied with the organizational climate followed by nurses (5.80) and physicians (5.65). Dentists are the least satisfied with a score of 5.38. The differences in mean scores are statistically significant ( $F = 2.62$ ,  $p = .050$ ) with midwives having significantly higher scores than dentists ( $p = .043$ ). Differences among the other occupational groups are not statistically significant.

When controlling for the biographical variables, three variables were significantly related to organizational climate: Governorate, socioeconomic status, and age. Specifically, medical staff working in Irbid Governorate have significantly higher scores than those working in Amman Governorate ( $p = .04$ ). Among other Governorates there is no statistically significant differences in organizational climate. In addition, medical staff with higher socioeconomic status (physicians and dentists) had significantly lower

organizational climate scores (5.59) than did medical staff with lower socioeconomic status (midwives and nurses) that had an organizational climate score of 6.10 ( $t = -3.32$ ,  $p = .001$ ). Age has a positive association with organizational climate so that as age increases, organizational climate scores were more positive. ( $t = 2.89$ ,  $p = .004$ ).

Cross tabulations were done between the four groups of medical occupations and the five categories of satisfaction with organizational climate and is shown in Table A3.3.1 of Appendix 10. Nearly 40 percent of all medical staff are satisfied or very satisfied with the Organizational Climate while approximately 31 percent are very dissatisfied or dissatisfied.

For UNRWA medical staff, the mean score for organizational climate is 5.44 which falls in the neutral range – neither satisfied nor dissatisfied. Dentists are the most satisfied with the organizational climate with a score of 6.96 while nurses are the least satisfied with organizational climate (4.92). None of these differences are statistically significant.

**Table 3.3.14: Organizational climate scores by Occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	5.21	2.13
dentist	6	6.96	1.74
midwife	10	5.58	2.04
nurse	9	4.92	1.81
Total	49	5.44	2.047

### 3.3.1.8 Appointments, promotions and transfers

Appointments, promotions and transfers is the eighth QWL variable examined. It is a composite index consisting of four questions and measures the extent to which employees are satisfied with the extent of opportunities available for career advancement, and that appointments, promotions and transfers are done equitably.

As can be seen in Table 3.3.1.5, overall attitudes towards appointments, promotions and transfers are relatively neutral with a mean score of 5.70. Midwives, with a score of 5.93, had the most favorable attitudes towards appointments, promotions and transfers

**Table 3.3.15: Appointment, Promotion and Transfer Scores by medical occupation, MOH**

Occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	5.71	1.47	5.56	5.87
dentist	105	5.66	1.66	5.33	5.98
midwife	96	5.93	1.94	5.54	6.33
nurse	45	5.15	1.09	4.82	5.48
Total	599	5.70	1.57	5.57	5.82

followed by physicians (5.71). With a score of 5.15, nurses had the least favorable attitudes. The differences between midwives and nurses are statistically significant ( $p = .034$ ). None of the other differences are significant.

Do overall attitudes of the medical occupations vary when controlling for gender, age, marital status, tenure in the MOH, education and other biographical variables? In addition to occupational group, the analysis found that appointments, promotions, and transfer attitudes vary significantly with three variables. Specifically, there is a positive relationship between the number of years since the last promotion increases and attitudes towards appointments, promotions, and transfers ( $t = 2.67, p = .008$ ). The mean score for married officials (6.34) is significantly higher than the mean score for single officials (5.43) ( $p < .001$ ). There are also significant differences in mean scores for the Governorates. Irbid's score of 6.34 is significantly higher than Amman score of 5.43 ( $p < .001$ ) and Ma'an score of 5.14 ( $p = .012$ ); Jerash's score of 6.80 is significantly higher than Amman score of 5.43 ( $p = .017$ ) and Ma'an score of 5.14 ( $p = .020$ ).

Cross tabulations were done between the four groups of medical occupations and the five categories of satisfaction with appointments, promotions and transfers and is shown in Table A3.3.1 of Appendix 11. Approximately 30 percent of all medical staff were found to be satisfied or very satisfied with the appointments, promotions and transfers while approximately 28 percent were very dissatisfied or dissatisfied.

UNRWA scores for appointments, promotions and transfers by medical occupation are shown in Table 3.3.16. Overall, medical staff was neither satisfied nor dissatisfied with a score of 5.65. Dentists had the highest levels of satisfaction with a score of 6.79. Nurses had the lowest levels of satisfaction with a score of 4.89. None of these differences in scores were statistically significant.

**Table 3.3.16: Appointments, promotions and Transfer scores by occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	5.73	1.47
dentist	6	6.79	1.54
midwife	10	5.45	1.38
nurse	9	4.89	2.06
Total	49	5.65	1.62

### 3.3.1.9 Clarity of policies, goals and procedures

Policies, goals and procedures is the eighth QWL variable examined. It is a composite index of three questions and is a measure of the extent to which employees are satisfied with the level of clarity of policies, goals and procedures.

According to the data in Table 3.3.17, the overall level of satisfaction with policies, goals, and procedures is neutral with a score of 5.31, i.e., MOH officials are neither satisfied nor dissatisfied. Of the twelve QWL dimensions, this ranks eighth. Scores are highest among midwives (5.72)

**Table 3.3.17: Clarity of policies, goals and procedures mean scores by medical occupation, MOH**

occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	5.21	2.10	4.99	5.43
dentist	105	5.19	2.07	4.78	5.59
midwife	96	5.72	1.82	5.35	6.09
nurse	45	5.49	1.81	4.95	6.03
Total	599	5.31	2.04	5.15	5.48

followed by nurses (5.49) and physicians (5.21). Dentists have the lowest level of satisfaction with a score of 5.19. In spite of these differences in mean scores, none are statistically significant so we can conclude that the level of satisfaction with appointments, promotions, and transfers among the four medical occupations are essentially the same ( $F = 1.82, p = .142$ ).

Does the overall mean score for appointments, promotions and transfers vary when controlling for education, gender, marital status, income, and other control variables? Analyses show that two control variables are significant. Years worked in the current location has a negative association so that as the number of years worked in their current location increases, the satisfaction with the level of clarity of policies, goals and procedures decreases ( $t = -2.72, p = .007$ ). Medical staff with higher socioeconomic status (physicians and dentists) had significantly lower satisfaction with the clarity of policies and goals scores (5.21) than did medical staff with lower socioeconomic status (midwives and nurses; score = 5.65) ( $t = -2.51, p = .012$ ).

Cross tabulations were done between the four groups of medical occupations and the five levels of satisfaction with policies, goals and procedures with the results shown in Table A3.3.1 of Appendix 12. Overall, a larger percentage (34.4%) is dissatisfied with the policies, goals, and procedures than are satisfied (31.5%).

**Table 3.3.18: Clarity of policies, goals and Procedures by occupation, UNRWA**

For UNRWA medical staff, the mean score for policies, goals and procedures is 6.03 as shown in Table 3.3.18, and falls in the neutral range – neither satisfied nor dissatisfied. Dentists are the most satisfied with a score of 7.11 while midwives are the least satisfied (4.92). None of these differences are statistically significant.

Occupation	N	Mean	Std. Deviation
physician	24	5.92	1.81
dentist	6	7.11	1.52
midwife	10	5.33	1.55
nurse	9	6.41	1.68
Total	49	6.03	1.74

### 3.3.1.10 Work group relations

This section examines work group relations, which is defined as the extent to which employees who work under the same supervisor relate well to each other, are able to resolve differences, and provide mutual support and encouragement. It is a composite index consisting of six questions.

As can be seen in Table 3.3.19, overall attitudes towards work group relations are neutral with a mean score of 5.29. In the 12 QWL variables, work group relations ranks ninth in terms of favorable attitudes. Nurses, with a mean score of 5.57, had the most favorable attitudes towards work group relations followed by midwives (5.50). With a score of 4.98, dentists had the least favorable attitudes. The higher score that midwives have over dentists is statistically significant ( $p = .013$ ) as well as the higher score that nurses have over dentists ( $p = .038$ ).

**Table 3.3.19: Work Group Relations mean scores by medical occupation, MOH**

Occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	5.29	1.19	5.16	5.41
dentist	105	4.98	1.21	4.74	5.21
midwife	96	5.50	1.33	5.24	5.77
nurse	45	5.57	1.17	5.22	5.91
Total	599	5.29	1.22	5.19	5.39

When controlling for differences in education, income, age, gender, etc., two variables were found to be significant: the number of years worked in the MOH and socioeconomic status. As the number of years worked in the MOH increased, satisfaction with work group relations also increased ( $t = 2.72$ ,  $p = .007$ ). In addition, medical staff with higher socioeconomic status (physicians and dentists) had significantly lower satisfaction with the work group relations (5.21) than did medical staff with lower socioeconomic status (midwives and nurses; score = 5.52) ( $t = -2.61$ ,  $p = .009$ ).

Cross tabulations were done between the four groups of medical occupations and the five categories of satisfaction with work group relations and is shown in Table A3.3.1 of

Appendix 13. Approximately 30 percent of the medical staff expresses dissatisfaction with work group relations while approximately 23 percent express satisfaction.

There is no person who is “very satisfied.”

UNRWA scores for work group relations by medical occupation are shown in Table 3.3.20. Overall, with a score of 6.55, medical staff are relatively satisfied with work group relations. Dentists had the highest levels of satisfaction with a score of 6.78. Midwives had the lowest levels of satisfaction with a score of 6.40. None of these differences in scores were statistically significant.

**Table 3.3.20: Work group relations score By medical occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	6.60	1.42
dentist	6	6.78	1.03
midwife	10	6.40	.98
nurse	9	6.46	1.70
Total	49	6.55	1.32

### 3.3.1.11 Centralization of decision-making

The eleventh QWL variable examined is the extent which decision-making is centralized; that is, the extent to which decisions made in the field must be approved by a senior official at headquarters or by a senior supervisor. A low score indicates that decision-making is more centralized while a high score indicates that decision-making is more decentralized. It is a composite index of six questions.

According to the data in Table 3.3.21, the mean score for all occupational groups is 5.22, indicating that MOH officials believe that decision-making is neither centralized nor decentralized. Scores are highest among nurses (5.89) indicating agreement that decision-making is *relatively* more decentralized as *compared* with midwives (5.30) and physicians (5.15). Dentists, with a score of 5.07, believe that, compared with the other groups, decision-making is decentralized. Note again, however, that all medical occupation groups feel “neutral” with respect to the extent that decision-making is centralized. Nurses have significantly higher scores than physicians ( $p = .006$ ) and dentists ( $p = .007$ ).

**Table 3.3.21: Centralization of decision-making by medical occupation, MOH**

Occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	5.15	1.38	5.01	5.30
dentist	105	5.07	1.34	4.81	5.33
midwife	96	5.30	1.64	4.97	5.63
nurse	45	5.89	1.37	5.48	6.30
Total	599	5.22	1.43	5.11	5.33

Do perceptions of the extent of centralization of decision-making vary when controlling for differences in education, salary, years worked in the MOH, gender, etc.? Analyses shows that in addition to occupational group, two control variables were significantly related to centralization perception: social status and gender. Thus, medical staff with lower social status (midwives and nurses) felt decision-making was more decentralized than staff with higher social status (physicians and dentists), ( $t = -3.41, p = .010$ ). In addition, male staff felt decision-making was more decentralized than female staff ( $t = 2.21, p = .028$ ). None of the other control variables were significantly related to centralization of decision-making.

Cross tabulations were done between the four occupational groups and the five categories of centralization with the results shown in Table A3.3.1 of Appendix 14. The largest percentage of medical staff (49%) were neutral regarding the extent to which decision-making is centralized or decentralized. On the other hand, more respondents disagreed (30.3%) than agreed (20.7%) that decision-making is decentralized.

For UNRWA medical staff, the mean score for the extent to which decision-making is decentralized is 5.30 as shown in Table 3.3.22, and falls in the neutral range – neither centralized nor decentralized. Dentists, compared with other groups, feel there is greater centralization of decision-making with a score of 5.58 while nurse feel the least centralization (4.80). None of these differences are statistically significant.

**Table 3.3.22: Centralization of decision-making Scores by occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	5.33	1.95
dentist	6	5.58	1.09
midwife	10	5.52	1.60
nurse	9	4.80	1.54
Total	49	5.30	1.70

### ***3.3.1.12 Performance and discipline***

Performance and discipline is a QWL variable that seeks to examine the extent to which discipline is a problem in the MOH, poor performance is not tolerated, and effective corrective action is taken against weak performance. Thus high mean scores indicate that weak performance is not tolerated and that when it does occur, effective corrective action is taken. It is a composite index consisting of three questions.

According to the data in Table 3.3.23, an overall mean score of 4.81 indicates that discipline is felt to be a problem and more effective corrective action needs to be taken against weak performance. The midwives score of 4.74, which is the lowest, indicates that they feel the strongest that there is a discipline problem and that more effective action needs to be taken. The highest score is among the nurses (4.95) who agree the least that discipline is a problem and that more effective action needs to be taken. In spite of these differences in mean scores, none are statistically significant so we can conclude that there is substantial agreement among the four occupational groups that discipline is a problem and more effective corrective action needs to be taken ( $F = .204, p = .894$ ).

**Table 3.3.23: Attitudes towards weak performance and discipline, MOH**

Occupation	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
physician	352	4.81	1.49	4.65	4.97
dentist	105	4.83	1.74	4.49	5.16
midwife	96	4.74	1.57	4.42	5.05
nurse	45	4.95	1.51	4.50	5.40
Total	599	4.81	1.55	4.69	4.97

Do overall attitudes vary when controlling for education, income, gender, age, etc? The analysis showed that two control variables are significantly related to discipline and performance. First, as the number of years since the last promotion increases, agreement decreases that weak performance and the need for corrective action is a problem ( $t = -3.31, p = .001$ ). Second, as the number of years worked in the current location increases, agreement decreases that weak performance and the need for corrective action is a problem ( $t = -2.31, p = .02$ ). None of the other control variables are significantly related.

Cross tabulations of the percentage of each medical occupational group that feel there is a discipline and performance problem is shown in Table A3.3.1 of Appendix 15. The largest share of MOH officials (43.3%) disagree that weak performance and need for corrective action is not a problem; that is, they feel that performance needs to improve and more effective corrective action needs to be taken.

UNRWA scores for performance and discipline by medical occupation are shown in Table 3.3.24. Overall, with a score of 5.84, medical staff is relatively neutral with the extent to which weak performance and corrective action is a problem. Physicians, with a score of 6.19, feel the strongest that weak performance is not tolerated and that when it does occur, effective corrective action is taken. Dentists, on the other hand, feel the strongest that weak performance and corrective action is a problem. None of these differences in scores are statistically significant.

**Table 3.3.24: Performance and discipline scores by occupation, UNRWA**

Occupation	N	Mean	Std. Deviation
physician	24	6.19	1.94
dentist	6	5.28	1.34
midwife	10	5.50	1.168
nurse	9	5.63	2.82
Total	49	5.84	1.93

### 3.3.2 Support staff

This section of the study examines attitudes of MOH *support staff* towards the 12 Quality of Work life dimensions. Support staff includes all MOH employees except for physicians, dentists, midwives, and nurses. The methods replicate those of the previous section in that we look first at the relative attitudes (mean scores on a scale of 1 – 10) for all the QWL dimensions. This is followed by a brief analysis of the job satisfaction dimension with particular emphasis on the influence of gender, education, salary and other external control variables.

### 3.3.3 Summary of scores and ranking of attitudes of support staff towards QWL dimensions

The first question addressed is what are the attitudes of support staff towards each of the QWL dimensions, and how do they compare with each other. According to the data in Table 3.3.25, mean scores range from a low of 4.93 (economic well-being) to a high of 7.14 (job satisfaction). The three work life dimensions that have the most favorable ratings are Job Satisfaction (7.14), supervision (6.81) and morale and motivation (6.49). On a scale of 1 – 10, these scores are in the “favorable” range, i.e., above the neutral range but below the “very favorable” range. The three variables that have the least favorable ratings are economic well-being (4.93), centralization of decision-making (4.95) and policies, goals and procedures (5.09). Although these scores have the least favorable ratings, each of these are in the neutral range.

### 3.3.4 Job satisfaction

With a mean score of 7.41, job satisfaction received the highest score of any of the 12 QWL dimensions for MOH support staff.

Was the relatively favorable score for job satisfaction the same for all sub-groups, or did it vary with years of education, gender, income, or other control variables? What the analysis shows is that job satisfaction does vary by gender, marital status, governorate, socioeconomic status, education, years worked in the Ministry, years worked in their current location, and income. These are detailed below.

**Table 3.3.25: Attitudes of support staff towards 12 QWL dimensions, MOH**

Work life dimension	Mean* (N=2611)	Std. Deviation
Job satisfaction	7.14	1.54
Supervision	6.81	1.53
Staff development and skill use	6.73	1.71
Morale & Motivation	6.49	1.65
Participation	5.93	1.58
Organizational climate	5.85	2.27
Appointments, promotions and transfers	5.53	1.70
Performance and discipline	5.44	1.83
Work group relations	5.24	1.30
Policies, goals and procedures	5.09	2.17
Centralization	4.95	1.31
Economic well-being	4.93	1.94

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

As the data show in Table 3.3.26, job satisfaction among male support staff is significantly higher (7.27) than among female support staff (7.07). These differences are significant ( $F = 9.86, p = .002$ ).

**Table 3.3.26: Mean job satisfaction scores by gender, MOH**

Gender	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
Male	921	7.27	1.58	7.16	7.37
Female	1690	7.07	1.52	7.00	7.14
Total	2611	7.14	1.54	7.08	7.20

There are also significant differences in job satisfaction by marital status as shown in Table 3.3.27. With a mean score of 8.60, the widowed had significantly higher job satisfaction than either married staff (7.13) or single staff (7.14) ( $F = 5.35, p = .005$ ). However, this difference in mean scores is likely explained by the small sample of widowed staff.

**Table 3.3.27: Mean job satisfaction by marital status, MOH**

Marital status	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
Married	2155	7.13	1.57	7.06	7.20
Single	445	7.14	1.42	7.00	7.27
Widowed	12	8.60	.44	8.31	8.88
Total	2611	7.14	1.54	7.08	7.20

When examining job satisfaction scores by social status (Table 3.3.28), it can be seen that the unskilled labor group has significantly lower scores (6.66) than either the skilled labor group (7.16) or the lower middle class group (7.19) ( $p < .001$  for both). Even though the upper middle class group has the highest job satisfaction scores, it is not significantly different because of the small sample size.

**Table 3.3.28: Job satisfaction scores by social status, MOH**

Social status	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
upper middle class	38	7.21	1.77	6.63	7.79
lower middle class	1556	7.19	1.52	7.12	7.27
skilled labor	801	7.16	1.60	7.05	7.27
unskilled labor	216	6.66	1.36	6.48	6.84
Total	2611	7.14	1.54	7.08	7.20

According to the data shown in Table 3.3.29, job satisfaction scores differ significantly among the Governorates. Support staff in Tafleleh has the highest job satisfaction scores (7.86) followed by Zarqa (7.80) and Jerash (7.68). Governorates with the lowest job satisfaction scores are Karak (6.78), Balqa (6.82), and Amman (6.98). Because showing all of the significantly different scores among the 12 Governorates is somewhat complicated, these are not shown. However, overall, these differences are significant at  $F = 10.24$  and  $p < .001$ .

**Table 3.3.29: Job satisfaction scores by Governorate, MOH**

Governorate	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
Amman	727	6.98	1.59	6.86	7.09
Madaba	71	7.10	1.61	6.72	7.48
Zarqa	130	7.80	1.48	7.55	8.06
Balqa	267	6.82	1.79	6.61	7.04
Irbid	383	7.26	1.50	7.11	7.41
Ajloun	96	7.63	1.13	7.40	7.86
Jerash	77	7.68	1.47	7.35	8.02
Mafraq	155	7.29	1.17	7.10	7.48
Karak	373	6.78	1.49	6.63	6.93
Tafleleh	90	7.86	1.22	7.61	8.12
Ma an	170	7.30	1.27	7.11	7.49
Aqaba	72	7.09	1.69	6.70	7.49
Total	2611	7.14	1.54	7.08	7.20

The data in Table 3.3.30 show relationships between job satisfaction and the remaining control variables that are statistically significant. Specifically, education is inversely related to job satisfaction such that as years of education increase, job satisfaction scores decrease – and vice versa. Similarly, as the number of years worked in government increases, job satisfaction decreases significantly – and vice versa. On the other hand, as monthly salary increases, job satisfaction also increases. In addition, as the number of years a person works in the same location increases, job satisfaction increases.

<b>Table 3.3.30: Relationship between job satisfaction and selected control variables, MOH</b>		
Control variable	t-value	p-value
Years of education	-2.856	.004
Years worked in Government	-3.923	.000
Years worked in current location	2.812	.005
Monthly salary	8.796	.000

## 3.4 Determinants of job satisfaction: MOH

### 3.4.1 Medical staff

The second objective of this study is to identify the primary determinants of job satisfaction among MOH officials working in the Governorates. It was shown in Table 3.2.1 and elsewhere that job satisfaction scores for MOH support staff rank the highest among all QWL dimensions. Understanding what is behind this can provide the MOH an opportunity to enhance job satisfaction among all employees.

To identify the determinants of job satisfaction, a model was constructed from the 12 QWL variables using regression analysis procedures. In this model, the possible moderating effects of control variables (age, gender, salary, marital status, education, the number of years working in the MOH, the number of years worked in their current location, the number of years since their last promotion, governorate) are held constant. From this process, variables were identified which together explain the greatest variation in job satisfaction.

The results of using stepwise regression are shown in Table 3.4.1. For the QWL variables, five were significantly related to job satisfaction.

**Table 3.4.1: Work related determinants of job satisfaction, MOH medical staff**

Independent variable (work life dimension)	Coefficient	t-value <sup>1</sup>	Adjusted R <sup>2</sup> (additive)	F-ratio (additive) <sup>2</sup>
Constant	1.881	8.53		
Morale and motivation	.485	12.97	.454	498
Supervision	.226	6.30	.504	304
Appointments, promotions and transfers	.133	4.10	.521	218
Economic well being	.08	3.15	.527	168
Participation	-0.07	-2.07	.529	136
Discipline	not significant			
Centralization	not significant			
Policies, goals and procedure	not significant			
Staff development and skill use	not significant			
Organizational climate	not significant			
Work group relations	not significant			

<sup>1</sup> = all t-value significant at  $p < .01$  except for participation which is significant at  $p < .05$

<sup>2</sup> = all F-values significant at  $p < .01$

According to the regression, the five QWL variables that make the largest contribution to explaining variation in job satisfaction include morale and motivation; supervision; appointments, promotions and transfers; economic well being; and participation. The adjusted R<sup>2</sup> value of .529 for the whole model indicates that approximately 53 percent of the variation in Job Satisfaction is explained by these five variables.

Of the five statistically significant variables in the model, morale and motivation make the greatest contribution to explaining variation in job satisfaction (45 percent) followed by Supervision which adds an additional five percentage points (totaling 50 percent). Appointments, promotions and transfer practices add two percentage points to explaining variation in job satisfaction while Economic Well Being adds another 0.6 percentage points. Participation adds a small, but significant, 0.2 percentage points.

For each of the individual variables, the positive direction of the relationship is as expected except for participation which is negative. That is, as attitudes towards morale and motivation; supervision; appointments; promotions and transfers; and economic well being become more favorable, job satisfaction also becomes significantly more favorable – and vice versa. The significant negative relationship between participation and job satisfaction indicate that as attitudes towards participation become more favorable, job satisfaction declines. The reason for this unexpected negative relationship is not clear and merits further investigation.

After identifying those QWL variables that explained the greatest variation in job satisfaction, the second step was to add the control variables to this basic model to see if that changed the total amount of variation explained. In doing this two changes occurred. First, monthly net salary and socioeconomic status were added to the model since it provided additional significant explanation in job satisfaction. Secondly, participation was no longer significantly related to job satisfaction so it was dropped from the model. These results are summarized in Table 3.4.2.

Independent variable (work life dimension)	Coefficient	t-value <sup>1</sup>	Adjusted R2 (additive)	F-ratio (additive) <sup>2</sup>
Constant	2.280	9.00		
Morale and motivation	.469	12.82	.454	498.27
Supervision	.183	5.77	.504	304.30
Appointments, promotions and transfers	.137	4.24	.521	217.84
Salary	-.0015	-4.13	.531	139.30
Economic well being	.074	2.95	.536	170.36
Social status	.257	2.03	.539	117.37
Participation			not significant	
Discipline			not significant	
Centralization			not significant	
Policies, goals and procedure			not significant	
Staff development and skill use			not significant	
Organizational climate			not significant	
Work group relations			not significant	
Other control variables			not significant	

<sup>1</sup> = all t-value significant at  $p < .001$  except for economic well-being which is significant at  $p = .003$  and socioeconomic status which is significant at  $p = .043$ .

<sup>2</sup> = all F-values significant at  $p < .001$

Specifically, there was a significant negative relationship between job satisfaction and monthly salary (t-value = -4.13, p-value < 0.001) such that medical staff with higher salaries had lower job satisfaction, and vice versa. Socioeconomic status also was significantly related to job satisfaction (t = 2.03, p = .043) such that medical staff with higher socioeconomic status (physicians and dentists) had higher job satisfaction than medical staff with lower socioeconomic status. The percent of variation in job satisfaction explained increased slightly from 53 percent (.529) to 54 percent (.539) with the F value changing from 135.5 to 117.37 (p < .001).

In summary, what the findings from the analysis of determinants of job satisfaction among MOH medical staff suggest is that to improve job satisfaction, the MOH should focus its efforts on making improvements in these four dimensions of work life, i.e.,

- Morale and motivation,
- Supervision,
- Appointments, promotions, and transfers, and
- Economic well-being.

This is not to suggest that the other dimensions of work life are not important; rather, change efforts could begin with these dimensions where the expected impact is greatest.

### **3.4.2 Determinants of job satisfaction among MOH support staff**

This section assesses the question of what are the primary determinants of job satisfaction among the support staff. It was shown in Table 3.2.6 and elsewhere that job satisfaction scores for MOH support staff, as with medical staff, rank the highest among all QWL dimensions. Understanding what is behind this can provide the MOH an opportunity to enhance job satisfaction among all employees.

The same methods were used to assess the determinates of job satisfaction among support staff as were used with medical staff. A model was constructed using regression analysis procedures. This model included all the QWL dimensions as possible explanatory variables in an effort to see what percent of the variation in job satisfaction is explained by the QWL dimensions. In addition, the possible moderating affects of control variables (such as age, marital status, gender, income, education, etc) are held constant. From this process, the QWL dimensions were identified which together explain the most variation in job satisfaction. The results of this process, using stepwise regression procedures, are shown in Table 3.4.3.

**Table 3.4.3: Determinants of job satisfaction among MOH support staff**

<b>Independent variable (Work life dimension)</b>	<b>coefficient</b>	<b>t- value<sup>1</sup></b>	<b>adj'd R<sup>2</sup> (additive)</b>	<b>F-ratio<sup>2</sup> (additive)</b>
(Constant)	2.152	13.836		
Morale and motivation	.339	17.905	.315	1203
Supervision	.145	6.896	.359	730
Participation	.112	5.429	.369	510
Economic well-being	.060	4.502	.375	392
Work group relations	.084	3.575	.377	317
Performance and discipline	.037	2.815	.379	267
Centralization	.039	1.972	.380	229
Organizational climate	not significant			
Staff development and skill use	not significant			
Policies, goals and procedures	not significant			
Appointments, promotions and transfer	not significant			

<sup>1</sup> all t-values significant at  $p < .005$  except for centralization where  $p = .049$

<sup>2</sup> all F-ratios significant at  $< .001$

According to the analysis, seven of the QWL dimensions explain 38 percent of the variation in job satisfaction. While this is statistically significant ( $p < .001$ ), it leaves 62 percent of the variation unexplained. Indications of what these other factors are can be determined with additional research.

The seven QWL dimensions that explain the greatest variation are morale and motivation, supervision, participation in decision-making, economic well-being, work group relations, performance and discipline, and centralization. Each of these dimensions is positively related to job satisfaction – as is expected. Thus, for example, as morale and motivation increase, so does job satisfaction; as participation in decision-making increases, so does job satisfaction. The same is true for the remaining dimensions that have a significant relationship. The implication of this is that in order to improve job satisfaction, the MOH should focus its efforts on improving these seven dimensions of work life.

The second step in analyzing the determinants of job satisfaction among MOH support staff was to add the control variables to the model to see what changes this causes in explaining variation in job satisfaction, as well as the specific QWL dimensions that explain the variation. The results of this are shown in Table 3.4.4.

**Table 3.4.4: Determinants of job satisfaction among MOH support staff when including control variables**

Independent variable (work life dimension)	coefficient	t-value <sup>1</sup>	Adj'd R <sup>2</sup> (additive)	F-ratio <sup>2</sup> (additive)
(Constant)	1.341	6.479		
Morale and motivation	.329	17.810	.315	1203
Supervision	.136	6.560	.359	730
Monthly salary	.008	9.038	.372	514
Participation	.143	7.290	.384	406
Years worked in the government	-.040	-6.707	.393	338
Economic well-being	.061	4.696	.399	288
Performance and discipline	.050	3.829	.403	251
Work group relations	.090	3.903	.407	223
Years worked in current location	.015	2.567	.408	199
Months since last promotion	-.0001	-2.124	.409	180

With the addition of the control variables, several changes occurred. First, the adjusted R<sup>2</sup> value increased slightly from .380 to .409 – an increase of approximately three percentage points, meaning that the percent of variation in job satisfaction explained has increased to 41 percent. Second, all the QWL dimensions that were part of the previous model are significant in this model except for centralization. Third, the control variables that are significant include: salary, years worked in government, years worked in their current location, and months since the last promotion. Salary and years worked in their current location are positively related to job satisfaction so that as salary and years worked in their current location increase, so does job satisfaction. On the other hand, as the number of years worked in government and the number of months since their last promotion increases, job satisfaction declines.

In summary, what the findings from the analysis of determinants of job satisfaction among MOH support staff suggest is that to improve job satisfaction, the MOH should focus its efforts on making improvements in these six dimensions of work life, i.e.,

- Improving the morale and motivation,
- Improving the quality of supervision,
- Increasing participation in decision-making,
- Enhancing economic well-being,
- Taking steps to strengthen work performance and taking corrective action against weak performance, and,
- Promoting improved work group relations – team building, group dynamics, conflict resolution, mutual support and encouragement.

As with medical staff, this is not to suggest that the other dimensions of work life are not important; rather, change efforts could begin with these dimensions where the expected impact is greatest.

## 4. Summary and Implications

This final section summarizes the major findings of the study in the form of four tables showing QWL scores for the medical and support staff of the MOH, and, the medical and support staff of UNRWA. Some observations will be made from which some concluding implications will be drawn.

### 4.1 Medical staff: MOH and UNRWA

**Table 4.1: Attitudes of MOH medical staff towards 12 dimensions of work life\***

Work life dimension	Physicians n = 352	Dentists n = 105	Midwives n = 96	Nurses n = 45	Average n = 599
Job satisfaction	7.19 <sup>1</sup>	7.35	7.83 <sup>1,2</sup>	6.86 <sup>2</sup>	7.30
Participation in decision-making	5.59	5.79	5.96	5.80	5.70
Work motivation	6.60	6.39	6.90	6.62	6.61
Centralization of decision making	5.15 <sup>3</sup>	5.07 <sup>4</sup>	5.30	5.89 <sup>3,4</sup>	5.22
Supervision	6.43	6.43	6.82	6.74	6.52
Staff development and skill use	6.49 <sup>3</sup>	6.43	6.56 <sup>2</sup>	5.80 <sup>3,2</sup>	6.43
Appointments, promotions and transfers	5.71	5.66	5.93 <sup>2</sup>	5.15 <sup>2</sup>	5.70
Economic well-being	4.65 <sup>1</sup>	4.47 <sup>5</sup>	5.36 <sup>1,5</sup>	4.87	4.75
Organizational climate	5.65	5.38 <sup>5</sup>	6.24 <sup>5</sup>	5.80	5.71
Performance and discipline	4.81	4.83	4.74	4.95	4.81
Clarity of policies, goals and procedures	5.21	5.19	5.72	5.49	5.31
Work group relations	5.29	4.98 <sup>5,4</sup>	5.50 <sup>5</sup>	5.57 <sup>4</sup>	5.29

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

<sup>1</sup> = significant difference between physicians and midwives at  $p = .05$

<sup>2</sup> = significant difference between midwives and nurses at  $p = .05$

<sup>3</sup> = significant difference between physicians and nurses at  $p = .05$

<sup>4</sup> = significant difference between dentists and nurses at  $p = .05$

<sup>5</sup> = significant difference between dentists and midwives at  $p = .05$

On the basis of the summary data shown in Table 4.1, five observations are made:

- MOH medical staff, as a group, has relatively favorable attitudes towards their (a) jobs, (b) morale and motivation, and (c) quality of supervision.
- MOH medical staff, as a group, has the least favorable attitudes towards (a) economic well-being, (b) MOH practices with respect to tolerating weak performance and discipline, and (c) the extent to which decision-making is centralized. However, these all fall in the “neutral” range – neither favorable or unfavorable.

- The overall mean score of 5.78 indicates that the MOH medical staff have neither favorable nor unfavorable attitudes towards the quality of their work life.
- Examination of QWL scores by MOH medical occupation shows that midwives have the highest overall quality of work life by having the largest number of high scores (9 of 12).
- On the other hand, the data indicate that MOH dentists appear to have the lowest overall quality of work life by having the largest number of low scores (7 of 12).

Table 4.2 summarizes QWL scores for all each UNRWA medical occupation.

**Table 4.2: Attitudes of UNRWA medical staff towards 12 dimensions of work life\***

Work life dimension	Physicians (n = 24)	Dentists (n = 9 )	Midwives (n = 10 )	Nurses (n = 9)	Average (n = 49)
Job satisfaction	7.60	7.73	7.53	7.24	7.54
Participation in decision-making	5.10	6.48	6.10	5.51	5.55
Morale and motivation	6.90	7.46	6.50	6.93	6.89
Centralization of decision making	5.33	5.58	5.52	4.80	5.30
Supportive supervision	7.00	7.88	6.73	7.29	7.10
Staff development and skill use	7.10	7.72	7.17	6.22	7.03
Appointments, promotions and transfers	5.73	6.79	5.45	4.89	5.65
Economic well-being	5.71	5.54	5.15	4.61	5.37
Organizational climate	5.21	6.96	5.58	4.92	5.44
Performance and discipline	6.19	5.28	5.50	5.63	5.84
Clarity of policies, goals and procedures	5.92	7.11	5.33	6.41	6.03
Work group relations	6.60	6.78	6.40	6.46	6.55

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

On the basis of the data shown in Table 4.2, five observations are made:

- UNRWA medical staff, as a group, has relatively favorable attitudes towards their (a) jobs, (b) the quality of supervision, (c) staff development and skill use, (d) morale and motivation, and (e) work group relations.
- UNRWA medical staff, as a group, has the least favorable attitudes towards (a) the extent to which decision-making is centralized, (b) economic well-being, and (c) organizational climate. However, these all fall within the “neutral” range – neither favorable nor unfavorable.
- The overall mean score of 6.19 indicates that the UNRWA medical staff has neither favorable nor unfavorable attitudes towards the quality of their work life.

- Examination of QWL scores by UNRWA medical occupation shows that dentists have the highest overall quality of work life by having the largest number of high scores (10 of 12).
- On the other hand, the data indicate that UNRWA nurses appear to have the lowest overall quality of work life by having the largest number of low scores (6 of 12).

## 4.2 Support staff: MOH and UNRWA

Table 4.3, which is a repeat of Table 3.2.6, summarizes QWL scores for all each medical occupation for both the MOH and UNRWA.

**Table 4.3: Attitudes of MOH and UNRWA Support staff towards 12 Quality of Work Life dimensions\***

Work life Dimension	MOH (intervention group) (n = 2611)	UNRWA (control group) (n = 74)
Job satisfaction	7.14	7.40
Participation in decision-making	5.93	5.63
Morale and motivation	6.49	6.83
Centralization of decision making	4.95	4.63
Supervision	6.81	6.87
Staff development and skill use	6.73	6.90
Appointments, promotions and transfers	5.53	4.86
Economic well-being	4.93	5.81
Organizational climate	5.85	5.33
Performance and discipline	5.44	5.88
Clarity of policies, goals and procedures	5.09	5.74
Work group relations	5.24	6.19

\* 1 = very unfavorable attitudes, 10 = very favorable attitudes

On the basis of the data shown in Table 4.3, three observations are made for MOH support staff:

- MOH support staff has relatively favorable attitudes towards (a) their jobs, (b) the quality of supervision, (c) staff development and skill use, and (d) morale and motivation.
- MOH support staff has the least favorable attitudes towards (a) economic well-being, (b) the extent to which decision-making is centralized, and (c) the extent to which policies, goals and procedures are clear. At the same time, each of these fall in the “neutral” range – neither favorable nor unfavorable.
- The overall mean score of 5.84 indicates that the MOH medical staff have neither favorable nor unfavorable attitudes towards the quality of their work life. This is slightly higher than the mean of MOH medical staff (5.78)

In addition, for UNRWA support staff, three observations are made on the basis of data shown in Table 4.3:

- UNRWA support staff has relatively favorable attitudes towards (a) their jobs, (b) staff development and skill use, (c) the quality of supervision, and (d) morale and motivation.
- UNRWA support staff has the least favorable attitudes towards (a) the extent to which decision-making is centralized (b) the way in which appointments, promotions and transfers are handled, and (c) organizational climate. However, each of these fall in the “neutral” range - neither favorable nor unfavorable.
- The overall mean score of 6.01 indicates that the UNRWA support staff has neither favorable nor unfavorable attitudes towards the quality of their work life. This is slightly higher than the mean of UNRWA support staff (5.84).

### **4.3 Determinants of job satisfaction**

For the MOH medical staff, the four significant determinants of job satisfaction include: (a) morale and motivation, (b) supervision, (c) appointments, promotions, and transfers, and (d) economic well-being.

For the MOH *support* staff, the six significant determinants of job satisfaction are: (a) morale and motivation, (b) quality of supervision, (c) participation in decision-making, (d) economic well-being, (e) performance and discipline, and, (f) work group relations.

### **4.4 Implications**

In light of the above summary of findings, the following recommendations are offered for consideration by the MOH as a means of improving the quality of work life.

#### **4.4.1 MOH medical staff**

- Develop policies, programs and procedures that will improve those QWL dimensions that have the lowest scores: economic well-being, weak work performance and actions to correct weak performance, and centralized decision-making
- Build on and promote those QWL dimensions leading to relatively high job satisfaction. The four most important dimensions include: (a) morale and motivation, (b) supervision, (c) appointments, promotions, and transfers, and (d) economic well-being. A review of the specific questions in the questionnaire (Appendix 1) composing each of these dimensions will give further guidance.
- In that midwives have the highest score on the largest number of QWL dimensions, conduct further research on how this may be explained and replicate, as appropriate, with other medical staff occupations.

- In that MOH dentists have the lowest average QWL score, give special emphasis to improving those dimensions that have a low score. Since UNRWA dentists have the highest average QWL score, an exploration of the reasons for this may be instructive for MOH dentists.

#### **4.4.2 MOH support staff**

- As with MOH medical staff, develop policies, programs and procedures that will improve those QWL dimensions that have the lowest scores. For the support staff these include: economic well-being (same as medical staff), centralized decision-making (same as medical staff), making more clear the policies, goals and procedures related to the support staff.
- As with the medical staff, build on and promote those QWL dimensions leading to the relatively high job satisfaction scores of support staff. For the support staff, the six most important dimensions include: (a) morale and motivation, (b) supervision, (c) participation in decision-making (d) economic well-being, and (e) work group relations.

In addition to the six recommendations summarized above, a theme common to both medical and support staff is the relatively unfavorable attitudes towards the extent to which decision-making is centralized. Developing and testing, with a control group, a decentralized decision-making model in one or two governorates could be considered.

---

# Appendix 1: Quality of Work Life Survey Questionnaire

## JOB SATISFACTION

	Strongly Disagree	—————→								Strongly Agree
1. It seems that my friends are more interested in their jobs than I am in my job.	1	2	3	4	5	6	7	8	9	10
2. I am often bored with my job.	1	2	3	4	5	6	7	8	9	10
3. I feel fairly well satisfied with my job.	1	2	3	4	5	6	7	8	9	10
4. I am satisfied with my job for the present time.	1	2	3	4	5	6	7	8	9	10
5. I definitely dislike my work.	1	2	3	4	5	6	7	8	9	10
6. I feel that I am happier in my work than most other people.	1	2	3	4	5	6	7	8	9	10
7. Most days I am enthusiastic about my work.	1	2	3	4	5	6	7	8	9	10
8. My job is not very interesting.	1	2	3	4	5	6	7	8	9	10
9. I find real enjoyment in my work.	1	2	3	4	5	6	7	8	9	10
10. Sometime I feel like resigning.	1	2	3	4	5	6	7	8	9	10

## PARTICIPATION

	<b>Strongly Disagree</b>	—————→								<b>Strongly Agree</b>
11. When changes are made that affect how I do my job, I am not usually consulted.	1	2	3	4	5	6	7	8	9	10
12. My supervisor asks my opinion when a problem related to my work arises.	1	2	3	4	5	6	7	8	9	10
13. My supervisor encourages subordinates to participate in important decisions.	1	2	3	4	5	6	7	8	9	10
14. Ministry employees do not have much opportunity to influence what goes on in this ministry.	1	2	3	4	5	6	7	8	9	10
15. I have little influence over decisions that affect my job.	1	2	3	4	5	6	7	8	9	10
16. I have a great deal of freedom to do my job as I think it ought to be.	1	2	3	4	5	6	7	8	9	10
17. In my work I am seldom asked for my ideas.	1	2	3	4	5	6	7	8	9	10

## MORALE AND MOTIVATION

	<b>Strongly disagree</b>	—————→								<b>Strongly Agree</b>
18. The morale in this ministry is low.	1	2	3	4	5	6	7	8	9	10
19. Most employees in this ministry seem to be giving their best efforts to their jobs.	1	2	3	4	5	6	7	8	9	10
20. I care a lot about my work.	1	2	3	4	5	6	7	8	9	10
21. I feel I am important to the work of this ministry.	1	2	3	4	5	6	7	8	9	10

## MORALE AND MOTIVATION

	<b>Strongly disagree</b>	—————→								<b>Strongly Agree</b>
22. I used to care about my work more than I do now.	1	2	3	4	5	6	7	8	9	10
23. I feel very little loyalty to this ministry.	1	2	3	4	5	6	7	8	9	10
24. I talk about this ministry to my fiends as a good ministry to work in.	1	2	3	4	5	6	7	8	9	10
25. What happens in this ministry is important to me.	1	2	3	4	5	6	7	8	9	10
26. I often think about resigning.	1	2	3	4	5	6	7	8	9	10

## CENTRALIZATION

	<b>Strongly disagree</b>	—————→								<b>Strongly Agree</b>
27. Not much action can be taken in this ministry until a senior officer at headquarters approves a decision.	1	2	3	4	5	6	7	8	9	10
28. A person who wants to make his or her own decisions would be quickly discouraged in this ministry.	1	2	3	4	5	6	7	8	9	10
29. Even small matters have to be referred to someone higher up for a final decision.	1	2	3	4	5	6	7	8	9	10
30. I have to ask my supervisor before I do almost anything.	1	2	3	4	5	6	7	8	9	10
31. I can make many decisions without a senior officer's approval.	1	2	3	4	5	6	7	8	9	10
32. In this ministry, authority is clearly delegated.	1	2	3	4	5	6	7	8	9	10

## SUPERVISION

	<b>Strongly disagree</b>	—————→								<b>Strongly Agree</b>
33. My supervisor is not very good at solving work related problems.	1	2	3	4	5	6	7	8	9	10
34. My supervisor tries to solve problems quickly when they occur.	1	2	3	4	5	6	7	8	9	10
35. My supervisor tells people when they have done a good job.	1	2	3	4	5	6	7	8	9	10
36. My supervisor provides the guidance I need to help me do a good job.	1	2	3	4	5	6	7	8	9	10
37. I can talk openly and honestly to my supervisor about my work.	1	2	3	4	5	6	7	8	9	10
38. My supervisor does not insist that subordinates work hard.	1	2	3	4	5	6	7	8	9	10
39. My supervisor tells people when they have not done a good job.	1	2	3	4	5	6	7	8	9	10
40. My supervisor treats subordinates fairly.	1	2	3	4	5	6	7	8	9	10
41. It is difficult to disagree openly and honestly with my supervisor.	1	2	3	4	5	6	7	8	9	10
42. My supervisor is not very interested in hearing what I have to say about my work.	1	2	3	4	5	6	7	8	9	10
43. My job duties are clearly defined by my supervisor.	1	2	3	4	5	6	7	8	9	10
44. My supervisor is a good person to work with.	1	2	3	4	5	6	7	8	9	10
45. I understand exactly what is expected of me in my job.	1	2	3	4	5	6	7	8	9	10
46. My supervisor sets a good example by working hard at his or her job.	1	2	3	4	5	6	7	8	9	10

## ON THE JOB DEVELOPMENT AND SKILL UTILIZATION

Strongly disagree  Strongly Agree

47. My job makes good use of my abilities. 1 2 3 4 5 6 7 8 9 10

48. Employees of this ministry do not receive the proper training they need in order to do their jobs well. 1 2 3 4 5 6 7 8 9 10

49. I would like more freedom to try out new ideas in doing my job. 1 2 3 4 5 6 7 8 9 10

## APPOINTMENTS, PROMOTIONS AND TRANSFERS

Strongly disagree  Strongly Agree

50. There are sufficient opportunities in this ministry for advancing my career. 1 2 3 4 5 6 7 8 9 10

51. People who get promoted in this ministry are the ones who deserve it. 1 2 3 4 5 6 7 8 9 10

52. I would be more willing to work in rural areas if there were special incentives and benefits. 1 2 3 4 5 6 7 8 9 10

53. Employees should not be transferred so often to different geographic locations. 1 2 3 4 5 6 7 8 9 10

## ECONOMIC WELL BEING

	<b>Strongly disagree</b>	—————→								<b>Strongly Agree</b>
54. Considering the kind of work I do, my salary is adequate and fair.	1	2	3	4	5	6	7	8	9	10
55. The employee benefits I get (vacation, sick leave, pension, etc.) are adequate.	1	2	3	4	5	6	7	8	9	10
56. The salary I receive for my job is similar to that of people in other ministries doing similar jobs.	1	2	3	4	5	6	7	8	9	10
57. Compared to a job outside the government, the job security that my job provides is very important to me.	1	2	3	4	5	6	7	8	9	10

## ORGANIZATIONAL CLIMATE

	<b>Strongly disagree</b>	—————→								<b>Strongly Agree</b>
58. An atmosphere of cooperation exists among employees of this ministry.	1	2	3	4	5	6	7	8	9	10
59. Senior officials of this ministry have a sincere interest in doing something about any problems that	1	2	3	4	5	6	7	8	9	10
60. In general, this ministry is a good place to work.	1	2	3	4	5	6	7	8	9	10
61. I think this ministry is changing for the better.	1	2	3	4	5	6	7	8	9	10

**DISCIPLINE**

**Strongly disagree**  **Strongly Agree**

62. Discipline is a serious problem in this ministry. 1 2 3 4 5 6 7 8 9 10

63. Poor performance is usually not tolerated in this ministry. 1 2 3 4 5 6 7 8 9 10

64. This ministry needs to take more effective disciplinary action against poor performance. 1 2 3 4 5 6 7 8 9 10

**CLARITY OF MINISTRY GOALS, POLICIES AND PROCEDURES**

**Strongly disagree**  **Strongly Agree**

65. I am clear about this ministry's policies and procedures that affect me. 1 2 3 4 5 6 7 8 9 10

66. I feel this ministry tells me as much as I would like to know about its plans & goals. 1 2 3 4 5 6 7 8 9 10

67. My specific unit or section has clear goals and plans to meet them. 1 2 3 4 5 6 7 8 9 10

**WORK GROUP RELATIONS**

**Strongly disagree**  **Strongly Agree**

68. Personality conflicts in my work group interfere with getting the work done. 1 2 3 4 5 6 7 8 9 10

69. I get cooperation from people in other parts of this ministry when I need it. 7 8 9 10 7 8 9 10 7 8

## WORK GROUP RELATIONS

	<b>Strongly disagree</b>	—————→								<b>Strongly Agree</b>	
70. My work group works well together.	7	8	9	10	7	8	9	10	7	8	
71. If a problem arises in my work group, people are willing to bring it up with our supervisor.	7	8	9	10	7	8	9	10	7	8	
72. Conflicts within this ministry are typically resolved through discussion and compromise.	7	8	9	10	7	8	9	10	7	8	
73. Conflicts are often left unresolved.	7	8	9	10	7	8	9	10	7	8	
74. I know who my supervisor is.	Yes										No

## BIOGRAPHICAL INFORMATION

75. Your age is: \_\_\_\_\_

76. You sex is: \_\_\_\_\_ Male  
 \_\_\_\_\_ Female

77. Your martial status is: \_\_\_\_\_ Married  
 \_\_\_\_\_ Single  
 \_\_\_\_\_ Widowed  
 \_\_\_\_\_ Divorced

78. How many years of education have you completed? \_\_\_\_\_

79. How many years have you worked in the Civil Service? \_\_\_\_\_

80. How many years have you worked in your current geographic location?  
 \_\_\_\_\_

81. What Governorate are you posted in? \_\_\_\_\_

82. What is your job title? \_\_\_\_\_

83. How many months ago was your last promotion? \_\_\_\_\_

84. What is your monthly net salary \_\_\_\_\_

85. Socio-economic status (see chart for definitions):

- \_\_\_\_\_ Upper middle class
- \_\_\_\_\_ Middle class
- \_\_\_\_\_ lower middle class
- \_\_\_\_\_ skilled working class
- \_\_\_\_\_ semi and unskilled working class

## Appendix 2: Detailed tables of background variables

<b>Table A3.1.1: Distribution of males and females of MOH medical staff, unweighted and weighted</b>				
Gender	Unweighted		Weighted	
	N	%	N	%
Male	154	56.2	350	58.5
Female	120	43.8	249	41.5
Total	274	100.0	599	100.0

<b>Table A3.1.2: Marital status of MOH medical staff, unweighted and weighted</b>				
Marital Status	Unweighted		Weighted	
	N	%	N	%
Married	227	82.8	509	85.1
Single	47	17.2	89	14.9
Total	274	100.0	599	100.0

<b>Table A3.1.3: Income of MOH medical staff, unweighted and weighted</b>				
Income	Unweighted		Weighted	
	N	%	N	%
0-180 JD	11	4.0	17	2.9
181-360 JD	131	47.8	260	43.4
361-540 JD	99	36.1	215	35.9
541-720 JD	29	10.6	98	16.4
721-900 JD	4	1.5	9	1.5
Total	274	100.0	599	100.0

<b>Table A3.1.4: Education of MOH medical staff, unweighted and weighted</b>				
Years of Education	Unweighted		Weighted	
	N	%	N	%
0-12	2	.7	5	.8
13-16	78	28.5	155	25.9
17-19	150	54.7	309	51.6
20+	44	16.1	140	21.7
Total	274	100.0	599	100.0

<b>Table A3.1.5: Social status of MOH medical staff, unweighted and weighted</b>				
Social Status	Unweighted		Weighted	
	N	%	N	%
Upper middle	2	74.8	457	76.3
Lower middle	69	25.2	142	23.7
Total	274	100.0	599	100.0

<b>Table A3.1.6: Years in civil service of MOH medical staff, unweighted and weighted</b>				
Years of Civil service	Unweighted		Weighted	
	N	%	N	%
0-5	93	33.9	167	27.8
6-10	72	26.3	145	24.3
11-15	71	25.9	189	31.6
16-20	28	10.2	72	12.0
21-25	10	3.6	26	4.3
Total	274	100.0	599	100.0

<b>Table A3.1.7: Years worked in current location of MOH medical staff, unweighted and weighted</b>				
Years in Current location	Unweighted		Weighted	
	N	%	N	%
0-2 years	125	45.6	255	42.7
3-4 years	49	17.9	122	20.4
5-6 years	29	10.6	67	11.2
7-10 years	50	18.2	118	19.6
11-15 years	13	4.7	24	4.0
16-25 years	8	2.9	13	2.1
Total	274	100.0	599	100.0

<b>Table A3.1.8: Years since last promotion of MOH medical staff, unweighted and weighted</b>				
Years since last promotion	Unweighted		Weighted	
	N	%	N	%
0-2 years	64	23.4	150	25.1
2-4 years	73	26.6	174	29.1
4-8 years	25	9.1	78	13.0
8-12 years	1	.4	3	.6
Never	111	40.5	193	32.2
Total	274	100.0	599	100.0

<b>Table A3.1.9: Occupation of MOH medical staff, unweighted and weighted</b>				
Job title	Unweighted		Weighted	
	N	%	N	%
Physician	155	56.6	352	58.8
Dentist	50	18.2	105	17.5
Midwife	53	19.3	96	16.1
Nurse	16	5.8	45	7.6
Total	274	100.0	599	100.0

<b>Table A3.1.10: Distribution of MOH medical staff by Governorate, Unweighted and weighted</b>				
Governorate	Unweighted		Weighted	
	N	%	N	%
Amman	80	29.2	256	42.7
Madaba	8	2.9	8	1.3
Zarqa	16	5.8	28	4.6
Balqa	21	7.7	47	7.8
Irbid	51	18.6	110	18.3
Ajloun	11	4.0	11	1.8
Jerash	9	3.3	18	3.0
Mafraq	12	4.4	19	3.1
Karak	25	9.1	41	6.9
Tafileh	9	3.3	18	2.9
Ma an	19	6.9	30	5.0
Aqaba	13	4.7	15	2.5
Total	274	100.0	599	100.0

## Appendix 3: Cross tabulations of medical occupations and job satisfaction

The data in Table A3.3.1 show what percentage of the medical occupations was satisfied or dissatisfied with their jobs.

**Table A3.3.1: Job Satisfaction medical occupation: MOH**

Job Satisfaction	Medical Occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	0	.1	0	.0	0	.0	0	.0	0	.1
dissatisfied	23	6.6	4	3.6	0	.0	6	14.1	33	5.6
neutral	65	18.4	30	28.5	10	10.2	4	7.8	108	18.0
satisfied	162	46.1	32	30.5	48	49.5	29	64.3	271	45.3
very satisfied	102	28.8	39	37.4	39	40.3	6	13.8	186	31.0
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

Approximately 76 percent of all medical staff were very either very satisfied or satisfied with their jobs while less than six percent were very dissatisfied or dissatisfied with their jobs. By occupation, midwives were the most satisfied with their jobs (90% either very satisfied or satisfied with their jobs) followed by nurses (78%), physicians (75%), and dentists (68%). The category that showed the most dissatisfaction with their jobs was nurses (14%) followed by physicians (7%) and dentists (4%). These differences are statistically significant ( $\chi^2 = 41.3$ ;  $p = .000$ ).

## Appendix 4: Participation scores by Governorate and Income group

As shown in Table A3.3.1, some governorates had significantly higher satisfaction with participation than others. Karak, Irbid, and Jerash had the most favorable attitudes towards participation while Zarqa, Aqaba, and Jerash had the least favorable attitudes towards participation. Irbid had significantly higher scores than Amman ( $p < .001$ ), Zarqa ( $p < .001$ ) and Ma'an ( $p = .006$ ). Karak had significantly higher scores than Amman ( $p < .001$ ) and Zarqa ( $p < .001$ ). None of the other control variables, such as gender, marital status, years worked in government, etc., were significantly related to job satisfaction.

Governorate	N	Mean	Std. Deviation
Amman	256	5.41	1.55
Madaba	8	5.35	2.00
Zarqa	28	4.80	1.62
Balqa	47	5.91	2.02
Irbid	110	6.42	1.62
Ajloun	11	5.54	1.42
Jerash	18	6.24	2.38
Ma'raq	19	5.57	1.28
Karak	41	6.64	1.91
Tafileh	18	5.59	1.34
Ma an	30	5.08	1.43
Aqaba	15	4.87	1.68
Total	599	5.70	1.72

According to the data in Table A3.3.2, the middle-income group (JD 361-540) had the least favorable attitudes towards the extent of participation with the highest income group having the most favorable attitudes.

The highest income group had significantly more favorable attitudes towards the extent of participation than all the other income groups ( $p < .05$ ) except for the lowest income group. Small sample size probably explains the lack of significant differences in attitudes towards participation between the highest and lowest income group.

Income Group (JD)	N	Mean	Std. Deviation	95% CI	
				Lower	Upper
0-180	17	5.60	1.97	4.60	6.61
181-360	260	5.79	1.71	5.59	6.00
361-540	215	5.52	1.70	5.29	5.74
541-720	98	5.69	1.65	5.36	6.02
721-900	9	7.55	2.02	5.98	9.13
Total	599	5.70	1.72	5.56	5.84

## Appendix 5: Cross tabulations between participation and medical occupation

What percentage of each category of the medical staff was satisfied or dissatisfied with the extent of participation in decision-making? To answer this question, cross tabulations were done between the four groups of medical staff and five categories of satisfaction. The results are shown in Table A3.3.1.

Attitudes towards participation	Medical occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	21	5.8	7	6.7	4	4.7	0	.0	32	5.4
dissatisfied	85	24.0	22	21.0	13	13.7	11	23.6	131	21.8
neutral	126	35.7	30	28.8	44	45.8	17	38.4	217	36.3
satisfied	97	27.4	43	41.0	28	29.5	17	37.9	185	30.9
very satisfied	25	7.0	3	2.5	6	6.3	0	.0	33	5.6
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

What the data in Table A3.3.3 show is that a nearly equal percentage of medical staff are either very satisfied or satisfied with the extent of participation in decision-making (36.5 %), or, were neutral about their attitudes (36.3%). Approximately 27 percent were very dissatisfied or dissatisfied with their jobs. By occupation, dentists were the most satisfied with the extent of participation (44% were either very satisfied or satisfied) followed by nurses (38%) and midwives (36%). The occupation that showed the most dissatisfaction with the extent of participation was physicians (30%) followed by dentists (28%) and nurses (24%). These differences are statistically significant ( $\chi^2 = 22.4$ ;  $p = .034$ ).

## Appendix 6: Cross tabulations between morale and motivations, and, medical occupation

Cross tabulations, shown in Table A3.3.1, were done between the four groups of medical staff and five categories of morale and motivation.

**Table A3.3.1: Attitudes towards morale and motivation by medical occupation**

Morale and motivation	Medical occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very unfavorable	2	.6	0	.0	0	.0	0	.0	2	.4
unfavorable	32	9.0	13	12.7	6	5.9	2	3.4	52	8.7
neutral	118	33.6	45	43.5	30	31.4	18	39.6	212	35.4
favorable	147	41.8	31	29.8	38	38.9	24	53.5	240	40.1
very favorable	52	14.9	15	14.1	23	23.8	2	3.5	92	15.3
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

The group that had the highest levels of morale and motivation were midwives in that 63 percent had favorable or very favorable attitudes. This was followed by nurses (57%) and then physicians (56.7%). The group with the most unfavorable attitudes was dentists at 13%. Dentists also had nearly an equal percentage of neutral attitudes (43.5%), or, favorable or very favorable attitudes (43.9%). Overall, approximately 55 percent of all medical staff had high levels of morale and motivation compared with the nine percent that had low morale and motivation. However, none of these differences were statistically significant ( $\chi^2 = 20.6$ ;  $p = .057$ ).

## Appendix 7: Cross tabulations between economic well-being and medical occupation

Cross tabulations were done between the four groups of medical staff and five categories of economic well-being in order to assess what percentage of each medical staff occupation had higher or lower levels of economic well-being. The results are shown in Table A3.3.1.

Over two and one-half times as many of the medical staff was dissatisfied or very dissatisfied with their economic well-being as were satisfied or very satisfied with it (48.2% to 18.8%). Nurses expressed the most dissatisfaction with their economic well-being (54.1%) followed by physicians (52%) and dentists (51.2%). Dentists, midwives, and nurses had nearly the same proportion expressing satisfaction at or near 24.6%. These differences were statistically significant ( $\chi^2 = 69.43$ ,  $p < .001$ ).

**Table A3.3.1: Attitudes towards economic well-being by occupation**

economic well being	Occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	67	19.1	34	32.5	14	14.5	3	7.3	118	19.8
dissatisfied	116	32.9	20	18.7	13	13.4	21	46.8	170	28.4
neutral	117	33.3	25	24.2	46	47.6	10	21.3	198	33.1
satisfied	34	9.7	24	23.3	13	13.6	11	24.6	83	13.9
very satisfied	17	4.9	1	1.3	10	10.9	0	.0	29	4.9
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

## Appendix 8: Cross tabulations between supervision and medical occupation

Cross tabulations were done between the four groups of medical staff and five categories of supervision with the results shown in Table A3.3.1. Overall, approximately 55 percent of the medical staff was satisfied or very satisfied with their supervision while just under 15 percent were dissatisfied or very dissatisfied with it. Midwives expressed the most satisfaction with their supervision (54 percent were either satisfied or very satisfied) while physicians, dentists and nurses had nearly the same score ranging from 52.9% - 54%. Dentists had the highest proportion expressing dissatisfaction at approximately 21 percent. These differences were statistically significant ( $\chi^2 = 37.6, p = .001$ ).

Supervision	Occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	12	3.3	3	3.1	0	.0	0	.0	15	2.5
dissatisfied	47	13.5	19	17.8	6	6.0	0	.0	72	12.0
neutral	107	30.4	26	25.0	29	30.6	21	46.9	184	30.7
satisfied	131	37.2	31	29.8	45	46.6	21	45.7	228	38.1
very satisfied	55	15.7	25	24.2	16	16.8	3	7.4	100	16.8
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

## Appendix 9: Cross tabulations between staff development and skill use and medical occupation

Cross tabulations were done between the four groups of medical occupations and the five categories of satisfaction with staff development and skill utilization and is shown in Table A3.3.1. According to the data, approximately 50 percent of the medical staff was satisfied or very satisfied with the extent of staff development and skill use with 8.9 percent being very dissatisfied or dissatisfied. As an occupational group, physicians expressed the most satisfaction with staff development and skill use (52.5 percent were either very satisfied or satisfied) while midwives and dentists had nearly equal percentages (51.7% and 51.5% respectively). Midwives had the highest proportion expressing dissatisfaction at approximately 17 percent. These differences were statistically significant ( $\chi^2 = 30.43$ ,  $p = .002$ ).

Staff development and skill use	Occupational Group								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	1	.2	0	.0	0	.0	0	.0	1	.1
dissatisfied	25	7.2	6	5.8	16	16.9	5	10.9	53	8.8
neutral	141	40.1	45	42.8	30	31.4	29	63.2	245	40.9
satisfied	141	40.0	46	44.3	33	34.4	8	18.7	229	38.2
very satisfied	44	12.5	8	7.2	17	17.3	3	7.1	71	11.9
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

## Appendix 10: Cross tabulations between organizational climate and medical occupation

Cross tabulations between the four groups of medical occupations and the five categories of satisfaction with organizational climate and is shown in Table A3.3.1.

Organizational climate	Occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	42	12.0	27	25.6	9	9.0	0	.0	78	13.0
dissatisfied	73	20.8	14	13.6	11	11.2	11	24.5	109	18.3
neutral	101	28.6	21	20.2	32	32.8	21	46.4	175	29.2
satisfied	87	24.7	22	20.8	23	24.2	3	6.1	135	22.5
very satisfied	49	13.9	21	19.8	22	22.8	10	23.0	102	17.0
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

Nearly 40 percent of all medical staff are satisfied or very satisfied with the Organizational Climate while approximately 31 percent are very dissatisfied or dissatisfied. The occupational group that has the highest satisfaction with Organizational Climate is the midwives with 47 percent being very satisfied or satisfied followed by dentists at just under 40.6 percent. While the dentists are the second most satisfied group, they also have the largest proportions that are very dissatisfied or dissatisfied at 39.2 percent. This is because they have the smallest percentage that is neutral towards organizational climate. Physicians follow with nearly 33 percent being very dissatisfied or dissatisfied with the organizational climate. These differences were statistically significant ( $\chi^2 = 45.57, p < .001$ ).

## Appendix 11: Cross tabulations between appointments, promotions and transfers and medical occupation

Cross tabulations between the four groups of medical occupations and the five categories of satisfaction with appointments, promotions and transfers is shown in Table A3.3.1. Approximately 30 percent of all medical staff was found to be satisfied or very satisfied with the appointments, promotions and transfers while approximately 28 percent were very dissatisfied or dissatisfied.

Appointments, promotions, and transfers	job title grouped								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	4	1.1	6	5.7	4	4.0	0	.0	13	2.3
dissatisfied	73	20.6	26	25.1	21	21.8	21	45.4	140	23.4
neutral	173	49.0	43	40.7	30	31.1	19	41.2	264	44.1
satisfied	81	22.9	26	24.7	26	27.1	6	13.4	139	23.2
very satisfied	23	6.4	4	3.8	15	16.0	0	.0	42	7.0
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

The occupational group that has the highest satisfaction is the midwives with 43.1 percent being very satisfied or satisfied followed by physicians at approximately 29 percent. Nurses have the largest proportion that is very dissatisfied or dissatisfied at 45.4 percent. Dentists follow with nearly 31 percent being very dissatisfied or dissatisfied with the appointments, promotions and transfers. These differences were statistically significant ( $\chi^2 = 44.51, p < .001$ ).

## Appendix 12: Cross tabulations between policies, goals and procedures and medical occupation

Cross tabulations were done between the four groups of medical occupations and the five levels of satisfaction with policies, goals and procedures with the results shown in Table A3.3.1.

Goals, policies & procedures	Medical occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	53	15.1	17	15.8	9	9.1	3	7.1	82	13.7
dissatisfied	82	23.2	22	20.8	10	10.3	13	29.3	127	21.2
neutral	109	30.9	37	35.4	39	40.7	17	36.9	202	33.7
satisfied	89	25.2	23	22.3	32	33.6	11	23.3	155	25.9
very satisfied	20	5.6	6	5.8	6	6.2	2	3.5	33	5.6
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

Overall, a larger percentage (34.4%) is dissatisfied with the policies, goals, and procedures than are satisfied (31.5%). As with most of the other QWL variables examined thus far, midwives have the largest share (39.8%) expressing satisfaction. Physicians as a group express the greatest dissatisfaction with policies, goals, and procedures (38.3%), followed by dentists and nurses who each have approximately 36.5 percent. These differences were not statistically significant ( $\chi^2 = 16.47$ ,  $p = .171$ ).

## Appendix 13: Cross tabulations between work group relations and medical occupation

Cross tabulations between the four groups of medical occupations and the five categories of satisfaction with work group relations are shown in Table A3.3.1 below. Thirty percent of the medical staff expresses dissatisfaction with work group relations while approximately 23 percent express satisfaction. There is no person who is “very satisfied.”

**Table A3.3.1: Attitudes towards work group relations by medical occupation**

Work group relations	job title grouped								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
very dissatisfied	8	2.2	3	3.1	4	4.3	0	.0	15	2.5
dissatisfied	97	27.4	44	41.9	12	12.6	12	27.0	165	27.5
neutral	162	46.1	41	39.2	57	59.0	23	51.4	284	47.4
satisfied	85	24.3	17	15.8	23	24.1	10	21.7	135	22.6
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

Within occupational groups the expressed satisfaction, physicians and midwives are nearly identical at just over 24 percent. The occupational group that is most dissatisfied with work group relations is the dentists at 45 percent followed by physicians (29.6%) and nurses (27%). These differences are statistically significant ( $\chi^2 = 25.14$ ,  $p = .003$ ).

## Appendix 14: Cross tabulations between centralized decision-making and medical occupation

Cross tabulations were done between the four occupational groups and the five categories of centralization with the results shown in Table A3.3.1. The largest percentage of medical staff (49%) were neutral regarding the extent to which decision-making is centralized or decentralized. On the other hand, more respondents disagreed (30.3%) than agreed (20.7%) that decision-making is decentralized. By specific occupation, midwives had that largest percentage (36.8%) that felt decision-making is more centralized followed by dentists at 31.7 percent. The occupational group that had the largest percent agreeing that decision-making was more decentralized was nurses at 30.7 percent. These differences are statistically significant ( $\chi^2 = 24.89$ ,  $p = .015$ ).

**Table A3.3.1: Agreement that decision-making is decentralized by medical occupation**

Decision-making is decentralized	Occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
strongly disagree	30	8.6	8	8.0	6	5.9	0	.0	44	7.4
disagree	76	21.7	25	23.7	30	30.9	6	12.9	137	22.9
neutral	175	49.7	51	48.8	41	42.9	26	56.4	293	49.0
agree	70	19.9	19	18.3	17	17.6	12	27.2	119	19.8
strongly agree	0	.0	1	1.3	3	2.8	2	3.5	6	.9
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

## Appendix 15: Cross tabulations between performance and discipline and medical occupation

Cross tabulations of the percentage of each medical occupational group that feel there is a discipline and performance problem is shown in Table A3.3.1.

Weak performance not a problem	Occupation								Total	
	physician		dentist		midwife		nurse		Count	%
	Count	%	Count	%	Count	%	Count	%		
strongly disagree	38	10.7	16	14.8	10	10.7	6	14.1	70	11.7
disagree	112	31.9	24	23.0	39	40.6	14	29.8	189	31.6
neutral	143	40.5	50	47.7	34	35.6	18	40.7	245	41.0
agree	59	16.9	15	14.4	9	9.1	7	15.4	90	15.1
strongly agree	0	.0	0	.0	4	3.9	0	.0	4	.6
Total	352	100.0	105	100.0	96	100.0	45	100.0	599	100.0

The largest share of MOH officials (43.3%) disagree that weak performance and need for corrective action is not a problem; that is, they feel that performance needs to improve and more effective corrective action needs to be taken. Forty one percent feel neutral about this and less than 16 percent feel it is not a problem. Over 51 percent of the midwives (the largest of the occupational groups) feel that performance needs to improve and more effective corrective action needs to be take, followed by nurses (43.9%). Approximately 17 percent of physicians (the largest group) feel that weak performance is not a problem. These differences are statistically significant ( $\chi^2 = 32.21, p = .001$ ).