

3 F M B U J P O T I J Q C F U X F F O - F B E F S T I J Q
F I B W J P S 2 V B M J U Z P G 8 P S L - J G F B O I
3 F T P V S D F T 1 S P E V D U J W J U Z % B U B G S

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Abstract

Background and Objectives: Quality of work life is an increasingly important organizational factor in health facilities. Most studies on quality of work life in hospitals have been conducted in developed countries. The few studies performed in developing countries have targeted low- and middle-performance hospitals, and they have not explored the relationship between quality of work life and other organizational factors. The purpose of this study was to gain insight on how Quality of Work Life (QWL), Leadership Behavior (LB), and Human Resources Productivity (HRP) would be inter-related in the high-performance hospitals in developing countries.

Methods: A cross-sectional study was carried out over the period of July to September 2011 in Hasheminejad Kidney Center, which is one of the largest Urology hospitals in Iran. Two scales were developed for measuring LB and QWL based on the literature review, and HRP was measured using a simple questionnaire with single-item questions for each dimension. The scales were distributed to 403 healthcare employees and 316 valid questionnaires were returned. The data was analyzed using exploratory factor analysis to examine the similarity of the factor structure between scales and collected data. An iterative model improvement procedure was adopted for improving the LB and QWL measurement PRGHOV DQG WKH AQDO PRGHOV ZHUH YDOLGDWHG DJDLQVW WKH FROOHFWHG GD RI VFDOHV DQG GLPHQVLRQV ZDV GHWHUPLQH E\ FDOFXODWLQJ &KURQEDFK.V D examine construct validity, and the relationship between constructs was studied by regression analysis.

Findings: (1) Employees had high positive perceptions of the LB (73%), QWL (70%) and HRP outcome variables (78%); (2) LB was positively correlated with QWL ($r = 0.78, P < 0.001$) and HRP ($r = 0.74, P < 0.001$); (3) QWL was positively correlated with HRP ($r = 0.30, P < 0.001$). \$OO LQGLYLGXDO GLPHQVLRQV RI /% ZHUH IRXQQ correlated with QWL.

Conclusions: Our results indicate that satisfactory levels of QWL are achievable in hospitals of developing countries. In addition, higher employee perception of QWL was found to correspond with higher employee perception of LB. Leadership style, treating subordinates with trust and respect, motivating and in-person recognition of subordinates, DQG SURPRWLQJ RUJDQLJDWLRQDO YDOLHWZHUHLGHG HGDG H 63DV VWURQJ SU

Keywords: Quality of Work Life, Well-being, Leadership, Behavior, Human Resources, Productivity, Hospital, Workplace, Organizational Health

Background and Objectives

\$Q RUJDQLJDWLRQ.V VXFHV DQG HHHFWLYHWLWYHOHVYLV FUXFBOOY dependent on how tasks and processes are performed by its employees [1]. Employees are able to perform well provided that they enjoy physical, mental, and spiritual health and have a general sense of well-being. Employee SHUFHSLRQ RI ZHOE EHLQJ LV VLJQLAFDQWO\ LQAXHQFHG E\ MRE characteristics and workplace conditions [1-3]. This has led to a growing understanding that in order to attain a high level of human resources productivity (HRP) outcomes,

organizations need to develop workplace improvement strategies with the scope of effects extending beyond the RUJDQLJDWLRQDO YDOLHWZHUHLGHG HGDG H 63DV VWURQJ SU the profound psychological effects of working conditions RQ HPSOR\HHV.VWDWH RI EHLQJ-DQG EH SDFW ZRUNHUV.SHUFHSLRQ RI OLIH VD factors [6]. Recognizing work life within the context of the entire life, and approaching employee well-being through workplace factors is debated and speculated under the umbrella title of Quality of Work Life (QWL).

While the QWL concept shares many common facets with job satisfaction, it places more emphasis on the relation of work to whole life satisfaction. Therefore, this construct is considered to offer a broader HRP scope relative to work-based factors such as job satisfaction,

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Methods

Study Design

A cross-sectional study was conducted in Hasheminejad Kidney Hospital (HKC) over the period of July to September 2011.

Measurement Tool

The LB measurement tool was developed by reviewing literature [37-40] and consulting several popular LB inventories such as the Multifactor Leadership Questionnaire (LBDQ) [42], and Supervisory Behavior Description [43]. The QWL assessment tool ZDV EXLOW EDVHG RQ OLWHUDWXUH UHYLHZ > 1,26+ TXDOLW\ RI ZRUN OLIH TXHVWLRQQDLUH & RQVXOWDQWV. -RE 6WUHV 6DWHU (n = 316) + & -664 > @ -RE 'LDJQRVLV 6XUYHY 5HODWHG 4XDOLW\ RI /LIH VFDOH low response rate due to the coverage of large number of variables, the dimensions of HRP were evaluated by single-item questions. The initial LB questionnaire FRQVLVWHG RI LWHPV EHORQLW WKDW LQFOXGHG /HDGHU V and Leadership Style; (2) Personalized Recognition; (3) Treating Subordinates with Trust and Respect, (4) Supportive Supervision, (6) Motivating Employees, and (7) Clarifying Visions and Expectations. The initial QWL TXHVWLRQQDLUH FRQWDLQHG -LWHPV VLRQV LQFOXGLQJ -RE 5HFRJQL (2) Feedback, (3) Interpersonal Relationships; (4) Task & OHDUDQFH \$XWRQRP\ DQG & RQWURO DW :RUN 'HYHORSPHQW DQG 8VH LQ :RUN portunity; (8) Work-family Balance; and (9) Work Stress. The human resources productivity questionnaire comprised three single-item dimensions, including Job Satisfaction (DP VDWLVAHG ZLWK DP FRPSOHWHO\ LQYROYHG LQ P\ & RPPLWPHQW ¶)RU PH WKLV LV-WKH JDQLJDWLRQV IRU ZKLFK WR ZRUN. D ÀYH SRLQW /LNHUW WISH VFDOH VWURQJµ 7KH YDOLGLW\ RI WKH TXHVWLRQQDLUH ZDV FRQAUPHG by expert opinion method.

Data Collection

The data was collected over the period of July to September 2011 from Hasheminejad Kidney Center (HKC). During the study period, there were 403 healthcare employees in the HKC. The same number of questionnaires were distributed with the aid of research assistants from +RVSLWDO 0DQDJHPHQW 5HVHDFK

Table 1 Demographic characteristics of the respondents

Variables	Number	%
Gender (n = 316)		
Female	224	71
Male	92	29
Marital Status (n = 316)		
Married	218	69
Single, never married	98	31
Educational level (n = 316)		
College	104	33
University	145	46
Postgraduate	67	21
Tenure (n = 316)		
1-10 years	180	57
11-21 years	88	28
21-30 years	48	15

University of Medical Sciences) and the employees were asked to answer the questions voluntarily. Of the total distributed questionnaire 316 valid questionnaire were returned (response rate = 78%). Table 1 summarizes the demographic characteristics of the participants. Of the total respondents, 71% were female, 31% were single or never married, 69% were married, 33% were college, 46% were university and 21% were postgraduate. In addition, while 36% of the study group were managers, 64% were hospital staff and the rest were clinical personnel.

Data Analysis

Descriptive Statistics

Data was summarized using descriptive statistics. For negatively worded items, the scores were reversed so that higher scores always mean more positive rating of an item. The Likert-type scale was converted to a 100-point purpose of study, a score above 70 indicated high attitude and a score below 70 indicated low attitude. For the purpose of study, a score above 70 indicated high attitude and a low (negative) rating.

Exploratory Factor Analysis

The collected data was analyzed using exploratory factor analysis (EFA) to identify variable loadings across the dimensions and to inspect if the factor structures underlying the data were meaningful. The adequacy of sample size for factor analysis was determined

Table 2 Mean and Reliability Analysis of Leadership Behavior, Quality of Work Life and Human Resources Productivity

Dimensions	Mean	Reliability
Leader's personal characteristics and management style (LB1)	4.20	0.837
• The leader decides what should be done and who should do it (R).	3.79	
• The leader is friendly and approachable.	3.87	
• Followers being directly influenced by the leader and their personal relationship with him/her.	4.58	
• The leader leads by saying rather than by doing (R).	4.26	
• The leader says things that make employees feel proud of being a part of this organization.	4.24	
• The leader displays a sense of power and confidence.	4.41	
• The leader inspires others with his/her plan for future.	4.29	
Treating the subordinates with trust and respect (LB2)	4.10	0.844
• The leader let the members do their work the way they think best.	4.07	
• The leader does not respect and trust subordinates (R).	4.17	
• The leadership tries to develop and establish a trustful culture.	3.93	
• The leader treats subordinates fairly and ethically.	4.20	
Promoting organizational values (LB3)	4.00	0.819
• The leader emphasizes commitment to patient satisfaction as an organizational value.	4.35	
• The leader emphasizes commitment to employee well-being as an organizational value.	3.57	
• The leader encourages employee commitment to the organizational values.	3.78	
• The leader himself acts according to organizational values.	3.92	
• My personal values are consistent with those held by the leader.	4.32	
Supportive supervision (LB4)	3.52	0.761
• The leader does not pay attention to the personal welfare of the employees (R).	3.44	
• The leader does not support employees to meet their family responsibilities (R).	3.18	
• Whenever I require assistance, the leader or a supervisor is always there to help.	3.79	
• The leader or a particular supervisor will always listen to my issues and assist me in resolving them.	3.74	
Motivating subordinates and in-person recognition (LB5)	4.05	0.745
• The leader builds a high degree of confidence in the follower's in meeting expectations.	4.39	
• The leader publicizes the activities of the groups.	3.87	
• The leader put suggestions made by employees into operation (R).	3.99	
• The leader demonstrates high performance expectation.	4.48	
• The leader treats subordinates as individuals rather than just as members of the group.	3.68	
• The leader gives the followers special recognition when the work is done very good.	3.86	
Clarifying visions and expectations (LB6)	3.52	0.716
• The leader will communicate messages that contain references to his /her overall vision.	3.35	
• The leader let group members know what is expected of them.	3.77	
• The leader interacts with the followers to portray his vision and attitudes clearly.	3.42	
Job recognition and significance (QWL1)	4.12	0.788
• I do not make significant contributions to the final product or service (R).	4.23	
• My job provides me with the opportunity to both communicate with my supervisors and to receive recognition from them as well.	3.99	
• My job influences decisions that significantly affect the organization.	4.13	

Table 2 Mean and Reliability Analysis of Leadership Behavior, Quality of Work Life and Human Resources Productivity (continued)

Feedback and job familiarity (QWL2)	4.06	0.802
• I receive feedback from my co-workers about my performance on the job.	4.05	
• My supervisor provides me with constant feedback about how I am doing.	3.95	
• I have an understanding of how my job relates to the organization's mission.	4.17	
• On my job, I do not know exactly what is expected of me (R).	3.93	
• My organization provides enough instruction and information as to how get the job done.	4.18	
Interpersonal relationship (QWL3)	4.05	0.832
• I am satisfied with the communication status between colleagues within other departments.	4.08	
• I am not satisfied with the communication status between colleagues within my department (R).	3.91	
• There is a spirit of collaboration and cooperation toward organizational vision in my workplace.	4.14	
Autonomy and control at work (QWL4)	4.07	0.797
• My job gives me considerable freedom in doing the work.	4.28	
• My job provides me the opportunity of self-directed flexibility of work hours (R).	4.33	
• I am able to act independently of my supervisor in performing my job.	3.56	
Skill development and use in work place and career growth opportunity (QWL5)	4.20	0.856
• I believe I will be able to develop a wide variety of skills by continuing work in this organization.	4.32	
• I have a chance to do a number of different tasks that need multiple skills and talents.	3.97	
• My organization gives me enough space and opportunities to grow as an individual and an employee.	4.57	
• I feel that my skills and expertise are put to their best use.	3.43	
• I believe I will grow my career in this organization in future and I will be able to take higher positions.	4.50	
Work-family balance (QWL6)	3.12	0.815
• I can easily balance work and family life.	2.89	
• In this organization it is very hard to leave during the workday to take care of personal or family matters.	3.56	
• My work schedule makes it difficult for me to fulfil my domestic obligations (R).	2.83	
• My work obligations make it difficult for me to feel relaxed at home (R).	3.16	
Work stress (QWL7)	3.40	0.742
• I have too great an overall volume of work (R).	2.85	
• I feel under pressure to meet deadlines (R).	2.94	
• I receive enough resources and facilities to do my job properly.	3.83	
• I am satisfied with organization's stress relief program.	2.90	
• The job security is good.	4.65	
• My workplace is stressful (R).	3.25	
Job Satisfaction (HRP1)		
• I am satisfied with my job.	4.22	
Job Involvement (HRP2)		
• I am completely involved in my work.	3.97	
Organizational Commitment (HRP3)		
• For me, this is the best of all possible organizations to work for.	4.17	

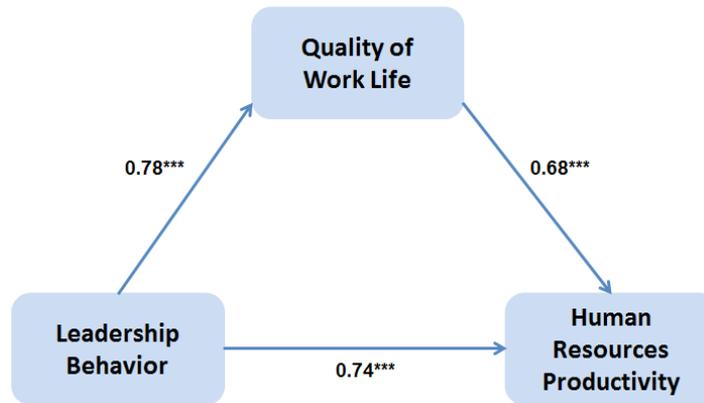


Figure 1 The relationship between leadership behavior, quality of work life and human resources productivity

by calculating Kaiser-Meyer-Olkin measure (KMO). The matrix is meaningful. Principal component analysis was then performed with Varimax rotation for factor extraction. The internal consistency reliability of the extracted

associated with HRP. Hierarchical regression analysis was used to determine if LB was independently associated with HRP when the effect of QWL was controlled. Finally, a series of linear regressions were carried out to examine the correlation of LB dimensions with the overall QWL index. CFA was carried out by IBM AMOS version 20 software, and all other analyses were performed using IBM SPSS 20 software.

Model Improvement

Due to inadequate internal consistency of some extracted factors, a model improvement procedure was carried out. The data was randomly divided into two equal-size parts, one for model development, and the other for model validation. Starting from the original model, the items with low factor loading and communalities were gradually eliminated. The criteria for stopping the procedure were communalities and factor loadings of higher than 0.3. After removal of eight items from the LB scale, and nine items from the QWL scale, the model was re-estimated and validated against the second half of the data by performing cross-validation. The internal consistency reliability of the factors in the improved model was examined by conducting correlation analysis among the factors.

Regression Analysis

Correlation between independent and dependent variables was examined using regression analysis. Simple linear regression was used to evaluate if LB was positively associated with QWL, and if QWL was positively

Results

Factor Analysis and Model Improvement

Initial EFA extracted seven factors for LB and 10 factors for QWL. While the factor structure was generally consistent with the designed questionnaires, there were many items not clustered to the same factors as within the scales. We grouped the factors according to the questionnaire. The internal consistency was found adequate for LB (Cronbach's alpha = 0.861). The internal consistency was found adequate for QWL (Cronbach's alpha = 0.78). The internal consistency was found adequate for HRP (Cronbach's alpha = 0.78). The internal consistency was found adequate for QWL (Cronbach's alpha = 0.78). The internal consistency was found adequate for HRP (Cronbach's alpha = 0.78).

fell short of an adequate level of reliability (alpha < 0.7). To develop more reliable scales, an iterative cycle of factor analysis was conducted. In the LB model, the criteria for stopping the procedure were communalities and factor loadings of higher than 0.3. After removal of eight items from the LB scale, and nine items from the QWL scale, the model was re-estimated and validated against the second half of the data by performing cross-validation. The internal consistency reliability of the factors in the improved model was examined by conducting correlation analysis among the factors.

Table 3 Correlation Analysis among Leadership Behavior, Quality of Work Life and Human Resources Productivity

Variables	Leadership Behavior							Quality of Work Life							Human Resources Productivity		
	LB 1	LB 2	LB 3	LB 4	LB 5	LB 6	LB 7	QWL 1	QWL 2	QWL 3	QWL 4	QWL 5	QWL 6	QWL 7	HRP 1	HRP 2	HRP 3
LB1	1																
LB2	0.423**	1															
LB3	0.393**	0.415**	1														
LB5	0.450**	0.300**	0.243**	1													
LB6	0.328**	0.222**	0.442**	0.235**	1												
LB7	0.347**	0.251**	0.229**	0.251**	0.246**	1											
QWL1	0.623**	0.376**	0.352**	0.382**	0.572**	0.216**	1										
QWL2	0.360**	0.339**	0.331**	0.135*	0.389**	0.411**	0.204**	1									
QWL3	0.461**	0.409**	0.488**	0.186*	0.313**	0.283**	0.239**	0.383*	1								
QWL4	0.519**	0.597**	0.218**	0.203**	0.420**	0.255**	0.380**	0.189*	0.167*	1							
QWL5	0.634**	0.434**	0.277**	0.268*	0.508**	0.142*	0.356**	0.200**	0.194*	0.324*	1						
QWL6	0.158*	0.152*	0.087	0.193*	0.092	0.129	0.145*	0.137*	0.175**	0.188**	0.204**	1					
QWL7	0.236**	0.312**	0.220**	0.266*	0.081	0.184*	0.240**	0.176*	0.248*	0.283*	0.214**	0.324**	1				
HRP1	0.513**	0.414**	0.217**	0.443**	0.424**	0.283**	0.351**	0.245**	0.366**	0.402**	0.459**	0.111	0.114	1			
HRP2	0.541**	0.424**	0.281**	0.411**	0.538**	0.239**	0.470**	0.283**	0.332**	0.434**	0.577**	0.125	0.185*	0.584**	1		
HRP3	0.668**	0.572**	0.370*	0.322**	0.44**	0.382**	0.388**	0.197**	0.344**	0.591**	0.583**	0.106	0.163*	0.591**	0.477**	1	

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed)

Table 4 The Linear Regression of Leadership Behavior and its Sub-scales and Quality of Work Life

Leadership Behavior	Leadership Behavior dimensions						
	Leader's personal characteristics and management style	Treating the subordinates with trust and respect	Promoting organizational values	Supportive supervision	Motivating subordinates and in-person recognition	Clarifying vision and expectations	
	β (t value)	β (t value)	β (t value)	β (t value)	β (t value)	β (t value)	β (t value)
Quality of Work Life	0.78 (28.8***)	0.64 (21.32***)	0.62 (19.64***)	0.60 (18.7***)	0.52 (15.21***)	0.56 (16.76***)	0.43 (11.51***)

*** $P < 0.001$, β = standardized regression coefficient, t value = test statistics of β

PRGHO UHGXFWRQ OHG WR PHUJHMLRQ. UHFHDPHGLDULFRUHZDWKLLJK DV
 (1)HHGEDFN. DQG PHUJHU RI 16NLOOQGYHORSRHDQWDRQDQOV&IRPPLWPHQW. VFR
 ZLWK 11FDUHHU *URZWK 2SSRUWXQ respectively (Table 2). WKH AQDO PRGHO

consisted of 29 items clustered into seven factors (Table

2). Three items from the LB scale and two items from the

4:/ VFDOH ZHUH QRW JURXSHG ZLWK SUH VSHFLAHG IDFWRUV

To facilitate interpretation of data, we grouped these items

with the designated factors during model validation and

reliability measurement. We assumed that this relocation

would not have considerable effect on the results.

The resulting models were validated against the second

KDOI RI GDWD XVLQJ &)* *RRGQHVV RI AWLOGLFHV VXXJHVWHG

DGHTXDWH AWQHVV RI ERWK PRGHOV WR GDWD ZLWK *)

CFI = 0.93, TLI = 0.84 and RMSEA = 0.073 for LB model,

DQG *) , &), 7/ , DQG 5.06 (\$ VFDOH VKRZ SRVLWLYH VLJQLAFDQW FRUHH

IRU WKH 4:/ PRGHO 5HOLDELOLW. DQDOVLV RI WKH LP

SURYHG PRGHO LGHQWLAHG DGHTXDWH OHYHOV RI LQWUHQDO FRQ

sistency for all factors (alpha > 0.7) (Table 2).

Survey Results

The average score of LB was 3.92 with the scores of di-

PHQVLRQV YDU\LQJ EHWZHHQ DQG 4.17 LYDQ & RULHQW HQL7DEOH /% GHP

VFRUH ZDV REWDLQHG E\ 1/HDGHU VFRUH ZDV REWDLQHG E\ 1/HDGHU

WLFV DQG 0DQDJHPPHQW 6W\OH. VFRUH ZDV REWDLQHG E\ 1/HDGHU

6XERUGLQDWHV ZLWK 7UXVW DQG 5.17 SHFWRU RI 1.17

YDWLQJ 6XE RUGLQDWHV DQG ,QSPURQSHURQVLRQ DQG 7DEOH

7KH ORZHVW VFRUH ZDV REWDLQHG E\ 1/HDGHU

([SHFWDWLRQV. 7DEOH

The average score of QWL was 3.81 with the scores of

dimensions varying between 3.12 and 4.20. The high-

HVW VFRUH ZDV REWDLQHG E\ 16NLOOQGYHORSRHDQWDRQDQOV&IRPPLWPHQW

LQ :RUNSODFH DQG FDUHHU *URZWK 2SSRUWXQ respectively (Table 2). WKH AQDO PRGHO

ORZHG E\ 1-RE 5HFRJQLWLRQ DQG 6.17 SHFWRU RI 1.17

1\$XWRQRP\ DQG &RQWURO DW :RUN 1.17 SHFWRU RI 1.17

DQFH. UHFHLYHG WKH ORZHVW VFRUH ZDV REWDLQHG E\ 1/HDGHU

7KH DYHUDJH VFRUH RI +53 ZDV - LGHQWLAHG DGHTXDWH OHYHOV RI LQWUHQDO FRQ

Correlations

The result of correlation analysis between dimensions of

LB and QWL is presented in Table 3. With the exception

RI 1:RUN IDPLO\ %DODQFH. FRUHHODWLRQ ZLWK 11FDUHHU

DJHPHQW. 10RWLYDWLQJ 6XE RUGLQDWHV DQG 16NLOOQGYHORSRHDQWDRQDQOV&IRPPLWPHQW

RJQLWLRQ. DQG 1&ODULI\LQJ 9LVLRQ DQG (DQDOVLV RI 16NLOOQGYHORSRHDQWDRQDQOV&IRPPLWPHQW

FRUHHODWLRQ RI 1:RUN 6WUHV. ZLWK 11FDUHHU

RI AWLOGLFHV VXXJHVWHG RYHUWKHFRUHHODWLRQV EHWZHHQ /% DQG 4.17

LYDQ & RULHQW HQL7DEOH /% DQG 4.17

This indicates the association of the two constructs in the

investigated hospital. Moreover, dimensions within each

DQG 5.06 (\$ VFDOH VKRZ SRVLWLYH VLJQLAFDQW FRUHH

strong intercorrelation suggesting the construct validity.

Table 4 shows the results of the regression analyses of

LB and LB dimensions with QWL. The positive associa-

tion of LB and QWL is demonstrated by the standardized

UHJUHVVLRQ FRHIAFLHQW RI 3

sub-scales of LB display positive correlation with QWL.

The relationship between HRP and predictor variables LB

DQG 4.17 LYDQ & RULHQW HQL7DEOH /% GHP

positive association with HRP with the standardized regres-

sion coefficient of 1.17 SHFWRU RI 1.17

4:/ VKRZ

relation with HRP with the standardized regression co-

efficient of 1.17 SHFWRU RI 1.17

three variables is illustrated in Figure 1.

Discussion

Satisfactory QWL level is an essential driver of high orga-

nizational performance (16NLOOQGYHORSRHDQWDRQDQOV&IRPPLWPHQW

order to improve QWL, knowledge of how the construct is

related to and affected by other organizational variables is

required. Several theoretical and empirical studies have

LGHQWLAHG DGHTXDWH OHYHOV RI LQWUHQDO FRQ

Table 5 The Linear Regression of Leadership Behavior, Quality of Work Life and Human Resources Productivity

	Leadership Behavior	Quality of Work Life ^a
	β (t value)	β (t value)
Human Resources Productivity	0.74 (30.42***)	0.68 (31.07***)

^a The effect of Leadership Behavior was controlled for.

*** P < 0.001, β = standardized regression coefficient, t value = test statistics of β

study, we sought to explore how LB and QWL are inter-related in a hospital in the developing world with high productivity. The result of our study demonstrated a strong positive correlation between LB and QWL. We deliberately excluded monetary and job content-related variables to be able to explore the inter-relation of the constructs investigated hospital have a perception of leadership behavior. Second, the investigated hospital features a high level of QWL as perceived by the employees. Third, the investigated hospital have a perception of leadership behavior. Fourth, the QWL level is positively correlated with HRP outcome variables, including job satisfaction, job involvement, and organizational commitment. Fifth, LB is directly and positively associated with HRP outcome variables.

In developing countries, including Iran, QWL is a new concept and studies in this area are scarce. However, the small number of studies performed to date, have reported low to moderate rates of employee satisfaction with work. In Iran, the low levels of QWL in Iranian hospitals can be attributed to the same factors that have created other critical human-resources-for-health (HRH) challenges in Low-Middle-Income Countries (LMICs), including of the limited understanding of HRH issues, lack of knowledge about the nature of HRH planning and management, and the lack of resources for HRH. The perception of attaining a high QWL level in HCOs of LMICs may seem far-reaching, and contingent on fundamental reform of the health system. A particular implication of our study is that this postulation is not true; the HCOs in LMICs can achieve high levels of QWL in spite of the current socio-economic situation and health system problems. In addition, our result demonstrated that higher levels of QWL as perceived by healthcare workers are associated with their higher perceptions of the behavior of leadership.

Regression analysis showed that QWL was mostly correlated with Leadership Behavior. The highest score among all LB factors, with the highest correlation with QWL was perceived by the level of autonomy that staff feel at work. This observation reinforces the evidence supporting the importance of leadership behavior in promoting QWL. Our results revealed that leaders who want to promote QWL, need to establish close and friendly relationships with employees. The third strongest correlation of QWL was found with job involvement. The congruity between personal and organizational values is important. If employees agree with those held by the organization, they would draw more satisfaction out of their job and would be able to appreciate the values provided by working in the organization, thereby gaining a more positive perception of QWL [60]. Lowe places the values within the major enablers for achieving organizational health [24]. Shoaf et al. describe values and goals as the constituents of organizational culture that drive effectiveness and QWL within

Study Limitations

The purpose of this study was to explore the relationship between LB, QWL and HRP in a hospital with a high pro-
 ÅOH RI KXPdq UHVrxUFHV SURG-X F WLYLWLRXWRPRPHV 2XU V X U
 ve results, therefore, do not represent the average status
 of these factors in Iranian hospitals. However, the results
 can provide a benchmark for comparative evaluation of
 WKH KHDOWKFDUH ZRUNHUV. SHUFHSHWLRQV RQ /% DQG 4:/
 It is also worth mentioning that our models for measur-
 ing LB, QWL and HRP are by no means comprehensive.
 Several measures of transformational leadership were
 not included in the LB scales. Assessment of human re-
 sources productivity was limited to three outcomes that
 were measured by single item variables. In addition, due
 to the scope of the study, our QWL survey did not include
 V RPH LPSRUWDQW IDFWRUV WKDW DUH LQAXHQFHG E\ MRE FRQWHQW
 such as task identity and job meaningfulness. The survey
 DOVR GLG QRW FRYHU WKH PHDVXUHV RI PRQHWDU\ DQG ÅQDQFLDO
 rewards. Hence, the results should be interpreted in the
 light of these limitations.

Conclusions

This study aimed at: (1) developing appropriate tools for
 measuring leadership behavior (LB) and quality of work-
 OLIH 4:/ LQ ,UDQ.V KHDOWKFDUH FRQVHJW ((2)HNE & :RUN IDPLO\ FRQÅLFW
 DQG 4:/ LQ DQ ,UDQLDQ KRVS LWD O ZLWK KLJK SURAQH RI KX
 man resources productivity (HRP), and (3) exploring the
 relationship between LB, QWL and HRP in a high-HRP
 hospital in Iran as a developing country. Two measure-
 ment models were developed for LB and QWL with good
 psychometric properties. Hospital employees showed
 high perceptions of both constructs. Regression analy-
 sis demonstrated positive association of LB with QWL
 and HRP and positive correlation of QWL with HRP. Cor-
 relation analysis also showed that the dimensions of LB
 DQG 4:/ DUH JHQHUDOO\ LQWHUUHODWHG ZLWK VLJQLDEW FRU
 UHODWLRQV 2XU ÅQGLQJV KDYH WZR DPSRUWDQW LPSOLFEDWLRQV
 achievement of high QWL levels in hospitals of devel-
 oping countries is a feasible and attainable goal, and
 perception of QWL by hospital employees is associated
 with their perception of LB.

Abbreviations

LB: Leadership Behavior; QWL: Quality of Work Life; HRP:
 Human Resources Productivity; LMICs: Low- Middle Income
 & RXQWULHV (\$) (ISORUDWRU\)DFWRU \$QDO\VLV *), *RRGQHVV RI AW LQGHI &) & RQAU
 WRU\)DFWRU \$QDO\VLV *), *RRGQHVV RI AW LQGHI &) & RQAU
 mative Fit Index; TLI: Tucker-Lewis Index; RMSEA: Root Mean
 Squared Error of Approximation

Competing Interests

Authors declare that there is no competing interest.

Authors' Contributions

6-7 GHV LJQH WKH VWXG\ 0% DQG (\$ FROOHFV
 lyzed the data. MB and SJT contributed to the interpretation of
 the results. MB and SA participated in preparation of the draft
 PDQXVFULSW 0% DQG %' UHYLVHG DQG ÅQDO
 7KH ÅQDO PDQXVFULSW ZDV UHDG DQG DSSURY

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 ÅOLDWHG WR 7HKUDQ 8QLYHUVLW\ RI 0HGLFD
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