Employee Wellness as Predictor of Productivity from Public Sector Management Perspectives: Conditional Process Analysis

Muhammad Nawaz Qaisar[1] Shahida Mariam[2] Farooq Ahmad[3]

Abstract

We studied the relationship between perceived levels of employee wellness, employee productivity, organizational productivity, and worksite wellness measures from managerial perspectives. Data was collected using scales comprising of exemplary items to measure selected variables. Sample consisted of 108 managers from public sector anticorruption and regulatory organizations. Results showed significant positive relationship of organizational productivity with worksite wellness measures, employee wellness, and employee productivity. Worksite wellness measures moderated the relationship between employee wellness and employee productivity. Employee productivity mediated this moderated effect of employee wellness on organizational productivity. Conditional indirect effect of employee wellness on organizational productivity through employee productivity was significant at low, medium, and high values of moderator. Findings indicate that organizations with lesser worksite wellness measures may risk of having unwell and less-productive employees and vice versa. We concluded that promoting healthy lifestyles through adequate workplace wellness measures can optimize employee's health and potential for engagement at work.

Key words: Wellness, wellbeing, worksites, productivity, public sector management

Introduction

This study is guided by wellness motivation theory which offers empowering potential for behavior change (Fluery, 1991). This theory has relevance to positive individual and organizational outcomes (Fleury, 1996). At workplaces, we often hear "I am not feeling well". At times we also claim this for various reasons. Such feelings influence our efficiency and effectiveness at work. Poor employee health leads to productivity losses with economic implications. Unwell and nonproductive human factor may drain out organizational excellence, competitive advantage, and the bottom line. In certain cases, an employee's own employability and associated wellbeing of his family might be at risk. Public sector in Pakistan is criticized for its inefficiency and ineffectiveness. It is losing loosing tax payer's confidence for investment in public service opportunities. Productivity improvement can rebuild this confidence. A lasting change can be created by capitalizing over employee wellbeing (Chenoweth, 2011; Swarbrick, 2010). In modern day busier life individuals have to compete for personal success, career growth, and lifelong employability. Modern organizations and nations are striving for survival, economic success, and competitive advantage. Given all these efforts on the face of socio-economic and human development, the life has almost become mechanical. It is full of restlessness, anxiety and stress. This is leading to

[1] Independent Researcher E-mail: itsnawaz@gmail.com
[2] Riphah International University, Islamabad
[3] International Islamic University, Islamabad

diminishing health and productivity. Qaisar (2015) found that 92% employees of selected public sector organizations in Pakistan do not feel physically well which seems quiet an alarming state of personal wellness. He also found a lower level of workplace wellness measure currently undertaken at these organizations. Workplace wellness programs intend to improve well-being, contain medical costs, and increase productivity (Jones, Molitor, & Reif, 2018). Initiation and success of workplace wellness programs depends upon managerial support to employees so they feel motivated and encouraged for optimum participation is those programs. Considering the expected benefits, probably every organization would prefer to have its own wellness program (Conrad, 1987). However, no such program could be successful without managerial support. Therefore, prior to making investments in customized wellness programs, empirical evidence is needed from different organizations, cultures, and countries using different research methodologies. In this backdrop, we intend to understand managers view point on the relationship between workplace wellness and organizational outcomes.

This study aims to find empirical evidence from public sector management in Pakistan to understand; (1) current state of workplace wellness measures, employees' wellness, employees' productivity, and organizational productivity?, (2) nature and magnitude of relationship among these variables, and (3) the potential of workplace wellness measures, if employers consider this investment, to attain wellness and productivity goals within organizational settings. This study provides managerial support to understand long run effects of wellness programs on organizational outcomes. An effort to understand the empirical relationship between wellness and productivity, and how to leverage this relationship through workplace wellness measures seems rationale. Findings may be useful for wellness professional, government, businesses, civil society, academicians, and students.

Literature Review

Organizational productivity defined as efficiency and effectiveness of an organization in achieving its objectives (Qaisar, 2015). It is relevant to organizational performance in the wake of new challenges, opportunities, environmental dynamics, and constant change (Ramendran, Raman, Moona Haji Mohamed, Beleya, & Nodeson, 2013). Productivity attainment in a diverse public sector has always remained a priority area (Jääskeläinen & Lönnqvist, 2011; Thornhill, 2006). It requires exploiting new knowledge though effective human resource development practices (Wiig & Jooste, 2003). Workplaces need to be healthy to generate sustainable outcomes (O'Donnell, 2007).

Wellness is the process of consciously and deliberately making choices for healthy living. It is defined as a healthy balance along physical, spiritual, social, emotional, occupational, financial, and environmental aspects in life (Fahey, Insel, & Roth, 2013; Qaisar, 2015; Swarbrick, 2010). It is a notion similar to health and both terms are widely used without a universally accepted definition (Goetzel & Ozminkowski, 2008) due to constant evolution across different societies and global context. It is increasingly becoming an area of organizational concern. The concerns for disease prevention and health promotion have originated the concept of wellness. It has become an active part of corporate health policies of many employers (Conrad, 1987).

Poor fitness coupled with stressful work environment contributes to chronic illness and performance issues (Harrington, 2017). Wellness philosophy can help people in living more healthy, satisfying, productive, and happy lives (Swarbrick, Yudof, & Garafano, 2011). Wellness behaviors refer to actions taken for enhanced individual health and wellbeing (Melia-Gordon, Sirois, & Pychyl, 2012). Everyday lifestyle choices shape our perceptions, attitude, and behavior that affect health and performance. Personal problems stemming from lack of wellness may infiltrate to organizations in the form of absenteeism, presenteeism, lack of interest, job dissatisfaction, and increased healthcare costs. All economic activities aim for betterment of human beings, realizing which the paradigm has already shifted to a need for balanced life and holistic wellness. Organizations are considering wellness imperative for gaining competitive success through healthy and wellthy human capital. This gives a basis for H_1 and H_2 in this study.

Productivity is one of the key criterions to measure an organization's success. Human capital and its productive efforts are most critical factors to organizational success. Employee productivity is defined as the capability of an individual to possess characteristics that help him in efficient and effective functioning at his work (Qaisar, 2015). Amongst many, literature suggests eight such key attributes; learning, personal organization, time management, stress control, creativity, decision making (Allen & Schwartz, 2011; Dabirian, Rezvanfar, & Asadi, 2010; Jussila, 2010), teamability (Presser & Adler, 2012; Siddiqui & Asghar, 2008), and happiness (Amabile & Kramer, 2011; Qaisar & Akhtar, 2012). Innovations in human resource management are considered effective tool to enhance productivity and effectiveness (C. C. Lee, Strohl, Fortenberry, & Cho, 2017). Targeting, developing, keeping productive employees is a cost effective effort to gain and maintain organizational productivity (Ghamari, Zeinabadi, Arasteh, & Behrangi, 2018). Individual healthy lifestyles bring health and individual productivity which in turn bring organizational and national productivity and prosperity (Goss, 2011; Saha, 2013). This provides the basis for H_3 and H_4 in this study.

Change is imperative if desired improvements are to be made. Sustainable lifestyle changes can help in adopting healthy ways of living. However, most people find it difficult to change (Hoeger & Hoeger, 2010). External motivation and support is required to bring lasting positive changes in lifestyles (Fahey et al., 2013). Worksite wellness measures is defined as steps taken by organizations to promote employee wellness such as embedding wellness in its strategy, policies, processes, leadership approaches, culture, education, and programs, encourage participation in wellness activities, and include wellness in evaluation parameters (Qaisar, 2015). Employers putting employee wellness close to their heart can reap benefits themselves and create a better society for everyone. Organizations using best practices in wellness programs and creating a facilitating culture are more likely to achieve success in health and financial outcomes (Goetzel et al., 2014). Workplaces are attractive and accessible locations to reach adults for their health education as most employees' spend about half of their daily time at work (Conrad, 1987). The corporate wellness programs therefore impact employee wellness and productivity (Gubler, Larkin, & Pierce, 2017). These may give

employees a feeling of psychological attachment to their work which enhances their performance.

Traditionally viewed as a nice extra, wellness now is seen as strategic priority as its generates savings (Baicker, Cutler, & Song, 2010) and high return on investment (Berry, Mirabito, & Baun, 2011). The engaged leadership, strategic alignment, relevance and quality, accessibility, partnerships, and effective communications are important pillars of successful wellness programs (Berry et al., 2011). The managers' commitment to create a supportive workplace culture supports employee health and wellbeing (Makrides, Heath, Farquharson, & Veinot, 2007). Benefits of worksite health promotion include improvements in productivity such as reduction in absenteeism, boosted morale, enhanced ability to perform, and staff development; reduced costs of healthcare and worker related insurance; minimized human resource development costs such as reduced turnover rate and increased employee satisfaction; and finally an improved corporate image (Rosen, 1993). Workplace wellness can contain healthcare spending and increase organizational productivity (Baicker et al., 2010; Goetzel & Ozminkowski, 2008). Health promotion programs are recommended for adoption at workplaces (Michaels & Greene, 2013) and these are financially viable as well (S. Lee, Blake, & Lloyd, 2010). These may range from a single intervention to comprehensive health and fitness programs that effectively influence health behavior change and personal health improvement (Merrill, Anderson, & Thygerson, 2011). These indicate professional as well as overall quality of life (Hillier, Fewell, Cann, & Shephard, 2005; Lawson & Myers, 2011; Melia-Gordon et al., 2012) which in turn enhances work performance and career sustaining behavior of employees (Lawson & Myers, 2011). Top management engagement and support, setting of clear and achievable objectives, effective communication, and measurement and evaluation procedures are some of the important factors that influence success of worksite wellness programs (Mazur & Mazur-Małek, 2017). This supports H_5 as worksite wellness measures are likely to positively interact with employee wellness and bring productive outcomes both at employee and organizational levels.

Conceptual framework and hypotheses

Based on theoretical foundation and objectives of this research, following model was conceptualized and hypotheses framed to determine proposed relationships:

H_1: Employee wellness is significantly associated with employee's productivity

H_2: Employees wellness is significantly associated with organizational productivity

H_3: Employees productivity is significantly associated with organizational productivity

H_4: Worksite wellness measures moderate the effect of employee wellness on employee productivity

H_5: Employee wellness has conditional indirect effect on organizational productivity through employee productivity at different values of worksite wellness

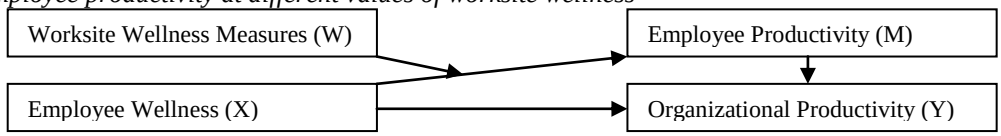

Figure 1: *Theoretical model of wellness and productivity in organizations*

Methodology

We involved managers from selected public sector organizations in Pakistan; 12 anticorruption and 12 regulatory organizations based at Islamabad, Rawalpindi, Lahore, Karachi, Peshawar, and Quetta for participation. These organizations are responsible to achieve productivity goals of economy through effective regulation, monitoring and fighting against corruption and corrupt practices in Pakistan. More the productive employees in these organizations more would be the overall productivity. In this context we have studied relationship between wellness and productivity.

Sample and procedure

Data was collected using a questionnaire sent to Heads of selected organizations. They were requested to get the questionnaire randomly filled by at least three managers of some functional division / section within their organization at their free consent and return to corresponding authors. A potential sample of 210 public sector managers was estimated. Given the volunteer participation, 2 out of 24 selected organizations did not respond to the survey request. Of those who participated, the completed questionnaires were received back from only 108 participants making a response rate of 51.42%. Data was analyzed using SPSS for reliability and validity, descriptive statistics, correlation, regression, and conditional process analyses. Assumptions of regression analysis were also tested and found satisfactory indicating reliability of research outcomes.

Measures

Participant's profile was obtained along five characteristics; gender, age, qualification, experience, and city. Participants were asked to reflect upon their organization's vision, culture, employees, policies, processes, and performance in a broader outlook and appropriately respond to survey items using a 5-point likert scale; (1) almost always, (2) occasionally, (3) often, (4) very often, and (5) almost always.

Worksite wellness measures (α=.931) was assessed using nine items indicating organizational approaches to promote workplace wellness; wellness strategy, policies, processes, leadership, culture, education, programs, participation, and evaluation (Qaisar, 2015). Scale measured the extent to which organizations undertake wellness activities. The sample items are "Wellness is an integral component of core business strategy" and "Programs are initiated for workplace wellness".

Employee wellness (α=.846) was measured using eight items representing behaviors and actions that promote physical, spiritual, emotional, social, intellectual, occupational, financial, and environmental wellness (Qaisar, 2015). Scale assessed the extent to which participants believe that their subordinates engage in lifestyles and activities that promote wellness for best possible quality of life and optimum functioning in life. The sample items are "Physical wellness i.e. engage in physical exercises, take balanced nutrition and enough sleep" and " Emotional wellness i.e. develop skills and strategies to cope with stress".

Employee productivity (α=.888) was measured using eight items indicating capabilities that support employee productivity; learning, personal organization, time management, stress control, creativity, decision making, happiness, and teamability (Qaisar, 2015). Scale assessed the extent to which participants believe that their

subordinates possess and practice various skills, competencies, and behaviors that are helpful in optimizing their workplace productivity. The sample items are "Learning i.e. shared knowledge and take personal responsibility for new learning" and "Teamability i.e. effectively work in teams, assume responsibility, and exchange feedback".

Organizational productivity (α=.937) was measured using eleven items. Six items indicated organizational efficiency in terms of cost, output, quality, speed, flexibility, and dependability, and five items indicated organizational effectiveness in its strategy, structure, culture, capacity, and environment (Qaisar, 2015). Scale assessed the extent to participants believe that their organizations are able to achieve desired outcomes that support productivity. Sample items measuring efficiency are "Output i.e. achieves strategic goals, desired outcomes, and efficient delivery of public services" and "Speed i.e. meets timelines, discourage delays, and encourage efficiency". Sample items measuring effectiveness are "Strategy i.e. has inspiring, energizing and well understood vision, goals, and objectives" and "Capacity i.e. has enough skilled manpower, space, technology, infrastructure and authority".

Validity and reliability

Face validity of questionnaire was assessed by a panel of experts from the fields of health and physical education, human resource management, and social marketing. Cronbach's alpha analysis (.846 ≤α ≤ .937) illustrated sufficient reliability of measures used (Table 1). Convergent validity was indicated as shown in Table 1; items significantly loaded on their respective constructs, average variance extracted (AVE) was found greater than .500, and alpha reliability coefficient was found greater than AVE of each construct (Fornell & Larcker, 1981). Discriminant validity was also established for measures used in this study (Table 1); AVE of each construct was greater than its shared variance (squared correlation) with all other constructs (Hassan, Walsh, Shiu, Hastings, & Harris, 2007; Fornell & Larcker, 1981).

Table 1: *Construct validity of measure (n=108)*

Var.	Convergent Validity				Discriminant Validity				
	KMO	Approx. χ^2	AVE	Alpha	Mean (SD)	1	2	3	4
EW	.819	329.838	.634	.846	3.04 (.682)	.634[a]			
EP	.813	476.090	.565	.888	2.92 (.770)	.594	.565[a]		
OP	.904	905.012	.724	.937	3.06 (.797)	.400	.451	.724[a]	
WWM	.895	704.070	.645	.931	2.84 (.824)	.499	.443	.543	.645[a]

KMO=Kaiser Mayer Olkin's , AVE=Average Variance Extracted, SD= Standard deviation

[a] Average Variance Extracted (AVE) compared with squared correlation (shared variance) between constructs

EW=Employee wellness, EP=Employee productivity, OP=Organizational Productivity, WWM=Worksite wellness measures

Results

Sample demographic

Sample consisted of male (78.7%) and female (31.3%) employees working on management positions in selected public sector organizations mostly adults below the age of 40 years (38.9%). Participating managers were academically highly qualified; graduate (17.6%), postgraduates (80.5%), and doctorates (1.9%) and had a rich professional experience; up to 10 years (24.1%), up to 20 years (46.4%), up to 30 years (17.6%), and above 30 years (12%). This shows a great level of expert assessment in this study.

Descriptive analysis

The cutoff values of mean scores for each variable; 1-60% (poor, need extensive improvement), 61-79% (good yet need to be improved), and 80-100% (excellent) were used to assess current state of personal wellness, personal productivity, organizational productivity, and worksite wellness measures (Table 2). Participants score (60% or less) showed a poor present state requiring steps for extensive improvement on each scale.

Correlation analysis

Findings showed significant positive correlations among employee wellness, employee productivity, organizational productivity, and worksite wellness measures (Table 2). Worksite wellness measures indicate significant potential to leverage organizational productivity (r=.737) by harnessing employees' wellness (r=.707) and productivity (r=.666). These correlations are relatively high. However, Variance Inflation Index ($2.245<VIF<2.767$) <10 and Conditioned Index ($1<CI<17.516$) <30 rejected the potential existence of multicollinearity (Hoffmann, 2010). Chatterjee and Hadi (2015) also recommends that if $0<VIF<5$, there is no evidence of multicollinearity problem.

Table 2: *Correlation matrix and current states of wellness and productivity*

Variables	Items	Mean (SD)	Mean Score [a]	1	2	3
Employee wellness	8	3.04 (.682)	57.6%			
Employee productivity	11	2.92 (.770)	58.4%	.771**		
Organizational productivity	9	3.06 (.797)	60.0%	.633**	.672**	
Worksite wellness measures	8	2.84 (.824)	56.7%	.707**	.666**	.737**

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

[a] Current State Scale: 1-60% (Poor, need extensive improvement), 61-79% (Good, yet need improvement), 80-100%(Excellent)

Regression analysis

Simple linear regression analyses were performed to examine proposed relationships. The assumptions of regression i.e. independence, linearity, normality, multicollinearity, and homoscedasticity were tested and found satisfied to ensure reliability of findings. Results indicated a good level of predictability of organizational productivity through employee wellness and employee productivity (Table 3). Employee wellness explained 51% variance in employee productivity (R^2=.511, F(1, 106)=110.626, β_{EW}=.807, p<.001). Employee wellness explained 38.6% variance in organizational productivity (R^2=.386, F(1, 106)=66.238, β_{EW}=.726, p<.001). Employee productivity explained 45% variance in organizational productivity (R^2=.450, F(1, 106)=86.789, β_{EP}=.694, p<.001). Hence, *hypotheses 1, 2, and 3* were supported.

Conditional process analysis

Organizational productivity was regressed on employee wellness, employee productivity, and worksite wellness measures using process model 8 of Hayes (2013). The outcome was a conditional process model indicating significant moderated-mediation in two steps (Table 3). The model in Step 1 explained 58.2% (R^2=.582, F(3, 104) = 58.002, p <.000) conditional variance in employee productivity through a significant contribution of employee wellness, worksite wellness measures, and their

interaction term ($\beta_{EW \rightarrow EP}$ = .469, $\beta_{WWM \rightarrow EP}$ = .313, $\beta_{EWxWWM \rightarrow EP}$ = .181, p<.001). This supported *hypothesis 4*.

The model in Step 2 explained 58.7% (R^2=.587, F(3, 104) = 58.002, p <.000) variance in organizational productivity through a significant contribution of employee productivity and worksite wellness measures; the insignificant contribution of employee wellness and its interaction term with worksite wellness measures indicated that conditional effect of employee wellness on organizational productivity is fully mediated through employee productivity without any moderation on direct path. Index of moderated mediation and indirect effect of highest order product (.058) was found significant. Interaction plot (Figure 2) showed a conditional incremental change in employee productivity when worksite wellness measures and employee wellness increase. This conditional incremental change in employee productivity leads to conditional incremental change in organizational productivity. It supports *hypothesis 5*.

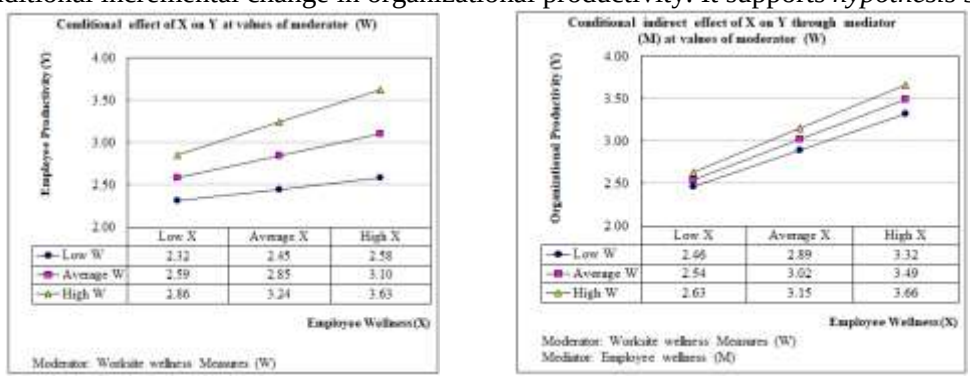

Figure 2: *Conditional effects of employee wellness on employee and organizational productivities*

Table 3: *Regression models and conditional process analysis*

Model		Coefficient			
DV[a]	IV[b]	B	Std. Error	t	Sig.
Simple linear regression model					
EP	(Constant)	.467	.239	1.955	.053
	EW	.807	.077	10.518	.000
	R = .715, R^2 = .511, SE = .541, F(1, 106) = 110.626, p <.000				
	$Equation\ 1: EP = .467 + .807(EW) + \varepsilon$				
OP	(Constant)	.855	.277	3.086	.003
	EW	.726	.089	8.162	.000
	R = .621, R^2 = .386, SE = .627, F(1, 106) = 66.238, p <.000				
	$Equation\ 2: OP = .855 + .726(EW) + \varepsilon$				
OP	(Constant)	1.034	.225	4.596	.000
	EP	.694	.075	9.316	.000
	R = .671, R^2 = .450,SE = .593, F(1, 106) = 86.789, p <.000				
	$Equation\ 3: OP = 1.034 + .694(EP) + \varepsilon$				
Conditional process analysis; direct and conditional indirect effects					
EP	(Constant)	2.846	.055	52.220	.000
	EW	.469	.104	4.507	.000
	WWM	.313	.086	3.633	.000
	EW×WWM	.181	.048	3.756	.000

	R = .763, R^2 = .582,MSE = .255, F(3, 104) = 58.002, p <.000				
	$Equation\ 4: EP = 2.846 + .469(EW) + .313(WWM) + .181(EW \times WWM) +$				
OP	(Constant)	2.102	.291	7.217	.000
	EP	.322	.103	3.120	.002
	EW	.024	.111	.215	.831
	WWM	.475	.142	3.353	.001
	EW×WWM	.046	.090	.504	.615
	R = .766, R^2 = .587,MSE = .273, F(4, 103) = 59.441, p <.000				
	$Equation\ 5: OP = 2.102 + .322(EP) + .475(WWM) + \varepsilon$				
	Conditional effects of X (EW) on Y (OP) at values of moderator (WWM):				
	Moderator	Conditional	Conditional		
	WWM	Direct Effect (SE)	Indirect Effect through EP (SE)		
	-.824	-.014 (.135)	.103 (.052)		
	.000	.024 (.111)	.151 (.056)		
	.824	.061 (.132)	.199 (.065)		
	Index of moderated-mediation =.058, SE=.030				

a. Based on 1000 bootstrap samples for bias corrected bootstrap confidence intervals (CI).
N=108, Significant at *p<.05, **p<.01 level (1-tailed). Where; B=Beta, DV=Dependent variables, IV=Independent variables (Predictors), EW (Employee wellness), EP (Employee productivity), OP (Organizational productivity), WWM (Worksite wellness measures)

Discussion

Human capital is a life blood for successful existence of any organization since employees' health and wellbeing influences organizational outcomes (Kirsten, 2008, 2010; Lowe, 2003; Saha, 2013). This study provides insights to developing health promotion programs at organizational level (Lowensteyn et al., 2018). Good living, health, and wellbeing are the philosophies evolved over centuries. The idea to translate these personal strengths into organizational health through workplace wellness initiatives is relatively a new concept. It is in the process of finding empirical evidence across different contexts. Public servants are regarded as partner for growth a country needs to modernize its governance and public service delivery. Healthy and productive individuals contribute towards workplace productivity. Public service employee spend one third of their day at work. Worksites can be effective settings for heath behavior change. The wellness program leads to high employee engagement along with clinical improvements in physical and mental health (Lowensteyn et al., 2018).

In the war for talent, employers are also concerned to have innovative ways that could help them in attracting and retaining the best people. To maintain and improve public service capacity, public workforce need to be seen as an asset and not a cost factor (OECD, 2011). Individual health and productivity is something that could be leveraged through well designed and effectively implemented interventions. An effective way to reach individual employees and provide them an environment that is safe and supportive to their health is to take initiatives for workplace health promotion (Makrides et al., 2007). Successful workplace wellness promotion initiatives are the comprehensive approaches that acknowledge personal, social, and environmental factors. These include onsite programs, recognition and incentives for employees, building awareness, manager's understanding and commitment, and measuring health related outcomes (Makrides et al., 2007).

Organizations need to ensure having a highly motivated workforce that is committed to service delivery and produce desired changes. Personal and workplace factors could influence one's overall wellness and performance. Wellness aims at creating awareness and taking steps needed to promote one's physical, social, emotional, occupational, spiritual, financial, intellectual, environmental wellness. A favorable workplace climate could be conducive in developing and practicing wellness lifestyle. Government of Pakistan is criticized for inefficient delivery of public services. There exists an extensive setup of regulatory and anticorruption organizations to regulate and watch over the performance and economic role of public and private sector organizations. Public, however, continues perceiving negative about productive role of this anticorruption and regulatory framework since they still feel deprived of efficient and effective public services. Among others one critical factor is the lack of productive capacity i.e. human resource development in public sector organizations where holistic wellness and wellbeing of employees seems almost a neglected element. These organizations can reap benefits of workplace wellness programs in the form of lower healthcare costs, higher morale, and greater productivity (Berry et al., 2011).

Wellness encompassing physical, spiritual, emotional, social, occupational, intellectual, financial, and environmental domains of life need to be taken care of at worksites through effective interventions. Workplace health and wellness promotion may benefit both employees and employers in a number of ways. Employees achieve satisfaction, wellbeing (Grawitch, Trares, & Kohler, 2007). Employers may reduce absenteeism, presenteeism, contain costs, and improve productivity (Pescud et al., 2015). They may also increase employee engagement, retain skilled workers, improve workplace culture, and raise return on investment (Baicker et al., 2010; Baxter, Sanderson, Venn, Blizzard, & Palmer, 2014). Hence, to reap these and many other benefits, there is a need to take a business-minded approach to wellness. The wellness promotion efforts, however, should evaluate related weaknesses before taking initiatives for improvement since "Repairing a small defect does little good if the whole is not examined for other weaknesses" (Oelbaum, 1974, p.1624).

Conclusion

Wellness helps individuals to productively contribute to organizational outcomes. In this context, we conclude that lifestyle choices influence organizational productivity by affecting one's state of personal wellness and productive abilities. Presently, public sector organizations are deficit in overall organizational productivity owing to lack of employees' wellness and productivity. Results suggest an extensive improvement in these domains. Organizational wellness measures offer potential to enhance organizational outcomes by optimizing employee wellness and their workplace productivity. These help in reaping great rewards, enhance productivity, engage employees, and contain costs. It could benefit a lot if wellness measures are taken as a strategic business priority in a manner that healthy lifestyle choices become easiest choice of employees. Findings may be useful for national health promotion policy and occupational health and wellness promotion (O'Donnell, 2009) as well as professionals, academicians, and students for

excellence in their respective domains. Findings also provides avenue for future wellness research in Pakistan.

We have not used control variable in regression analysis in this cross sectional study as core purpose was to determine prevalence of proposed relationships without permitting distinction between cause and effect. The findings may be rigorously tested using cohort or controlled experimental studies in future (Mann, 2003). Future research may also consider replication of this study using more objective measures in private sector organizations to help in comparative analysis, design organization specific wellness programs and evaluate their effectiveness, understand issues of current wellness programs, evaluate costs and benefits associated with wellness programs, and explore need and feasibility of employing wellness professionals in organizations.

References

Allen, D., & Schwartz, T. (2011). Being more productive. *Harvard Business Review*, *89*(5), 82-87.

Amabile, T. M., & Kramer, S. (2011, September 3). Do happier people worl harder? *The New York Times*. New York. Retrieved from http://www.nytimes.com/2011/09/04/opinion/sunday

Baicker, K., Cutler, D., & Song, Z. (2010). Workplace wellness programs can generate savings. *Health Affairs*, *29*(2), 304-311.

Baxter, S., Sanderson, K., Venn, A. J., Blizzard, C. L., & Palmer, A. J. (2014). The relationship between return on investment and quality of study methodology in workplace health promotion programs. *American Journal of Health Promotion*, *28*(6), 347-363.

Berry, L. L., Mirabito, A. M., & Baun, W. B. (2011). What's the hard return on employee wellness programs?. *Harvard Business Review*, *89*(3), 20-21.

Chatterjee S, & Hadi A. S. (2015). *Regression analysis by example*. New York: John Wiley & Sons.

Chenoweth, D. (2011). Promoting employee well-being: Wellness strategies to improve employee health, performance and the bottom line. *SHRM Foundation*. Retrieved from www.shrm.org/foundation.

Conrad, P. (1987). Wellness in the Work Place : Potentials and Pitfalls of Work-site Health Promotion. *The Milbank Quarterly*, *65*(2), 255-275.

Dabirian, S., Rezvanfar, A., & Asadi, A. (2010). The influence of organizational factors on individual productivity of agricultural extension experts. *Asian Journal of Agricultural Sciences*, *2*(3), 78-83.

Fahey, T. D., Insel, P. M., & Roth, W. T. (2013). *Fit & Well: Core Concepts and Labs in Physical Fitness and Wellness*. New York: McGraw-Hill Higher Education.

Fleury, J. (1996). Wellness motivation theory: An exploration of theoretical relevance. *Nursing Research*, *45*(5), 277-283.

Fluery, J. D. (1991). Empowering potential: A theory of wellness motivation. *Nursing Research*, *40*(5), 286-291.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement errors. *Journal of Marketing Research*, *18*(1), 39-50.

Ghamari, A., Zeinabadi, H., Arasteh, H., & Behrangi, M. (2018). Organizational productivity with the maintenance of human resources talents: providing a model (A Study on National Iranian Gas) Company). *Journal of Urban Economics and Management*, *6*(23), 67-80.

Goetzel, R. Z., Henke, R. M., Tabrizi, M., Pelletier, K. R., Loeppke, R., Ballard, D. W., … Metz, R. D. (2014). Do Workplace Health Promotion (Wellness) Programs Work? *Journal of Occupational and Environmental Medicine*, *56*(9), 927-934.

Goetzel, R. Z., & Ozminkowski, R. J. (2008). The health and cost benefits of worksite health promotion programs. *Annual Review of Public Health*, *29*, 303-323.

Goss, H. B. (2011). *Wellness education : An integrated theoretical framework for fostering Transformative Learning*. Doctoral dissertation, Queensland University of Technology.

Grawitch, M. J., Trares, S., & Kohler, J. M. (2007). Healthy workplace practices and employee outcomes. *International Journal of Stress Management*, *14*(3), 275-293.

Gubler, T., Larkin, I., & Pierce, L. (2017). Doing well by making well: The impact of corporate wellness programs on employee productivity. *Management Science*. *61*(11), 4967-4987.

Harrington, J. (2017). *Barriers to Implementation of Workplace Wellness Programs in Career Fire Service Organizations: An Exploratory Qualitative Study*. Doctoral dissertation, Creighton University.

Hassan, L. M., Walsh, G., Shiu, E. M. K., Hastings, G., & Harris, F. (2007). Modeling persuasion in social advertising. *Journal of Advertising*, *36*(2), 15-31.

Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, NY: Guilford Press.

Hillier, D., Fewell, F., Cann, W., & Shephard, V. (2005). Wellness at work: Enhancing the quality of our working lives. *International Review of Psychiatry*, *17*(5), 419-431.

Hoeger, W. W. K., & Hoeger, S. A. (2010). *Principles and labs for fitness & wellness*. Belmont, CA: Cengage Learning.

Hoffmann, J. P. (2010). *Linear regression analysis: Applications and assumptions* (2nd ed.). Provo, UT, USA: Brigham Young University.

Jääskeläinen, A., & Lönnqvist, A. (2011). Public service productivity: how to capture outputs? *International Journal of Public Sector Management*, *24*(4), 289–302.

Jones, D., Molitor, D., & Reif, J. (2018). *What Do Workplace Wellness Programs Do? Evidence from the Illinois Workplace Wellness Study* (No. w24229. National Bureau of Economic Research).

Jussila, H. (2010). Personal Productivity: Our Definition. Retrieved August 12, 2012, from http://www.time-management-solutions.com/personal-productivity.html

Kirsten, W. (2008). Health and productivity management in Europe. *International Journal of Workplace Health Management*, *1*(2), 136-144.

Kirsten, W. (2010). Making the link between health and productivity at the workplace - A global perspective. *Industrial Health*, *48*(3), 251-255.

Lawson, G., & Myers, J. E. (2011). Wellness, professional quality of life, and career-sustaining behaviors: What keeps us well? *Journal of Counseling & Development*, *89*(2), 163-171.

Lee, C. C., Strohl, K., Fortenberry, M., & Cho, Y. S. (2017). Impacts of human resources management innovations on productivity and effectiveness in a medium-size non-profit organization. *Global Journal of Management and Marketing*, *1*(1), 51-62.

Lee, S., Blake, H., & Lloyd, S. (2010). The price is right: making workplace wellness financially sustainable. *International Journal of Workplace Health Management*, *3*(1), 58-69.

Lowe, G. S. (2003). *Healthy workplaces and productivity: A discussion paper* (No. April).

Lowensteyn, I., Berberian, V., Belisle, P., DaCosta, D., Joseph, L., & Grover, S. A. (2018). The Measurable Benefits of a Workplace Wellness Program in Canada. *Journal of Occupational and Environmental Medicine*, *60*(3), 211-216.

Makrides, L., Heath, S., Farquharson, J., & Veinot, P. L. (2007). Perceptions of workplace health: building community partnerships. *Clinical Governance: An International Journal*, *12*(3), 178-187.

Mann, C. J. (2003). Observational research methods. Research design II: cohort, cross sectional,

and case-control studies. *Emergency Medicine Journal*, *20*(1), 54-60.
Mazur, B., & Mazur-Małek, M. (2017). Evaluating the Effectiveness of a Worksite Wellness Program. *International Journal of Contemporary Management*, *15*(4), 77-89.
Melia-Gordon, M. L., Sirois, F. M., & Pychyl, T. A. (2012). Wellness behaviors as an indicator of health-related quality of life. *Quality of Life Research*, *10*(3), 242-242.
Merrill, R. M., Anderson, A., & Thygerson, S. M. (2011). Effectiveness of a worksite wellness program on health behaviors and personal health. *Journal of Occupational and Environmental Medicine*, *53*(9), 1008-1012.
Michaels, C. N., & Greene, A. M. (2013). Worksite wellness: increasing adoption of workplace health promotion programs. *Health promotion practice*, *14*(4), 473-479.
O'Donnell, M. P. (2007). Editor's Notes: Psychologically healthy workplaces. *American Journal of Health Promotion*, *21*(3), iv-iv.
O'Donnell, M. P. (2009). Integrating health promotion into national health policy. *American Journal of Health Promotion*, *23*(6), iv–vi.
OECD. (2011). *Public Servants as Partners for Growth: Towards a Stronger, Leaner and More Equitable Workforce*. OECD Publishing.
Oelbaum, C. H. (1974). Hallmarks of adult wellness. *The American Journal of Nursing*, *74*(9), 1623-1625.
Pescud, M., Teal, R., Shilton, T., Slevin, T., Ledger, M., Waterworth, P., & Rosenberg, M. (2015). Employers' views on the promotion of workplace health and wellbeing: a qualitative study. *BMC Public Health*, *15*(1), 642-652.
Presser, J., & Adler, R. (2012). Teamability: Measuring, Attracting, Developing, and Capitalizing on It. America: Bloomberg BNA. Retrieved from http://www.bna.com/teamability-25387
Qaisar, M. N. (2015). *Wellness and productivity in public sector organizations in Pakistan*. Doctoral dissertation, National University of Modern Languages, Islamabad, Pakistan.
Qaisar, M. N., & Akhtar, N. (2012). Happiness and Individual Productivity in a Learning Organization. *NUML Journal of Management & Technology*, *7*(1), 46-54.
Ramendran, C., Raman, G., Moona Haji Mohamed, R. K., Beleya, P., & Nodeson, S. (2013). Organizational flexibility and its implications on employee's productivity. *Interdisciplinary Journal of Contemporary Research in Business*, *4*(10), 298-316.
Rosen, E. D. (1993). *Improving public sector productivity: Concepts and practice*. Sage Publications.
Saha, S. (2013). Impact of health on productivity growth in India. *International Journal of Economics, Finance and Management*, *2*(4), 303-312.
Siddiqui, S. H., & Asghar, W. (2008). Linking Training, Productivity and Competitive Strategy: Implications of Value Chain Model for Strategically Effective Training Programs. *International Review of Business Research Papers*, *4*(1), 310-324.
Swarbrick, P. (2010). Defining wellness. *Words of Wellness*, *3*(7), 1-2.
Swarbrick, P., Yudof, J., & Garafano, J. (2011). Personal wellness, recovery, and quality of life. *Words of Wellness*, *4*(8), 3-6.
Thornhill, D. (2006). Productivity attainment in a diverse public sector. In *Promoting Productivity in a Diverse Public Sector*. Dublin: Institute of Public Administration.
Wiig, K. M., & Jooste, A. (2003). Exploiting knowledge for productivity gains. In *Handbook on knowledge management* (pp. 289-308). Springer, Berlin, Heidelberg.