BSc in Psychology

The Impact of Communication Factors on Job Satisfaction Among Icelandic Employees in the Public Sector

June, 2018

Name: Jóhannes Þorkelsson

ID number: 220394-2639

Foreword

Submitted in partial fulfillment of the requirements of the BSc Psychology degree, Reykjavik University, this thesis is presented in the style of an article for submission to a peer-reviewed journal.

Abstract

The main purpose of the present study was to explore the impact of communicative factors on job satisfaction and employee's desired need for new ways of communicating. In addition, it was assessed whether communicative factors would differ between employees that had any subordinates and those who did not. Participants in the study were 127 employees in leisure centers in Reykjavik, Iceland. A survey was conducted and consisted of nine factors measuring role expectations, leadership, justice, social support, and job satisfaction. Regression analysis revealed a significant relationship between employee's job satisfaction and interactional justice, procedural justice, role clarity, role conflict, empowering leadership, fair leadership, support from co-workers, and support from superiors which supports the primary hypothesis. Results also provided support to the secondary hypothesis as employees desired need for new methods of communication was significantly related to role conflict and interactional justice. T-test analysis revealed that those who had any subordinates experienced more empowering leadership, more procedural justice and more role clarity in the workplace than those who did not have subordinates. This study supports the importance of developing new methods that encourage fairness in order to increase job satisfaction.

Keywords: organizational psychology, job satisfaction, communication, organizational justice, social support, leadership, role expectations

Útdráttur

Þessi rannsókn var framkvæmd til þess að kanna áhrif samskiptaþátta á starfsánægju og þörf starfsmanna á nýjum leiðum til þess að eiga samskipti á vinnustöðum. Til viðbótar var kannað hvort þessir samskiptaþættir væru ólíkir milli starfsmanna sem höfðu undirmenn og þeirra sem höfðu enga undirmenn. Spurningalisti var sendur á 350 starfsmenn og voru 127 starfsmenn í frístundamiðstöðvum og félagsmiðstöðvum í Reykjavík sem svöruðu. Spurningalistinn innihélt mælingar á níu þáttum; hlutverkum og væntingum, stjórnun, félagslegum stuðning, réttlæti og starfsánægju. Aðhvarfsgreining leiddi í ljós marktæk tengsl á milli starfsánægju og hvetjandi stjórnunar, sanngjarnar stjórnunar, stuðningi frá yfirmanni, stuðningi frá samstarfsmönnum, skýrleika hlutverka, óskýrleika hlutverka, sanngirni í verklagi og sanngirni í upplýsingastreymi sem styður megintilgátu rannsóknarinnar. Niðurstöður studdu einnig seinni tilgátu rannsóknarinnar þar sem þörf starfsmanna á nýjum leiðum til að eiga samskipti á vinnustaðnum hafði marktæk tengsl við óskýrleika hlutverka og sanngirni í upplýsingastreymi. T-próf leiddu í ljós að starfsmenn sem höfðu undirmenn upplifðu meiri hvetjandi stjórnun, meiri sanngirni í verklagi og meiri skýrleika hlutverka innan fyrirtækisins en þeir sem höfðu enga undirmenn. Þessi rannsókn styður mikilvægi þess að þróa nýjar leiðir sem ýta undir upplifun starfsmanns á sanngirni til þess að auka starfsánægju.

Lykilorð: Vinnusálfræði, starfsánægja, samskipti, sanngirni innan fyrirtækja, stjórnun, hlutverk og væntingar

The impact of communication factors on job satisfaction among Icelandic employees

in the public sector

Organizational communication is sometimes regarded as "an amalgam of disparate research traditions, each with its own core constructs, epistemological assumptions, and methodological commitments" (Conrad & Haynes, 2001, p. 47). Because of that, it can be difficult to find a proper definition of the term. However, communication affects employee's job attitudes and can reduce employee's uncertainty, it is one of the key factors associated with employee's job satisfaction. Job satisfaction has been defined as a positive or pleasurable emotional state resulting from the appraisal of one's job or job experience (Locke, 1976; Schneider & Snyder, 1975). Job satisfaction is based on perceptions and evaluations of one's job that are influenced by individual factors such as values, needs, expectations, and will. As the construct is multidimensional and therefore differs in classification, there are several factors related to job satisfaction. The most common ways to measure the construct are single item approach and summation scores. Single item approach can measure job satisfaction on a single facet and can be beneficial when researchers are interested in measuring specific factors and their effects (Nagy, 2002; Oshagbemi, 1999). Summation scores take into account various factors that have been shown responsible for job satisfaction in any way, for example; autonomy, work content, meaningfulness, financial rewards, and communication (Saane, Sluiter, Verbeek, & Frings-Dresen, 2003). Companies, therefore, strive to keep their employees "happy" and satisfied at work as it influences productivity, profitability and customer satisfaction (Böckerman & Ilmakunnas, 2012; Koys, 2001). Job satisfaction has also a significant positive relationship with employee's communication and therefore the communication-satisfaction link is a crucial part of organizational success (Euske & Roberts, 1987; Pincus, 1986). Communication is also a multidimensional concept and communication factors that have shown to predict employees

job satisfaction are role expectations, social support, leadership and justice (Akdol & Arikboga, 2015; Baruch-Feldman, Brondolo, Ben-Dayan, & Schwartz, 2002; Choi, 2011; Lyons, 1971). Employees are more satisfied with their job when they are supported from their co-workers and superiors, have a clear understanding of the extent of their job roles, have superiors that are willing to help them and influence them in a good way, and are informed of important decision making within the company.

Role expectations

Role clarity is how the employee feels that the company delivers sufficient information about the job (Burton, Kundtz, Martin, & Pathak, 1980). Role conflict occurs when individual's roles within an organization are not clear or when other's expectations for an employee differ in any way. When an employee does not have enough information to complete his required duties, he experiences role ambiguity (Tarrant & Sabo, 2010). It is important for the employee to know what his supervisors or the company wants him to do at work, if job roles are not clear or even ambiguous, it can lead to low job satisfaction and depression in some cases (Keller, 1975; Kroposki, Murdaugh, Tavakoli, & Parsons, 1999; Tarrant & Sabo, 2010; Wu & Norman, 2006). Individuals that have more freedom over their work and more to say about what to do experience more role clarity than those who do not, that can hinder the negative impact on job satisfaction (Belias, Koustelios, Sdrolias, & Aspridis, 2015). Role conflict at work has shown to be positively related to emotional exhaustion which can lead to burnout. Clear roles are therefore important for well-being and could possibly hinder some dissatisfaction among employees (Piko, 2006).

Leadership

In the last decade, scholars have mainly focused on two different leadership styles, *transformational* and *transactional* (Bogler, 2001; Lok & Crawford, 2004). *Transformational leaders* serve as a positive role model for the followers, they have the skill to inspire and

motivate followers and demonstrate genuine concern for needs and feelings of followers while challenging them to be innovative and creative (Bass & Avolio, 1993; Burns, 2003; McCall, 1986). *Transactional leaders*, on the other hand, build their relationship with followers in order to satisfy their own self-interest, they reward their followers for completing goals but merely focus on mistakes and avoid offering help until something goes wrong (Burns, 1978; McCall, 1986). Studies show that employees exposed to transformational leadership experience higher levels of job satisfaction and are more likely to listen to their leader than employees exposed to transactional leadership (Deluga, 1988; Medley & Larochelle, 1995). Leaders influence the crucial attitudes and expectations of an organization's members that creates employee's unity to accomplish organization's goals (Aarons, 2006; Morales et al., 2008; Walumbwa et al., 2011). Leadership is important for organizations because good leadership leads to increased performance of followers and organizations as a whole (Madanchian, Hussein, Noordin, & Taherdoost, 2016).

Social support

Social support can be defined as assistance, information, or comfort that a person receives as a result of communicating with other individuals or groups (Streeter & Franklin, 1992). Social support can be displayed in many ways and can be supplied from co-workers or supervisors, for example; the supply of empathy, trust, technical aid, the arrangement of advice or information and arrangement of feedback or declaration (House, 1981). Previous studies demonstrate that perceptions of co-worker involvement and support from supervisors can increase job satisfaction and reduce employees stress (Babin & Boles, 1996; Hombrados-Mendieta & Cosano-Rivas, 2013; Ko & Yom, 2003; Ulleberg & Rundmo, 1997). Social support has also shown to have a positive effect on quality care and negative effect on turnover intentions (Orgambídez-Ramos & de Almeida, 2017). With higher levels of social support from an organization that an employee works for, the performance and commitment

to the organization increases (Rhoades, 2002). Social support is crucial as it affects employee's well-being, it has shown to be beneficial to hinder stress, strain, and burnout (Cohen & Wills, 1985; Etzion, 1984; Wilks & Spivey, 2010). Additionally, it can hinder several of the damaging effects of bullying, which is important as bullying is growing internationally and impacts employee's job satisfaction negatively (Creasy & Carnes, 2017; Quine, 1999).

Organizational justice

Organizational justice is defined as employee's perceived fairness towards the company he works for (Greenberg, 1990). It is often divided into three dimensions, *distributive*, *procedural* and *interactional justice* (Choi, 2011). *Distributive justice* refers to perceived fairness in the share of outcomes or rewards and *procedural justice* to perceived fairness in procedures used in the organization to reward or rate employees. The third type is *interactional justice*, an extension of procedural justice. It concerns the perceived fairness of communication in the organization, like honesty, courtesy, and respect, as if they are informed of important decisions made by the company for example (Bahri-Ammari & Bilgihan, 2017; Cohen-Charash & Spector, 2001; Tyler & Bies, 1990). The relationship between these three justice components and job satisfaction has been studied and results show that all of them are positively related to job satisfaction and negatively related to the turnover intention of employees (Choi, 2011; Cohen-Charash & Spector, 2001). Studies have demonstrated the crucial role of interactional justice for job satisfaction and suggested that in order to improve job satisfaction, organizations should put more effort in developing programs and policies that encourage fairness (Lambert, Hogan, & Griffin, 2007; Rai, 2013). An important factor for perceiving fairness is having a voice, it refers to the possibility of expressing your opinion or influencing the process of an outcome (Folger, 1977). Employees that have the possibility of expressing themselves, experience more satisfaction with process

made in the company than those who do not (Folger, 1977). Results also demonstrate that information distortion is negatively correlated to job satisfaction as well as the performance of an individual, or a group (O'Reilly, 1978).
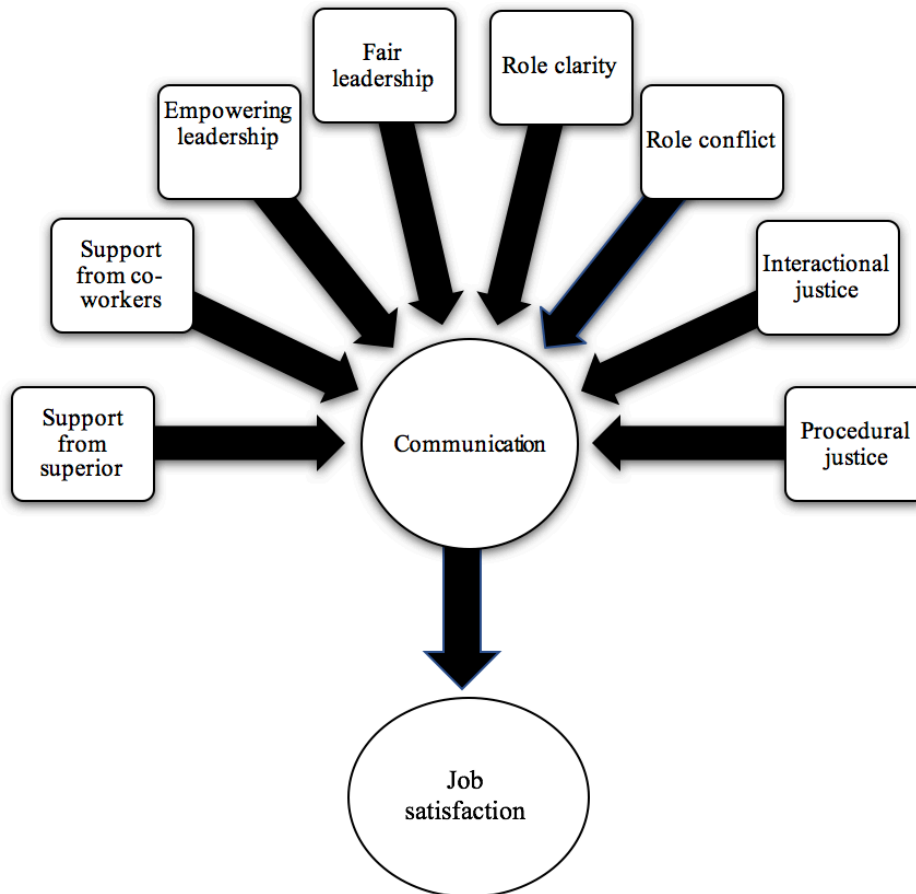

Figure 1. Model made to illustrate the concept of the study, it shows communication factors used and their expected effects on job satisfaction.

The main purpose of the present study is to explore the effect of communicative factors on job satisfaction among Icelandic employees. While the body of evidence shows that communicative factors can enhance job satisfaction studies have not clearly shown what factors are most important in this regard and whether communication factors differ for employees in a controlling position. The present study will add considerable knowledge and originality to the field by examining the relationship in an Icelandic environment between communicative factors, job satisfaction and willingness for new ways of communicating. To

researcher's knowledge, this has not been done before. Furthermore, the aim was to evaluate the possibilities of developing new technological methods that could possibly decrease the risk of insufficient communication between employees in the same organization. Based on the above literature it was hypothesized that: 1) Fair leadership, empowering leadership, support from superior, support from co-workers, role clarity and interactional justice raises employees job satisfaction, 2) Increased role conflict and decreased interactional justice increases employee's willingness for additional methods of communicating. In addition, it will be examined how subordinates and superiors differ in the willingness for new methods, job satisfaction, role clarity, role conflict, support from superior, support from co-workers, interactional justice, procedural justice, fair leadership, and empowering leadership.

Method

Participants

Participants in this study were employees in all youth clubs for adolescents age 10-16 years old in Reykjavik, Iceland. The experiment was conducted on a convenience sample drawn from all of these employees. A questionnaire was sent to 350 employees and a total of 127 employees answered, representing a response rate of 36.3%. The sample included 68.50% female, 38.60% had subordinates and 61.8% had a university degree. The youngest participant was 18 years old, the oldest 66 years old and the mean age of the sample was 30.72 years ($SD = 10.34$). The participation in the study was optional, but the employees were encouraged to participate in the study by their supervisors.

Instrument and measures

The questionnaire used in the study consisted of 37 questions and included measurements on the following constructs: *Role clarity, role conflict, support from superior, support from co-workers, empowering leadership, fair leadership, procedural justice, and interactional justice.* Demographic information was gathered with various questions

including age, sex, years in the job, education, job percentage, and whether the participant had any subordinates. Additional questions were made to measure interest in a new form of communication ways as well as a single-item measure for overall job satisfaction, the additional questions were on a Likert scale from 1 (the least) to 5 (the most).

The General Nordic (QPS Nordic) measures psychological and social factors at work with a total of 127 items (Lindström, 1997). Psychometric properties of the scale have been tested with good results (Wännström, Peterson, Åsberg, Nygren, & Gustavsson, 2009). The Icelandic version has shown to have good psychometric properties, although it needs to test the psychometrics in a larger sample for more optimal results (Jörgensen, 2009). The list is classified in 3 dimensions (*Task level*, *Social and Organizational level,* and *Individual level*) and in this study, *Support from superior, Support from co-workers, Empowering leadership,* and *Fair leadership* were used from the *Social and Organizational level* dimension and *Role clarity* and *Role conflict* from the *Task Level* dimension. All of the items for these factors were used in the study except for one item in support from superior as the question did not measure communication. Otherwise, the same factor structure was used.

Role expectations. QPS Nordic measures role expectations with two factors and three items for each factor, *Role conflict* and *Role clarity*, both of them were used. Example of role clarity item is: "Do you know what your responsibilities are?". Example for an item for role conflict is: "Do you have to do things that you feel should be done differently?" the response options were on a 5- point Likert scale from 1 (very seldom or never) to 5 (very often or always). The internal consistency in this study was good, $\alpha = 0.84$ for role clarity and acceptable, $\alpha = 0.74$ for role conflict. The factor loadings for role clarity were $0.88 - 0.92$ and $0.79 - 0.84$ for role conflict.

Social support. Five questions from QPS Nordic measure social support with two factors, *Support from superior* and *Support from co-workers*. Two items measure *Support*

from Superior and two items measure *Support from co-workers*. One item was not used from support from superior as it was not about communication. Example of support from co-worker item is: "If needed, are your co-workers willing to listen to your work-related problems?", and an example of *support from superior item* is: "If needed, is your nearest superior willing to listen to your work-related problems?". Response options were on a 5-point Likert scale from 1 (very seldom or never) to 5 (very often or always). The internal consistency in this study was acceptable for support from superior, $\alpha = 0.78$ and acceptable for support from co-workers $\alpha = 0.71$. The factor loadings for support from co-workers was 0.88 and 0.82 - 0.87 for support from superior.

 Leadership. Six items in QPS Nordic measure leadership with two factors, *Empowering leadership* and *Fair leadership*. Example of fair leadership item is: "Does your immediate superior treat the workers fairly and equally?" and an example of empowering leadership item is "Does your nearest superior encourage you to speak up, when you have different opinions?". Each question was answered on a 5-point Likert scale from 1 (very seldom or never) to 5 (very often or always). The internal consistency in this study was good, $\alpha = 0.85$ for empowering leadership and acceptable, $\alpha = 0.74$ for fair leadership. The factor loadings for empowering leadership were 0.87 - 0.91 and 0.70 - 0.91 for fair leadership.

 Perception of justice. Five questions were used to measure employees attitude towards *procedural and interactional justice* within the company. Three items were used from Chang (2005) to measure employee's perception of *procedural justice* that originated from Price and Mueller (1986; see Chang, 2005). Two items from Rhoades et al. (2001) that were originally developed by Beehr, Walsh & Taber were used to measure employee's perception of *interactional justice* (Beehr, Walsh, & Taber, 1976). An example of a question for procedural justice is: "The company's procedures to measure performance are fair". An example of a question for interactional justice is: "Usually, I am not informed of important

things happening in the company". The respond options were on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The internal consistency in this study was good (α = 0.85) for procedural justice and acceptable (α = 0.70) for interactional justice. The factor loadings were 0.88 for interactional justice and 0.87 - 0.90 for procedural justice.

Internal consistency for all scales used in this study was acceptable, between α = 0.70 for interactional justice and α = 0.87 for leadership.

Procedure

An introduction letter was sent to the head of all youth clubs in Reykjavik and to all managers of every youth club center. All agreed to participate in the study. The managers asked the directors of every center to send the questionnaire to all subordinates through Facebook sites and email. All participants received relevant information about the study as well as instructions on how to answer the questionnaire. Participants were encouraged to participate and made clear that their answers were untraceable and anonymous and only researchers had access to answers from the survey. Participants were also given the researcher contact information if they needed any additional information or explanation of items in the survey. Data was collected during a 4-week period between the end of February and end of March 2018. Two weeks after employees received the questionnaire, managers were asked to send the questionnaire again to increase response rates. The questionnaire was designed with *Google Forms* and published online. Participants survey response time was on average 8-10 minutes.

Statistical analysis

For statistical analysis, simple regression and independent sample t-test were used. Independent variables were; gender, controlling position, education, and age. Dependent variables were job satisfaction and interest in new methods of communication. Role clarity, role conflict, support from co-workers, support from superior, empowering leadership, fair

leadership, interactional justice, and procedural justice were used as independent and dependent variables. In order to evaluate how well the communication variables used in the study predicted job satisfaction (hypothesis 1), simple regression analysis was conducted. Simple regression analysis was also used to predict the impact of communication variables on employee's willingness for new methods for communicating (hypothesis 2). Independent sample t-test was conducted to evaluate the difference between supervisors and subordinates of the same variables (additional explorations).

A principal component analysis was made to confirm that the scales used in the study were one-dimensional. Cronbach's alpha was used to measure the internal consistency of the scales. All scales fulfilled requirements of one-dimensional measurements, with one factor explaining more than 40% of the variance. The assumptions for regression were tested, the participants were 127 and one independent variable used for every analysis. The dependent variables were continuous and all independent variables were on a ratio scale. Durbin-Watson test was used to detect autocorrelation in the residuals ($d = 1.98 - 2.26$) for hypothesis 1, and ($d = 1.79 - 1.82$) for hypothesis 2, therefore, the assumption of autocorrelation was met. The assumption of linearity was met as the scatter plot followed a linear pattern. Every participant was measured once, therefore, the assumption of independence was met. However, the assumption of normality was not met, the distribution of both dependent variables was significantly different from normal, according to the Kolmogorov-Smirnov test (Field, 2013).

The assumptions for independent sample t-test were also tested. The independent variables were categorical and dependent variables were on a ratio scale, the observations were independent. To test if variances were homogenous across subordinates and superiors, Levene's test was used. There was equal variance between the groups as the test was non-significant. Using histograms and Shapiro-Wilk test for normality, all the dependent variables

were significantly different from normal, therefore, the assumption of normality was not met

(Field, 2013).

Results

Descriptive statistics

   Table 1 below illustrates descriptive data for the 127 participants in the study. The

majority were female and mean age was 30.70 (*SD* = 10.30). The majority of the participants

had a university degree, worked in their leisure center for 2 years or less and were working

part-time (less than 50%).

Table 1

Descriptive statistics for background information

Background		*M*	*SD*	n	%
Gender	Male			40	31.50
	Female			87	68.50
Age		30.70	10.30	127	
Education	Primary school			12	9.40
	Secondary school			36	28.30
	University			56	44.10
	Graduate program in university			23	18.10
Years of job	0-2 years			59	46.50
	2-6 years			40	31.50
	6-10 years			10	7.90
	10-15 years			14	11.00
	15+ years			4	3.10
Any subordinates?	Yes			49	38.60
	No			78	61.40
Job percentage	Over 50%			77	39.40
	Under 50%			50	60.60

Effects of communication factors on job satisfaction

To test the relationship between communication factors and job satisfaction (hypothesis 1), simple regression analysis was conducted and Cohen's d was used to calculate effect size. The following variables were used independently; *interactional justice, procedural justice, support from co-workers, support from superior, empowering leadership, fair leadership, role clarity*, and *role conflict*. Interactional justice had a significant effect on job satisfaction ($F_{(1, 125)} = 10.38$, $p < .05$) and explained 7.70 % of the total distribution of employee's job satisfaction ($R^2 = .077$). Procedural justice had a significant effect on job satisfaction ($F_{(1, 125)} = 4.05$, $p < .05$) and explained 3.10% of the total distribution of employee's job satisfaction ($R^2 = .031$). Support from co-workers had a significant effect on job satisfaction ($F_{(1, 125)} = 14.64$, $p < .001$) and explained 10.50 % of the total distribution of employee's job satisfaction ($R^2 = .105$). Support from superior had a significant effect on job satisfaction ($F_{(1, 125)} = 17.60$, $p < .001$) and explained 12.30 % of the total distribution of employee's job satisfaction ($R^2 = .123$). Empowering leadership had a significant effect on job satisfaction ($F_{(1, 125)} = 6.30$, $p < .05$) and explained 4.80 % of the total distribution of employee's job satisfaction ($R^2 = .048$). Fair leadership had a significant effect on job satisfaction ($F_{(1, 125)} = 14.54$, $p < .001$) and explained 10.40 % of the total distribution of employee's job satisfaction ($R^2 = .104$). Role clarity had a significant effect on job satisfaction ($F_{(1, 125)} = 10.47$, $p < .01$) and explained 7.70 % of the total distribution of employee's job satisfaction ($R^2 = .077$). Role conflict had a significant effect on job satisfaction ($F_{(1, 125)} = 26.96$, $p < .001$) and explained 17.70 % of the total distribution of employee's job satisfaction ($R^2 = .177$). Of these factors, role conflict had the biggest impact on employee's job satisfaction ($\beta = -.42$), increased role conflict by 1 point was followed by decreased employee's job satisfaction by .29 points ($b = -.29$).

In table 2, the correlation between job satisfaction and the factors used as well as Cohen's d for every factor on job satisfaction. Cohen's d indicated that the effect size was none for fair leadership and role clarity, small for support from co-workers and support from superiors and large for empowering leadership, procedural justice, interactional justice and role conflict. All of the factors were positively correlated to job satisfaction except for role conflict, there was a significant relationship between job satisfaction and all of the factors, $r = .22 - .44$, $p < .05$.

Effects of communication factors on the desired need for new methods

Simple regression analysis was used to test hypothesis 2, role conflict and interactional justice were used independently to evaluate their effects on employee's desired need for new methods of communication. Role conflict was positively correlated with employee's desired need for new methods of communication and interactional justice was negatively correlated. Role conflict had a significant effect on desired need for new methods of communication ($F_{(1, 125)} = 38.73$, $p < .001$) and explained 23.70 % of the total distribution ($R^2 = .237$). Interactional justice had a significant effect on desired need for new methods of communication ($F_{(1, 125)} = 14.91$, $p < .001$) and explained 10.70 % of the total distribution ($R^2 = .107$). Role conflict had more impact on the desired need than interactional justice ($\beta = .50$), increased role conflict by 1 point was followed by an increase of 0.49 points in employee's need for new methods of communication ($b = .49$). The effect size was large for interactional justice ($d = 2.06$) and small for role clarity ($d = 0.21$). Table 2 shows that the desired need for new methods of communicating was significantly correlated to interactional justice, $r = -.34$, $p < .01$ and role conflict $r = .40$, $p < .01$.

Difference between supervisors and subordinates

Independent sample t-test was used to test the difference between supervisor and subordinates in the following factors; *role clarity, role conflict, support from superior,*

support from co-workers, procedural justice, interactional justice, empowering leadership,

fair leadership, the desired need for new methods, and *job satisfaction*. Of the 127

participants, 49 of them had any subordinates. The results illustrated in table 3 show a

significant difference in three of the factors measured, procedural justice, role clarity, and

empowering leadership. In all these cases, participants that had any subordinates evaluated

these factors better than those who did not have subordinates. Cohen's *d* indicates that the

difference was medium for procedural justice and role clarity and large for empowering

leadership. Overall, the means were not very different for the groups. However, those who

had any subordinates evaluated the conditions in the workplace better than those who did not,

thus, the means for positive factors were higher and means for negative factors were lower

for that group.

Table 3

Mean, SD, df, t-values, and Cohen's d for difference in various factors measured between superiors and subordinates

Factors	No Subordinates M (SD)	Any Subordinates M (SD)	df	t-value	(Cohen's d)
Job satisfaction	4.45 (0.68)	4.59 (0.50)	125	1.28	0.23
Need for system	1.95 (0.94)	1.88 (0.83)	125	0.43	0.07
Procedural justice	3.56 (0.91)	3.87 (0.85)	125	1.90*	0.35
Interactional justice	3.84 (1.04	3.97 (1.00)	125	0.82	0.15
Role clarity	4.44 (0.60)	4.61 (0.50)	125	1.67*	0.31
Role conflict	2.05 (0.86)	2.15 (0.91)	125	0.63	0.11
Fair_Leadership	4.43 (0.76)	4.45 (0.75)	125	0.16	0.03
Empowering Leadership	3.71 (0.93)	4.37 (0.80)	125	4.15**	0.76
Support_from superior	4.50 (0.66)	4.63 (0.64)	125	1.03	0.20
Support_from co-workers	4.57 (0.59)	4.59 (0.65)	125	0.20	0.03

Note. * $p < .05$, ** $p < .01$. No subordinates ($n = 78$), Any subordinates ($n = 49$).

Table 2

Correlations between the factors used and Cohen's d for their effect size on job satisfaction

Factors	M	SD	1	2	3	4	5	6	7	8	9	10
1.Empowering leadership	3.97	0.93	.67									
2.Support from co-workers	4.58	0.60	.40**	.13								
3.Support from superior	4.60	0.65	.66**	.54**	.16							
4.Procedural justice	3.68	0.90	.29*	.18*	.27**	1.06						
5.Interactional justice	3.90	1.01	.17	.11*	.27**	.28**	0.72					
6. Role conflict	2.10	0.88	-.14	-.17	-.33**	-.05	-.32**	3.15				
7.Role clarity	4.51	0.58	.45**	.35**	.36**	.30**	.17*	-.08	0.02			
8.Fair leadership	4.44	0.75	.52**	.35**	.61**	.34**	.41**	-.53**	.34**	0.09		
9. Job satisfaction	4.50	0.62	.22*	.31**	.44**	.28**	.23**	-.39**	.37**	.33**	0	
10. New methods	1.92	0.90					-.34**	.40**				

Note. * *p* < .05, ** *p* < .01

Discussion

The main purpose of the present study was to explore the effects of communicative factors on job satisfaction and employees desired need for new ways of communicating among Icelandic employees in leisure centers. In addition, it was assessed whether communicative factors would differ between employees that had any subordinates and those who did not. The reason for these aims was to evaluate the possibilities of developing new technological methods that could possibly decrease the risk of insufficient communication between employees in the same organization.

The communicative factors used in the study to test their effects on job satisfaction were support from superior, support from co-workers, role clarity, role conflict, empowering leadership, fair leadership, procedural justice, and interactional justice. The results showed that there was a significant relationship between all of these factors and job satisfaction. Therefore, results supported hypothesis 1. These results are in line with previous studies as they have demonstrated that employees that perceive empowering and fair leadership style from their superiors are more satisfied with their work (Deluga, 1988; Medley & Larochelle, 1995). In addition, the results support previous findings that increased procedural and interactional justice increases employee's job satisfaction (Choi, 2011; Cohen-Charash & Spector, 2001). The results are also in line with previous findings that have established the important role of support from co-workers and superiors for employee's job satisfaction (Babin & Boles, 1996; Hombrados-Mendieta & Cosano-Rivas, 2013; Ko & Yom, 2003; Ulleberg & Rundmo, 1997). Furthermore, previous studies support the negative impact of role conflict on job satisfaction, that when employees job roles are not clear they are more likely to be dissatisfied with their jobs (Keller, 1975; Kroposki et al., 1999; Tarrant & Sabo, 2010; Wu & Norman, 2006).

The results supported hypothesis 2 as increased role conflict and decreased interactional justice increased employee's willingness for additional methods of communicating within the organization. Previous studies demonstrate that when employees experience role conflict they are less likely to be satisfied with the job overall. Furthermore, when employees are not satisfied the desire for change is more (Tarrant & Sabo, 2010; Wu & Norman, 2006). Studies on interactional justice support the results as well, employees that experience they are not part of decision making within the company and their superior does not treat them with respect are more likely to be dissatisfied with their work and the desire for some changes is more (O'Reilly, 1978; Rai, 2013) The results indicate that for organizations with low interactional justice and role clarity, the need for such systems is more vital because of the negative effect on job satisfaction. As Rai (2013) suggested after his study of interactional justice, companies should put more effort in developing programs that encourage fairness in order to improve employees job satisfaction.

When examining the difference between those who had any subordinates and those who did not results showed that there was a significant difference in three of the factors measured; role clarity, procedural justice and empowering leadership. Those who had any subordinates evaluated these factors higher, i.e. they felt that the job roles were clearer, perceived more fairness in procedures used in the organization to rate or reward employees and felt that the leadership was more empowering than those who did not have any subordinates. Cohen's *d* indicated medium-sized effect for the difference between the groups in procedural justice and role clarity and large-sized effect for the difference in empowering leadership. It is difficult to interpret these results as there is a lack of previous studies that test the difference in these factors between people in controlling positions and people with no subordinates. The difference could indicate that people in controlling positions perceive that these factors are fairer because it is in part their responsibility to have them fair. Thus, those

who had any subordinates were evaluating factors at work that are directly connected to them and are therefore more likely to rate them higher. However, as demonstrated in a study made in 2015 among Greek bankers, autonomy is positively related to role clarity, thus, the experienced role clarity at work could differ between those groups because of more autonomy of those who had any subordinates (Belias et al., 2015).

This study had some limitations, first, the sample studied was small and the response rate was rather low, therefore, the participants in the study cannot be representatives for the population of all employees in leisure centers neither all employees in the public sector, that limits the generalizability of the study. Second, because the study was made using an online survey, it can be hard to assure that some employees did not answer the questionnaire together. Third, the questionnaire was rather long so participants may have been bored closer to the end of the survey and paid less attention to the meaning of the items. Additionally, the assumption of normality was broken as the dependent variables used in the study were significantly different from normal. The factors measured in the study were negatively skewed as participants rated the factors relatively high in most cases. The strengths of the study were that the data was easy to analyze as the measurement tool used has been validated and translated into Icelandic, the internal consistency was about the same as in previous studies. The participant's answers were anonymous and untraceable to increase the probability of truthful answers.

The results of this study show that the desired need for new ways of communicating in the workplace is predicted by the role clarity and interactional justice level, that indicates that for organizations with poor interactional justice and little role clarity, the importance of having a voice gets more important. New methods of communicating should aim to raise the voice of employees, which has proven to predict fairness. In order to develop new methods for communicating within organizations, future research should test the factors responsible

for effective and fair communication. Previous studies have addressed the importance of

having a voice in the workplace but these effects should be tested between different

organizations and cultures. Studies in these lines have not been done before to researcher's

best knowledge. The utilization of such studies could expose the importance of new methods

of communicating in the workplace as well as the development of such methods. The

utilization of this study is that it collects some data that can be used to develop new methods

of communicating in workplaces. The results support the importance of developing new

methods that encourage fairness in order to increase employees job satisfaction.

References

Aarons, G. A. (2006). Transformational and transactional leadership: Association with attitudes toward evidence-based practice. *Psychiatric Services*, *57*(8), 1162–1169. doi:10.1176/ps.2006.57.8.1162

Akdol, B., & Arikboga, F. S. (2015). The effects of leader behavior on job satisfaction: A research on technology fast50 Turkey companies. *Procedia - Social and Behavioral Sciences*, *195*, 278–282. doi:10.1016/j.sbspro.2015.06.159

Babin, B. J., & Boles, J. S. (1996). The effects of perceived co-worker involvement and supervisor support on service provider role stress, performance and job satisfaction. *Journal of Retailing*, *72*(1), 57–75. doi:10.1016/S0022-4359(96)90005-6

Bahri-Ammari, N., & Bilgihan, A. (2017). The effects of distributive, procedural, and interactional justice on customer retention: An empirical investigation in the mobile telecom industry in Tunisia. *Journal of Retailing and Consumer Services*, *37*, 89–100. doi:10.1016/j.jretconser.2017.02.012

Baruch-Feldman, C., Brondolo, E., Ben-Dayan, D., & Schwartz, J. (2002). Sources of social support and burnout, job satisfaction, and productivity. *Journal of Occupational Health Psychology*, *7*(1), 84–93.

Bass, B. M., & Avolio, B. J. (1993). Transformational leadership and organizational culture. *Public Administration Quarterly*, *17*(1), 112–121.

Beehr, T. A., Walsh, J. T., & Taber, T. D. (1976). Relationship of stress to individually and organizationally valued states: Higher order needs as a moderator. *The Journal of Applied Psychology*, *61*(7), 41–47.

Belias, D., Koustelios, A., Sdrolias, L., & Aspridis, G. (2015). Job Satisfaction, role conflict and autonomy of employees in the Greek banking organization. *Procedia - Social and Behavioral Sciences*, *175*, 324–333. doi:10.1016/j.sbspro.2015.01.1207

Böckerman, P., & Ilmakunnas, P. (2012). The job satisfaction-productivity nexus: A study using matched survey and register data. *ILR Review*, *65*(2), 244–262. doi:10.1177/0 01979391206500203

Bogler, R. (2001). The influence of leadership style on teacher job satisfaction. *Educational Administration Quarterly*, *37*(5), 662–683. doi:10.1177/00131610121969460

Burns, J. M. (1978). *Leadership*. New York: Harper & Row.

Burns, J. M. (2003). *Transforming Leadership: A New Pursuit of Happiness*. New York: Grove Press.

Burton, G. E., Kundtz, R., Martin, G., & Pathak, D. S. (1980). The impact of role clarity on job satisfaction for hospital managers. *Hospital Topics*, *58*(1), 12–18. doi:10.1080/0 0185868.1980.9954744

Chang, E. (2005). Employees' overall perception of HRM effectiveness. *Human Relations*, *58*(4), 523–544. doi:10.1177/0018726705055037

Choi, S. (2011). Organizational justice and employee work attitudes: The federal case. *The American Review of Public Administration*, *41*(2), 185–204. doi:10.1177/02750740 10373275

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310–357.

Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, *86*(2), 278–321. doi:10.1006/obhd.2001.2958

Conrad, C. & Haynes, J. (2001). Key constructs: Views from varying perspectives. In L.L. Putnam & F. M. Jablin (Eds.), *The new handbook of organizational communication: Advances in theory, research and methods* (pp. 47–77). Thousand Oaks, CA: Sage Publications.

Creasy, T., & Carnes, A. (2017). The effects of workplace bullying on team learning, innovation and project success as mediated through virtual and traditional team dynamics. *International Journal of Project Management*, *35*(6), 964–977. doi:10.1016/j.ijproman.2017.04.005

Deluga, R. J. (1988). Relationship of transformational and transactional leadership with employee influencing strategies. *Group & Organization Studies*, *13*(4), 456–467. doi:10.1177/105960118801300404

Etzion, D. (1984). Moderating effect of social support on the stress-burnout relationship. *The Journal of Applied Psychology*, *69*(4), 615–622.

Euske, N. A. & Roberts, K. H. (1987). Evolving perspectives in organization theory: Communication implications. In F. M. Jablin, L. L. Putnam, K. H. Roberts, & L. W. Porter (N.d.), *Handbook of organizational communication: An interdisciplinary perspective* (pp. 41-69). Thousand Oaks, CA: Sage Publications.

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics*. London: Sage Publications.

Folger, R. (1977). Distributive and procedural justice: Combined impact of voice and improvement on experienced inequity. *Journal of Personality and Social Psychology*, *35*, 108–119. doi:10.1037/0022-3514.35.2.108

García-Morales, J. V., Lloréns-Montes, V., & Verdú-Hover, A. (2008). The Effects of transformational leadership on organizational performance through knowledge and innovation. *British Journal of Management*, *19*(4), 299–319. doi:10.1111/j.1467-8551.2007.00547

Greenberg, J. (1990). Organizational justice: Yesterday, today, and tomorrow. *Journal of Management*, *16*(2), 399–432. doi:10.1177/014920639001600208

Hombrados-Mendieta, I., & Cosano-Rivas, F. (2013). Burnout, workplace support, job

    satisfaction and life satisfaction among social workers in Spain: A structural equation

    model. *International Social Work*, *56*(2), 228–246. doi:10.1177/0020872811421620

House, J.S. (1981). *Work stress and social support*. Reading, MA: Addison-Wesley.

Jörgensen, M. G. (2009). *Mat á próffræðilegum eiginleikum Norræna spurningalistans um*

    sálfélagslega þætti í starfi (QPSNordic) (Cand.Psych). University of Iceland,

    Psychology department. Retrieved from https://skemman.is/handle/1946/2915

Keller, R. T. (1975). Role conflict and ambiguity: Correlates with job satisfaction and values.

    Personnel Psychology, *28*(1), 57–64. doi:10.1111/j.1744-6570.1975.tb00391

Ko, J. W., & Yom, Y. H. (2003). The role of social support in the relationship between job

    stress and job satisfaction/organizational commitment among hospital nurses. *Journal*

    of Korean Academy of Nursing, *33*(2), 265–274. doi:10.4040/jkan.2003.33.2.265

Koys, D. J. (2001). The effects of employee satisfaction, organizational citizenship behavior,

    and turnover on organizational effectiveness: A unit-level, longitudinal study.

    Personnel Psychology, *54*(1), 101–114. doi:10.1111/j.1744-6570.2001.tb00087

Kroposki, M., Murdaugh, C. L., Tavakoli, A. S., & Parsons, M. (1999). Role clarity,

    organizational commitment, and job satisfaction during hospital reengineering.

    Nursing Connections, *12*(1), 27–34.

Lambert, E. G., Hogan, N. L., & Griffin, M. L. (2007). The impact of distributive and

    procedural justice on correctional staff job stress, job satisfaction, and organizational

    commitment. *Journal of Criminal Justice*, *35*(6), 644–656. doi:10.1016/j.jcrimjus.2

    007.09.001

Lindström, K. (1997). *Review of psychological and social factors at work and suggestions for*

    the General Nordic Questionnaire: Description of the conceptual and theoretical

background of topics selected for coverage by the Nordic questionnaire (QPSNordic).

Nordic Council of Ministers.

Locke, E.A. (1976). The nature and causes of job satisfaction. In M.D. Dunnette (Ed.),

Handbook of industrial and organizational psychology (pp.1297-1349).

Chicago: Rand McNally.

Lok, P., & Crawford, J. (2004). The effect of organisational culture and leadership style on

job satisfaction and organisational commitment: A cross-national comparison.

Journal of Management Development, *23*(4), 321–338. doi:10.1108/0262171041

0529785

Lyons, T. F. (1971). Role clarity, need for clarity, satisfaction, tension, and withdrawal.

Organizational Behavior and Human Performance, *6*(1), 99–110. doi:10.1016/0030-

5073(71)90007-9

Madanchian, M., Hussein, N., Noordin, F., & Taherdoost, H. (2016). Effects of leadership on

organizational performance. *Economics and Education*, *12*(1). 71-74.

McCall, M. W. (1986). Leadership and performance beyond expectations. *Human Resource

Management*, *25*(3), 481–484. doi:10.1002/hrm.3930250310

Medley, F., & Larochelle, D. R. (1995). Transformational leadership and job satisfaction.

Nursing Management, *26*(9), 64.

Nagy, M. S. (2002). Using a single-item approach to measure facet job satisfaction. *Journal

of Occupational and Organizational Psychology*, *75*(1), 77–86. doi:10.1348/09631

7902167658

O'Reilly, C, I. (1978). The intentional distortion of information in organizational

communication: A laboratory and field investigation. *Human Relations*, *31*(2), 173–

193. doi:10.1177/001872677803100205

Orgambídez-Ramos, A., & de Almeida, H. (2017). Work engagement, social support, and job satisfaction in Portuguese nursing staff: A winning combination. *Applied Nursing Research: ANR*, *36*, 37–41. doi:10.1016/j.apnr.2017.05.012

Oshagbemi, T. (1999). Overall job satisfaction: How good are single versus multiple-item measures. *Journal of Managerial Psychology*, *14*(5), 388–403. doi:10.1108/026839 49910277148

Piko, B. F. (2006). Burnout, role conflict, job satisfaction and psychosocial health among Hungarian health care staff: A questionnaire survey. *International Journal of Nursing Studies*, *43*(3), 311–318. doi:10.1016/j.ijnurstu.2005.05.003

Pincus, J. D. (1986). Communication satisfaction, job satisfaction, and job performance. *Human Communication Research*, *12*(3), 395–419. doi:10.1111/j.1468-2958.198 6.tb00084

Quine, L. (1999). Workplace bullying in NHS community trust: Staff questionnaire survey. *BMJ*, *318*(7178), 228–232. doi:10.1136/bmj.318.7178.228

Rai, G. S. (2013). Impact of organizational justice on satisfaction, commitment and turnover intention: Can fair treatment by organizations make a difference in their workers' attitudes and behaviors. *Journal of Human Sciences*, *10*(2), 260–284.

Rhoades, L., Eisenberger, R. & Armeli, S. (2001). Affective commitment to the organization: The contribution of perceived organizational support. *Journal of Applied Psychology, 86*(1)*, 825–836.

Rhoades, L. (2002). Perceived organizational support: A review of the literature. *Journal of applied psychology*, *87*(4), 698–714.

Saane, N., Sluiter, J. K., Verbeek, J. H. M., & Frings-Dresen, M. H. W. (2003). Reliability and validity of instruments measuring job satisfaction: A systematic review. *Occupational Medicine*, *53*(3), 191–200. doi:10.1093/occmed/kqg038

Schneider, B., & Snyder, R.A. (1975). Some relationship between job satisfaction and organizational climate. *Journal of Applied Psychology*, *60*(3), 318-328.

Streeter, C. L., & Franklin, C. (1992). Defining and measuring social support: Guidelines for social work practitioners. *Research on Social Work Practice*, *2*(1), 81–98. doi:10.1177/104973159200200107

Tarrant, T., & Sabo, C. E. (2010). Role conflict, role ambiguity, and job satisfaction in nurse executives. *Nursing Administration Quarterly*, *34*(1), 72–82. doi:10.1097/NAQ.0b013e3181c95eb5

Tyler, T. R., & Bies, R. J. (1990). Beyond formal procedures: The interpersonal context of procedural justice. In J. Carroll (Ed.), *Applied Social Psychology and Organizational Settings* (pp. 77-98). Hillsdale, NJ: L. Erlbaum Associates.

Ulleberg, P., & Rundmo, T. (1997). Job stress, social support, job satisfaction and absenteeism among offshore oil personnel. *Work & Stress*, *11*(3), 215–228. doi:10.1080/02678379708256836

Walumbwa, F. O., Mayer, D. M., Wang, P., Wang, H., Workman, K., & Christensen, A. L. (2011). Linking ethical leadership to employee performance: The roles of leader–member exchange, self-efficacy, and organizational identification. *Organizational Behavior and Human Decision Processes*, *115*(2), 204–213. doi:10.1016/j.obhdp.2010.11.002

Wännström, I., Peterson, U., Åsberg, M., Nygren, Å., & Gustavsson, J. P. (2009). Psychometric properties of scales in the General Nordic Questionnaire for Psychological and Social Factors at Work (QPSNordic): Confirmatory factor analysis and prediction of certified long-term sickness absence. *Scandinavian Journal of Psychology*, *50*(3), 231–244. doi:10.1111/j.1467-9450.2008.00697

Wilks, S. E., & Spivey, C. A. (2010). Resilience in undergraduate social work students: Social support and adjustment to academic stress. *Social Work Education*, *29*(3), 276–288. doi:10.1080/02615470902912243

Wu, L., & Norman, I. J. (2006). An investigation of job satisfaction, organizational commitment and role conflict and ambiguity in a sample of Chinese undergraduate nursing students. *Nurse Education Today*, *26*(4), 304–314. doi:10.1016/j.nedt.2005.10.011