Leadership in Maritime: Assessing the effect of Leadership Motivation and Fear

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Abstract: The aim of this research was to evaluate the relations among selective information processing about role models (SIP), motivation to lead (MTL), fear of leadership (FOL), role model evaluation and regulatory focus. It is obvious that the appropriate leadership are essential for safety at sea. In literature review, innotivation in academic and health domains by positive and negative role models depending on regulatory focus was investigated. This research study targets leader and leader candidate seafarers and uses randomsampling methods. Data were collected from 200 students of ITU Maritime Faculty and 40 master (leader) seafarers working in the Shipping companies. Data were gathered online through Qualtrics. 6 different types of questionnaires were applied. SIP, a hypothetical role model text describing the event of the leading seafarer was presented. Role model evaluation, participants were asked to rate how happy-unhappy, successful-unsuccessful they thought the leader was and how positive-negative the leadership experience of the role model was and how much they aspired to be like this role model. MTL has three subscales: affective, noncalculative, social-normative. Regulatory focus is composed of two subscales assessing prevention and promotion focus. FOL has 16 items that comprised of a list of possible negative consequences of leadership. Finally, 7 demographic questions were asked and scales compared according to demographics. relationships between factors were assessed by correlation analysis Bivariate correlation analysis was used to determine relations between scales and multiple linear regression analysis was used to determine the factors affected the MTL and FOL. Backward variable selection used to determine the significant parameters. It is seen that, MTL is affecting promotion focus and FOL. FOL is affecting prevention focus and MTL.

Keywords: Leadership, Motivation, Role Model, Seafarer

1. Introduction

An example is given to explain the role model evaluation: Person B is the master of Person A, the master on the Sismik ship. A wants to become a master in the future by observing B's successes. However, person C, who works on the same ship under B at the same time as A, decides that there should not be a master in the future after observing B's problem in family life. What could be the underlying reason for the different decisions that A and B made about becoming masters, assuming they knew B's life at an equally well? The main reason why they are involved in different aspects of the role model is the difference in evaluating the role model. This difference can be a result of the individual difference in their regulatory focus. The purpose of this study is to investigate the relationship between regulatory focus, fear of leadership, role model evaluation, selective information processing on role models and motivation to lead.

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Previous studies have investigated motivation in healthcare field and academic domain with positive and negative role models depending on the regulatory focus. Nevertheless, a single role model has both positive and negative experiments, instead of having totally positive or negative experiments. On such an occasion, what is positive or negative to evaluate the role model is part of the role model's experiment of people's participation. We recommend that the role model be evaluated differently by people with different regulatory focus by selectively processing information about role models. People who have promotion focus are more likely to evaluate the role model positively owing to the selective processing of positive experiments of a role model and people who have prevention focus are more likely to evaluate the role model negatively owing to the selective processing of negative experiences of a role model.

Higgins (1997) expressed that there are two subscales in regulatory focus theory: prevention focus and promotion focus. Prevention focus are responsive to presence and absence of negative outcomes and oppositely, promotion focus are responsive to presence and absence of positive outcomes. Brockner and Higgins (2001) suggested that leadership behaviors can be perceived as part of promotion-focus assumptions, and then encourage creative behaviors by revealing employees' promotion focus. We expected, Regulatory focus will predict motivation to lead and fear of leadership. Luria and Berson (2013) expressed that motivation to lead was associated with both formal and informal leadership emergence. Participants with low MTL were selected as leaders by less group members and less inclined to assume leadership roles in comparison to participants with high MTL. We expected, role model evaluation will predict MTL. In the this study, we investigated whether regulatory focus, selective information processing, role model predicts motivation to lead and fear of leadership. It is obvious that the leadership are essential for maritime sector, because of the fact that hierarchy is more predominant in the management of maritime sector compared to most inland based businesses (Tavacıoğlu, 2014). In this direction, we have two hypotheses:

Hypothesis 1: Motivation to lead (MTL) will be predicted by regulatory focus, Selective Information Processing (SIP), fear of leadership, role model.

Hypothesis 2: Fear of leadership (FOL) will be predicted by regulatory focus, Selective Information Processing (SIP), motivation to lead (MTL), role model.

2. Material and Method

Data were collected from 200 maritime students and 40 masters (leaders) in maritime company. Data were gathered online and anonymously through Qualtrics. Sample was recruited by sharing the Qualtrics link with our network and through e-mails. The response rate is 64% (118 students, 35 masters). The leadership text consisting of 4 paragraphs on maritime was given in the first part. We offered three questions to check that the participants actually read the paragraph. Those who responded wrongly to at least one fell down. 5 positive and 5 negative sentences existing in the text are selected and these sentences are marked in a box after the participants read the text (SIP). For the role model evaluation, participants were asked to rate how happy-unhappy, successful-unsuccessful they thought the leader was and how positive-negative the leadership experience of the role model was and how much they aspired to be like this role model (rated 0 to 100). The Questionnaires were asked into that order: MTL, Regulatory Focus, FOL. Finally, Participants were asked to report their gender, educational level, whether they are currently employed or not. Descriptive statistics were calculated for continous variables (mean, standard deviation (SD), minimum, maximum, median) and categorical variables (N, %) showed in Table 1. Comparison of two independent and normally distributed variables Student's t test was used, to compare two independent and non-normally distributed variables Mann Whitney U test was used. Comparison of more than two independent and non-normally distributed variables Kruskal Wallis test was used. It is shown in Table 2. Pearson correlation analysis was used to determine two normally distributed variables (Tabachnick,2013). It is shown in Table 3. Multiple linear regression modeling was used to examine the effect of independent variables on the continuous dependent variable, and the Backward variable selection method was used (Çokluk et. al,2016). It is shown in Table 4a and 4b. The analysis was conducted by utilising SPSS 24.0 (Statistical Package for the Social Sciences).

Table 1. Demographic characteristics of the participants (N=153)

		Mean±SD	Median (Min-Max)
Age		27,5±9,3	24 (19-70)
How many years of work experience do you have?		7,1±9,8	2,7 (0,08-43,0)
		N	%
Gender	Female	22	14.9
	Male	126	85.1
Education	High School	58	39.2
	Bachelor's Degree	7	4.7
	Master's Degree	62	41.9
Occupation	Employee	35	22.8
	Student	118	77.1
Position	Administrative	11	7.2
	Not Administrative	24	15.7

Selective Information Processing About Role Model (SIP)

A hypothetical role model text was presented about maritime. On the top of the text, they saw a page in which it is written that they should carefully read the following text, since there will be questions about the text and they had 5 minutes to read it. The text had the same amount of sentences presenting positive and negative experiences of the role model. Three questions were presented to check whether the participants really read the paragraph and who responded wrongly to at least one dropped out. After answering check questions, they selected the sentences that they thought are indicated in the text. 5 positive and 5 negative sentences existing in the text are selected and for measuring SIP about role model number of the positive sentences in the box were subtracted from number of negative sentences in the box. The mean number of negative sentences selected was 2.76 (SD=1.58). The mean number of positive sentences selected was 2.95 (SD=1.61). The mean of calculated SIP was -0.2 (SD=1.4). It showes that positive sentences picked more than negatives.

Role Model Evaluation

For the role model evaluation, semantic differentials were used. That is, participants were asked to rate how happy-unhappy, successful-unsuccessful they thought the leader was and how positive-negative the leadership experience of the role model was and how much they aspired to be like this role model (Sandal, 2014).

Motivation to Lead Scale

The original MTL scale was composed of 27 items developed by Chan and Drasgow (2001). The scale has three subscales: affective, noncalculative, social-normative. For purposes of this study, we only used 18 items that are related to affective and social-normative subscales. Items are scored on a 5-point Likert scale (1= totally disagree to 5= totally agree). Cronbach's alpha was .78 for the current study and it shows that the scale was consistent. The mean of MTL was 3.3 (SD=0.5).

Regulatory Focus Scale

The 18 items questionnaire developed by Lockwood et al. (2002) was used to measure regulatory focus of participants. The questionnaire has two subscales: prevention and promotion goals. Items are scored on a 5-point Likert scale (1= totally disagree to 5= totally agree). Turkish version of the questionnaire was obtained from Canacik (2006) and used in this study. Cronbach's Alpha was .70 for prevention focus subscale and .76 for promotion focus subscale, indicating that both subscales are consistent. The mean of prevention focus was 2.9 (SD=0.8) and promotion focus was 3.7 (SD=0.7). The mean of promotion focus was found higher than prevention focus.

Fear of Leadership Scale (FOL)

The 16-item scale was developed by Aycan et al. (2014). They rated items on a 5-point Likert scale ranging from "very low levels of anxiety" to "very high levels of anxiety. The items comprised of a list of possible negative consequences of

leadership. The reliability for the current study was .87. The mean of FOL was 3.3 (SD=0.6)

3. Results

There is no statistically significant differences between demographics and MTL (p>0.05). It is seen that FOL and age have statistically significant weak correlation with negative direction. Thus, FOL decreases as age increases (Table 3).

Table 2. Comparisons according to demographics

Mean±SD Median(Min-Max)		MTL	FOL
Gender	**Female**	3.2±0.4 3.3 (2.2-3.8)	3.1±0.8 3.3 (1.3-4.6)
	Male	3.4±0.5 3.3 (2.1-5)	3.3±0.6 3.3 (1.6-5)
	p	0.118[1]	0.329
Education	**High School**	3.4±0.5 3.4 (2.1-4.3)	3.4±0.7 3.4 (1.6-4.8)
	Bachelor's Degree	3.2±0.7 3.2 (2.1-4.3)	3.3±0.7 3.4 (1.9-4.3)
	Master's Degree	3.3±0.4 3.3 (2.5-5)	3.3±0.6 3.3 (2-5)
	p[2]	0.574	0.835
Occupation	**Employee**	3.3±0.3 3.3 (2.8-3.8)	3±0.8 3.1 (1.3-4.2)
	Student	3.3±0.5 3.3 (2.1-5)	3.3±0.7 3.3 (1.6-5)
	p	0.266	0.211
Position	**Administrative**	3.3±0.3 3.2 (2.8-4.1)	3.2±0.6 3.3 (1.3-4.1)
	Not Administrative	3.3±0.3 3.2 (2.8-4.1)	3±0.9 3.3 (1.3-4.1)
	p	0.106	0.820
Pearson correlation coefficients: r			
Age	**r**	-0.027	**-0.178**
	p	0.752	**0.032**
How many years of work experience do you have?	**r**	0.108	-0.212
	p	0.367	0.078

Mann-Whitney U test, [1]Student t test, [2]Kruskal Wallis test

To investigate relationship between scales, Pearson correlation analysis was utilized. The correlation analysis results were shown in Table 4. There is a statistically significant weak uphill (positive) linear relationship between MTL and Prevention focus. Meanwhile, promotion focus and role model, prevention focus have a weak uphill (positive) linear relationship, according to promotion focus the degree of relationship increased to moderate (0.437). FOL and Promotion focus have a moderate (0.418) uphill (positive) linear relationship and with promotion focus the degree of relationship decreased to weak.

Table 3. Correlation between scales

r; p	1	2	3	4	5	6
SIP[1]	1.000					
Role model[2]	0.141	1.000				
	0.093					
MTL[3]	**0.167**	0.108	1.000			
	0.045	0.199				
Prevention focus[4]	-0.036	-0.150	**0.195**	1.000		
	0.670	0.074	**0.019**			
Promotion focus[5]	**0.178**	**0.172**	0.437	**0.218**	1.000	
	0.033	**0.040**	**<0.001**	**0.008**		
FOL[6]	0.139	0.055	0.134	**0.418**	0.212	1.000
	0.099	0.520	0.110	**<0.001**	**0.011**	

After the comparison of the demographics and correlation analysis, the regression models given in Table 5a for MTL and Table 5b for FOL were formed. As a first step, MTL is selected as a dependent variable and SIP, role model, prevention focus, promotion focus, FOL were modeled as independent variables and Backward variable selection method was used. There is no multicollinearity (VIF<10) and autocorrelation (Durbin-Watson$\leq$2). So, model can be interpreted and was found statistically significant (p<0.001). If promotion focus differed by one unit, MTL will differ by 0.253 units and if FOL differed by one unit, MTL will differ by 0.210 units, on average.

Table 4a. Regression analysis (Backward selection)

MTL Dependent	Unstandardized β	Standard Deviation	Standardized β	t	p	VIF
Constant	2.029	0.224		9.077	<0.001	
Promotion focus	0.253	0.049	0.385	5.183	<0.001	1.038
FOL	0.116	0.052	0.167	2.249	0.026	1.038
R^2	0.210					
F/p	18.905/<0.001					

Finally, FOL is selected as a dependent variable and SIP, role model, prevention focus, promotion focus, MTL were modeled as independent variable, since it has a significant relationship with age, the age was also added to the model. According to backward variable selection, MTL and prevention focus were found significant in final model. There is no multicollinearity (VIF<10) and autocorrelation (Durbin-Watson$\leq$2). So, model can be interpreted and was found statistically significant (p<0.001). If MTL differed by one unit, FOL will differ by 0.239 units and if prevention focus differed by one unit, FOL will differ by 0.270 units, on average.

Table 4b. Regression analysis (Backward selection)

FOL Dependent	Unstandardized β	Standard Deviation	Standardized β	t	p	VIF
Constant	1.688	0.394		4.285	<0.001	
MTL	0.239	0.115	0.165	2.081	0.039	1.055
Prevention focus	0.270	0.068	0.318	4.002	<0.001	1.055
R^2	0.152					
F/p	12.748/<0.001					

4. Discussion and Conclusions

The main purpose of the study was to examine FOL and MTL which were affected by scales. We expected that the relation between MTL and FOL in consumer research will reveal itself also when people evaluating the leadership in terms of role model's success, happiness and positivity of leadership experience and aspiration to be like the role model.

Motivation to lead (MTL) was defined as "an individual differences construct that affects a leader's or leader-to-be's decisions to assume leadership training, roles, and responsibilities and that affect his or her intensity of effort at leading and persistence as a leader" (Chan & Drasgow, 2001, p.487). Participants with high MTL were both selected as leaders by more group members and tended to assume leadership roles when compared to participants with low MTL (Sandal, 2014). We expected that role model evaluation will predict MTL. Promotion focus and FOL were found to have a significant effect on MTL. According to regression results, MTL will differ 0.25 units with change of promotion focus and 0.12 units with change of FOL. In the first hypothesis, MTL will be predicted by regulatory focus, Selective Information Processing (SIP), fear of leadership, role model was found semi-significant ,by reason of FOL and promotion focus were important according to the model.

By establishing the regression model of FOL, we suggested that if people have high levels of FOL, prevention focus is increased. Thus, we predicted that FOL and prevention focus have relationship and also MTL is affecting FOL. According to regression results, FOL will differ 0.24 units with change of MTL and 0.27 units with change of preventionfocus. In the second hypothesis, FOL will be predicted by regulatory focus, Selective Information Processing (SIP), motivation to lead (MTL), role model was found semi-significant, by reason of MTL and prevention focus were important according to the model.

The first limitation of the present study was sample size in terms of number of questions including all scales. As the number of questions is more, the sample size can be increased. So, different structural models can be established and simultaneous relationships can be examined. The second limitation of the present study was that our data was based on self-report. The insignificant results regarding role model might be attributed to the use of self report in process of information. Future studies might use brain activities or attention measures to determine the role model. In addition, future studies might look for other possible predictors which predicts MTL and FOL. Despite those limitations, the findings are expected to contribute human resources policies. The present study shows the parameters which are affecting motivation and fear in leadership.

Acknowledgements

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