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The Relationship Between Prosocial Voice and the Patient Safety Culture Moderated by Self-Monitoring at Saudi Public Hospitals

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Abstract: This study is focused on achieving two objectives; first, examining the direct relationship between prosocial voice and the patient safety in Saudi public hospitals and second, investigating the moderating effect of self-monitoring on the relationship between prosocial voice and patient safety. The primary research design employed in the present study is a quantitative method of survey. A sample of 127 out of 251 healthcare organizations were selected in Saudi Arabia divided as follows: About 73 from the Central and 54 from the Western region. These are all public hospitals operating under the Kingdom's Ministry of Health. Total 30 questionnaires were distributed in each of the 127 public hospitals of Saudi Arabia in the two regions. The staff workers in the nursing units are the main focus for the data collection through these questionnaires. The number of questionnaires returned totalled 1793 and therefore, the response rate is calculated by dividing the number of questionnaires returned or completed with the number of participants of the survey. This study used multiple regression and hierarchical multiple regression analyses to examine the relationship between prosocial voice and patient safety culture and moderating effect of self-monitoring on the prosocial voice and patient safety culture relationship. Specifically, the findings showed a positive and significant association between prosocial voice and patent safety culture and a significant effect of self-motoring on the prosocial voice and patent safety culture. Finally, this study offers recommendations for future researchers at the end.

Key words: Patient safety culture, prosocial voice, self-monitoring, patient safety, primary research, survey

INTRODUCTION

In the medical industry, culture plays a crucial role for organizational development and improvement where it reflects individual behaviour and attitudes at the workplace. Culture is the set of moral values of a society that is revealed in their behaviours (Feng *et al*., 2008) or the full range of learned human behaviour patterns. The study of patient safety is now an essential subject that offers response to the healthcare organisations with the opportunity to measures specific problems (Fajardo-Dolci *et al*., 2010). One of the factors that influences patient safety in health organisations is the culture of patient safety, better known as Patient Safety Culture (PSC) (Abdolahzadeh *et al*., 2012). Currently issues related Patient Safety Culture (PSC) has received more attention from society and many organisations, since it shows the importance of patient-related safety in the workplace (Milligan, 2007).

From the literature, patient safety is defined as avoidance and prevention of patient injuries or adverse events resulting from the procedures of health care delivery. The PSC of an institute acts as a guide as to how staff members is expected to perform in the workplace. A strong and proactive PSC can ensure that the leadership learns from errors and records, motivates and practices teamwork, overcomes possible threats, uses methods for reporting and analysing adverse events and celebrates workers as heroes on improving safety rather than as villains committing errors (Aboul-Fotouh *et al*., 2012).

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Moreover, a healthcare institution with a positive safety culture is characterised by communications founded on mutual trust, shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures (AHRQ, 2004). Although, there is plenty emphasis on PSC in health care, few organisations have assessed the extent to which their staff culture supports patient safety. More pertinently, evolving a culture of safety is the basic component of constant struggle to improve quality patient safety in healthcare organisations (Weaver *et al*., 2013). The literature revealed that PSC is associated to such clinician behaviours such as error reporting, decreased in adverse events and can minimise mortality (Mardon *et al*., 2010; Singer *et al*., 2009).

PSC would be significant in workplace patient safety from the staff members point of view (Milligan, 2007), especially in this critical industry. It is defined as the performance shaping element guiding the behaviours of healthcare professionals towards considering patient safety among the top priorities (Aboshaiqah and Baker, 2013). The PSC is a result of the internalized values and beliefs of the hospital staff and the behaviour that contributes towards it. An institute's safety culture guides how the staff members perform workplace activities. An effective and proactive safety culture guarantees that leadership learns from mistakes and records in order to encourage and practice teamwork to face potential threats to utilise approaches of reporting and analysing negative events and to give workers their due in enhancing safety as opposed to punishing them for committing errors (Aboul-Fotouh *et al*., 2012). In addition, a healthcare institution having a positive PSC is associated with trust, efficient communications, mutual trust and common perceptions of importance of safety in the preventive measures efficacy (AHRQ, 2004). Meanwhile, shedding a light on and minimising medical errors calls for understanding the way behavioural factors, like registered nurses Prosocial Voice (PSV) and Self-Monitoring (SM), is linked with PSC.

An approach to reporting medical errors is the Prosocial Voice (PSV) which is described as a certain style of proactive and improvement-directed workplace communication behaviour. An employee practicing PSV is urged to report knowledge, information and views to bring about positive changes to the status quo on the basis of the desire to maximise work processes despite disagreements from others (Van Dyne *et al*., 2003). When employees report and discuss about significant issues, organisations benefit from them. Although PSV is desired in the workplace, employees are often hesitant to speak up (Marrison and Milliken, 2000).

Thus, the failure of staff to communication negatively influences the ability of the hospital to pinpoint medical errors and learn from their errors (Lyndon, 2006; Hughes *et al*., 2009). According to Soibel *et al*. (2012), there are many reasons why the hospital staff often refuse to speak out regarding patient safety concerns. Psychological processes like Self-Monitoring (SM) impacts their expressive behaviour and communication. SM refers to a behavioural process in which individuals control their projected public image according to others expectations. This may be attributable to the employee's decision to speak up (Premeaux and Bedeian, 2003). It is however, contended time and again in literature that enhancing PSC to minimise medical errors in healthcare is significant. The PSC of a hospital has a key role in identifying and dealing with errors. Hospital leaders and management encouraging PSC is characterised by effective communication among all healthcare professions to take advantage of opportunities of procedures, practices and processes enhancement (Armstrong *et al*., 2009).

However, despite the stress on effective communication, many healthcare providers do not often communicate concerns regarding unsafe practices and medical errors. According to a survey distributed among 196,462 hospital staff members employed in 622 US hospitals, 63% of respondents showed no patient safety concerns or report medical errors (Sorra *et al*., 2009). Failure to communicate appears to be the reason behind the potentially avoidable medical errors.

Although, proactive communication is linked with the organizational leaders ability to solve mistakes, enhance processes and develop solutions to organizational issues in several industries, it has received little or no attention in scientific research. Consequently, little is known concerning the relationship between a certain type of proactive and upward-directed workplace communication behaviour such as PSV and PSC in the context of hospitals.

Furthermore, only a few operationalised factors are available throughout studies in literature. In addition, researchers call for the investigation of behavioural factors associated with PSV (Burris *et al*., 2008; Detert and Trevino, 2010). Several reported on the impact of SM behaviour in the workplace. Prior studies such as Grant and Mayer (2009) presented that SM may moderate employee PSV in several industries. It refers to the individual's ability to observe and modify expressive behaviour and self-presentation in reaction to social signals (Soibel *et al*., 2012).

Moreover, individual variances related to SM have a key role in shaping communication behaviour in the context of social situations. Superior self-monitors may be urged to adapt their behaviour to satisfy the expectation of others (Barrick *et al*., 2005).

Literature review and hypotheses development

Prosocial voice and patient safety culture: In the previous decade, studies have been dedicated to describing the mechanisms that urge or hinder prosocial voice in various organizational settings. Factors associated with prosocial voice include perceived quality of leadership support, management style, loyalty to an organisation and the level to which employees were treated fairly (Detert and Trevino, 2010; Walumbwa and Schaubroeck, 2009).

Researchers have indicated the existence of a relationship between an organisation and prosocial voice. Detert and Trevino (2010) conducted a qualitative phenomenological approach examine prosocial voice. They conducted an interview of 89 high-tech industry employees to understand their perceptions concerning the supportive or hindering influences of leaders upon prosocial voice. They revealed that employee perception of supervisory supportiveness positively predict the inclination to use prosocial voice. In other words, those who perceived supervisors as open, empathetic and tolerant exercised their use of prosocial voice because leaders who encouraged informal interaction with employees at all levels urged their use of higher degrees of prosocial voice. However, future studies are required to examine the manner in which individual characteristics are linked to employee's hesitance to report (Detert and Trevino, 2010).

A related qualitative study by Walumbwa and Schaubroeck (2009) involving 894 employees and their 222 immediate supervisors was conducted in a US financial institution. They revealed that leadership personality traits of agreeableness and conscientiousness were linked to prosocial voice behaviour through the mediating effect of employee's perception of ethical leadership. In other words, employees were not as likely to determine problems or indicate improvements when they perceived minimal degrees of ethical leadership. They also revealed that ethical leadership perceptions significantly predicted greater levels of employee voice. This association was partially mediated by psychological safety perceptions where psychological safety is the level to which employees are convinced that they have a positive and collaborative environment and they are safe in reporting issues, new ideas or recommendations for the organisation's benefit.

Along a similar line of contention, leadership's support for safety predicted employee prosocial voice in a quantitative study involving 213 bus drivers in the U.K (Tucker *et al*., 2008). This study employed perceived co-worker support as a mediating factor between leadership support for safety and employee's prosocial voice. The perception of employee of peer support for workplace safety mediated the perceived leadership support for safety-employee prosocial voice relationship. Employees used their prosocial voice to report safety issues when they perceived their leaders support for safety and this relationship was mediated by the level to which peers supported workplace safety. Moreover, employees use of their prosocial voice increased when their leaders encouraged them to provide suggestions and transformed them into actions.

Another notable quantitative study was carried out by Burris *et al*. (2008). The study involved 234 restaurant managers to examine the association between leadership and prosocial voice with the inclusion of two mediators. They examined employees psychological attachment and detachment to the organisation as mediators between two independent variables linked to leadership behaviour and the dependent variable of prosocial voice. They revealed that employees who were psychologically detached had a tendency to with hold ideas that may be important for organizational improvement. In other words, when the relationship between employee and leader is poor, employees are detached, they think about quitting and they do not attempt to enhance their work surroundings. Also, abusive supervision was found to be significantly associated to employee detachment while the latter was significant associated to decreased levels of prosocial voice. They urged for future studies to investigative the prosocial voice-aspects of organizational culture relationship.

Only two studies have been conducted in a healthcare organisation and the target population were registered nurses .The first study by Tangirala and Ramanujam (2008)'s was a quantitative one involving 606 registered nurses where they attempted to measure the impact of perceived climate of procedural justice upon employee silence. They defined procedural justice as the level to which employees are convinced that their leaders are treating them fairly. Stated differently, employees perceive a sense of procedural justice when they perceive that their leaders decisions are consistent, accurate, fair and bias-free. They revealed that despite the fact that individual factors may motivate nurses to employ their prosocial voice; the procedural justice climate of an organisation plays a key role in indicating whether or not the nurses speak up or remain silent. They also noted that prosocial voice increased with work-group identification,

professional commitment and perceptions of procedural justice. And second study was by Hill that carried out on registered nurses from one hospital to study registered nurses perception of prosocial voice, self-monitoring behavior and four out of twelves dimensions of hospital patient-safety culture and the results presented a weak positive correlation between registered nurses prosocial voice and patient-safety culture. Regression analyses did not support self-monitoring as a moderator of the relationship between prosocial voice and hospital patient-safety culture. There is call for additional research involved studying larger subject populations in various hospitals locations. And this is the gap that will fill by current study.

The prior discussion was presented to provide an insight to the contextual framework of prosocial voice. Majority of studies among the prosocial voice research conducted the quantitative measurement of the construct of prosocial voice with the help of prosocial voice scale PSVS (Van Dyne and LePine, 1998). The construct has been examined throughout various organisations but only two studies in health filed made use of healthcare workers as a sample population. Hence, a research gap is evident among studies assessing how employ prosocial voice and its relationship to the patient safety culture from organizational level. So, there is call to study prosocial voice and patient safety culture on larger subject populations in diverse hospital settings to explore and determine to which extend the prosocial voice is promote the patient safety culture on healthcare industry. Based on the past literature regarding their relationships, the following hypotheses are formulated:

- H_1: There is a relationship between a positive association prosocial voice and patient safety culture

The moderating effect of self-monitoring on the relationship between prosocial voice and patient safety culture: According to Snyder (1974), self-monitoring refers to a psychological construct described as an individual's intention towards and ability of self-observation and self-control based on different social situations. It is defined as a cognitive process via which individuals are able to observe and adjust to the public image which they think others perceive of them (Snyder, 1974; Snyder and Cpeland, 1986). The self-monitoring theory posits that individuals are different based on the level to which they consider situational cues and voluntarily manage their expressive behaviour and self-presentation in certain situations (Gangestad and Snyder, 2000).

In self-monitoring theory, there are several themes underpinned by social cognitive theory that arises. For instance in the social cognitive theory, human behaviour is deemed to be a reactionary interaction of personality factors, behaviour and the surroundings. The theory posits three main components which are individuals learn via observation of others, individuals have beliefs regarding certain situations and whether or not they feel that they perceive themselves capable of bringing about the expected outcome and finally, individuals use cognitive process to regulate and control their behaviour (Bandura, 1991).

The social cognitive theory describes human functioning as an interaction between internal and external influence sources where self-monitoring can be considered in ways that the expressive behaviour of the individual represents their specific self-constructs. In this regard, the self-monitoring construct categorizes the expressive behaviour of individuals in social circumstances into two main and contrasting interpersonal orientations; individuals having high self-monitoring abilities and those having low self-monitoring abilities. The premise underpinning the self-monitoring theory is the fact that the earlier two categories of monitors perceive and interact within their social worlds differently (Leone, 2006).

Specifically, high self-monitors are capable of viewing and modifying their self-presentation in response to different social circumstances and are capable of controlling their expressive behaviour to suit them. In contrast, low self-monitors do not voluntarily make use of expressive control and they could not care less of what suits the situation (Snyder, 1974). In other words, their behaviour is an accurate depiction of their attitudes, emotions and feelings (Day and Kilduff, 2003). Thus, self-monitoring is driven by concern coupled with control behaviour in order to keep up with social expectations, rather than representing the actual self.

A typical high self-monitoring individual behaves differently in different situations by using a list of expressive behaviours. Such self-monitors are interested in maintaining positive impressions and they care about the behaviour of their peers. This is why, they are referred to as 'social chameleons' they are able to change their behaviour in order to adapt to various social circumstances (Snyder, 1974). They utilize information and cues available to them from the environment to steer their behaviour and they are interested in proper behaviour and acceptance in society. Added to this behaviour is the culmination of situation orientation and hence, high self-monitoring individuals display divergence between appearances and actual reality (Snyder, 1974).

On the other hand, a typical self-monitoring individual behaves according to his inner state and attitude. Self-monitors disregard external cues and they are not as likely to change their behaviours and attitudes

to suit social situations. Therefore, they actions are consistent with their appearances and the actual reality of themselves (Snyder, 1974).

Studies dedicated to examining self-monitoring in the context of the workplace take a significant portion of literature. Based on pioneering empirical evidence in this field, high-self monitors are more sensitive to role demands in comparison to low-self monitors and former behaves in such a way that they fit into the social situation (Dabbs *et al*., 1980). In this regard, Turnley and Bolino (2001) found a significant relationship between high self-monitoring and impression management where high self-monitoring individuals were capable of controlling their impressions better than their counterparts (low self-monitoring individuals). In fact, such high self-monitoring individuals are socially dynamic and flexible compared to low self-monitoring ones (Leone, 2006) and they are more sensitive to the social group members thoughts and feelings and hence, show superior performance in group situations (Flynn and Ames, 2006). This contention was supported by Flynn and Ames (2006) who stated that high self-monitors achieve a certain status in social groups according to their peers through their generous and versatile expressions. Specifically, they make use of their voice behaviour in such a way that it positively adds to their image. Moreover, high self-monitors may become leaders via their effective communication use to display a competent image.

Added to the above, high-self monitors tend to speak first, break periods of silence and to bring a positive impact into social interactions with the help of humour and they also tend to volunteer self-disclosures to get the upper hand (Oh and Kilduff, 2008). Currently, self-monitoring is deemed to be a positive trait rather than a deceptive one as it is attributed to sensitivity and understanding of social circumstances (Oyamot *et al*., 2010). Nevertheless, there is still a need to validate the relationship between self-monitoring and prosocial voice as studies in this calibre are few and far between.

Among such studies in literature is the one conducted by Premeau and Premeaux (2003) where high self-monitors were identified as individuals who steer clear of expressing their opinions if they perceive that such opinions may lead to negative impression and outcomes. Consequently, high self-monitors refrain from speaking about workplace issues and problems.

Contrastingly, there are also studies in literature that revealed the absence of a relationship between self-monitoring and prosocial voice among organizations employees. This calls for more studies to examine self-monitoring relationship with prosocial voice at the level of the organization.

More importantly, self-monitoring is related to the motivation of individual's behaviour in the social context and it provides an insight into the fundamental dichotomy proposed in psychological theory that questions whether or not human behaviour is situational (as noted in high self-monitors) or dispositional (as noted in low self-monitors). Literature shows that self-monitoring theory provides a framework for explaining human beings motivation in the work environment and it adds to the knowledge in terms of the implications brought about by the prediction of employee behaviour. The theory sheds a light on the level to which individual differences in self-monitoring drive behaviour and social interaction. Studies dedicated to self-monitoring revealed that employees perceive different situation information and they employ voice in different ways when reporting their concerns. To this end, high self-monitors view the dominant opinion regarding an issue and they are more inclined to use their voice when they are convinced of their peer's agreement. High self-monitors who perceive that their opinions are against to that of their peers, tend to keep silent. Also, high self-monitors take advantage of voicing their opinions to make a positive impression while their low counterparts consider voicing their opinions as a way to express their honest attitude and feelings (Premeaux and Bedeian, 2003). According to the discussed prior literature concerning the relationship between the variables, the researcher proposes the following hypotheses:

- H_2: There is a moderating effect of self-monitoring on the relationship between prosocial voice and patient safety culture

MATERIALS AND METHODS

In order to collect data from respondents, certain methods can be employed for questionnaires (Sekaran, 2003). A questionnaire refers to a pre-written set of questions which is closely defined that respondents are required to answer (Sekaran, 2003). It is an efficient data collection method but only when the researcher is aware of what is needed and of the variables measurement (Sekaran, 2003). Meanwhile in this study, a survey using questionnaires shall be employed for data collection as the researcher aims to obtain certain responses toward the issues under study (structural empowerment, prosocial voice, self-monitoring, psychological empowerment and patient safety culture) in Saudi Public Hospitals through specific measurements.

Moreover, the questionnaire were together with the approval letter would garner higher responses as the participants will be privy to the importance of the research. The approval letter was considered to be a formal permission to carry out the research at 127 public hospitals of Saudi Arabia in two main regions; Central and Western. Therefore for the purpose of the present study,

the sample size is 30 questionnaires were distributed in each of the 127 public hospitals of Saudi Arabia in two main regions; Central and Western because of the higher populations residing in these regions. Therefore, the total of Questionnaires were distributed 3810.

A sample of 127 out of 251 healthcare organization were selected in the Saudi Arabia (Moh, 2002), 73 from the Central 54 from the Western region. These are all public hospital and operate under the Ministry of Health (MOH) in the kingdom. Total 30 questionnaires were distributed in each of the 127 public hospitals of Saudi Arabia in two main regions; Central and Western because of the higher populations residing in these regions. The staff workers in the nursing units have been the main focus for the data collection through these questionnaires. Total 1793 questions returned as completed and therefore, the response rate is calculated by dividing the number of questionnaires returned or completed with the number of participants of the survey (Zikmund *et al*., 2010).

This study is to examine the association between Prosocial Voice (PV) and the Patient Safety Culture (PSC). On the other hand, it is to investigate the moderating effect Self-Monitoring (SM) on the relationship between Prosocial Voice (PV) and the Patient Safety Culture (PSC). Table 1 is to provide the vaiables measurements.

Regarding to above relationship between independence, moderator and dependence variable that the following models will be used:

$$PCS = \alpha 0 + \beta 1 \times PV + \varepsilon \quad (1)$$

$$PCS = \alpha 0 + \beta 1 \times PV + \beta 2SM \times PV + \varepsilon \quad (1)$$

Where:

$\alpha 0$ = Constant
PSC = Patient Safety Culture
PV = Prosocial Voice
SM = Self-Monitoring
SM×PV = Self-Monitoring×Prosocial Voice
ε = Error term

Table 1: Summary of variables measurement

Variables	Acronym	Operationalisation
Dependent Variables (DV)		
Patient safety culture	PSC	Patient safety culture is operationally defined as the total score of the overall perception of patient safety gauged through the HSOPSC instrument (Sorra and Nieva, 2004)
Independent Variables (IV)		
Prosocial voice	PV	Prosocial voice is the total score of prosocial voice scale (Van Dyne and LePine, 1998)
Moderators Variables (MV)		
Self-monitoring	SM	Self-monitoring is defined as the total score of self-monitoring where scale questions are numbered from 1-17 (Oyamot *et al*., 2010)

RESULTS

The data collected was analyzed with the help of IBM SPSS for the purpose of determining data description and conducting hypothesis testing.

Descriptive statistic: The descriptive statistics of the continuous variables are presented in Table 2, including the results of mean, standard deviation, minimum and maximum calculated through the use of SPSS Version 19.

Correlation analysis: Table 3 provides the summary of correlation results. The results revealed that correlations were all <0.80 which is in light with the recommendations provided by Gujarati and Porter (2009). Specifically, they stated that correlations of <0.80 ensure the absence of multicollinearity.

Regression results of model

Regression results of model (based on patient safety culture): The R^2 informs us that the percentage of variance in the independent variable Patient Safety Culture (PSC) is explained by the model's variables which are the Prosocial Voice (PV) the results in Table 3 presents that the R^2 in this model is 0.025. This shows that the model explains 3% of the Patient Safety Culture (PSC) variance which is quite a respectable percentage. The SPSS shows an Adjusted R^2 value in the output. For a small sample, R^2 value in the sample tends to lean more to an optimistic over estimation of the actual population value (Tabachnick and Fidell, 2007).

Based on the adjusted coefficient of determination (R^2), 0.024% of the variation in the dependent variable is explained by the independent variables' variations (Table 4). In other words, patient safety culture variation

Table 2: Descriptive statistics of continuous variables

Variables	Mean	SD	Min	Max
Prosocila Voice (PV)	3.4739	0.69122	1.00	5.00
Self-Monitoring (SM)	3.2153	0.48915	1.00	5.00
Patient Safety Culture (PSC)	3.3053	0.38263	1.00	4.50

Table 3: Results of pearson correlation analysis

Variables	1	2	3
PV	-	-	-
SM	0.299***	-	-
PSC	0.157***	0.147***	-

***Correlation is significant at the 0.01 level (2- tailed); ** Correlation is significant at the 0.05 level (2-tailed); *Correlation is significant at the 0.1 level (2-tailed)

Table 4: Regression results of model (Dependent = PSC)

Variables	Standardized coefficients beta	t-value	Sig.
PV	0.157	6.737	0.000
R^2			0.025
Adjusted R^2			0.024
F-value			45.400
F-significant			0.000

Table 5: The moderating effect of the self-monitoring on the relationship prosocial voice and patient safety culture

	Step 1 (Without interaction)			Step 2 (Moderator variable)			Step 3 (With interaction)		
Variables	Beta	t	Sig.	Beta	t	Sig.	Beta	t	Sig.
PV	0.157	6.737	0	0.124	5.106	0	0.658	5.167	0
SM				0.110	4.535	0	0.539	5.219	0
MOV							-0.784	-4.270	0
F value	45.400			33.200			28.400		
F Sig.	0.000			0.000			0.000		
R^2	0.025			0.036			0.046		
Adjusted R^2	0.024			0.035			0.044		
R^2 change	0.025			0.011			0.010		
Significant change F	0.000			0.000			0.000		

as proxied by PSC was statistically explained by the regression equation. Moreover, the results listed in Table 4 shows that the model is significant as F value is significant at ($F = 45.4$, $p<0.01$). This indicates the model's validity.

Hierarchical multiple linear regression results: This sub-section is dedicated to providing a discussion on the moderating effect of self-monitoring on relationship between prosocial voice and patient safety culture. The result of this discussion determines the twelfth research question which states, "does self-monitoring moderate the effect of prosocial voice on patient safety culture in Saudi hospitals? The present study selected self-monitoring as a moderating variable in order to contribute to literature. Therefore, the moderating role of self-monitoring upon prosocial voice-patient safety relationship was examined. For this purpose, regression analysis was employed and the proceeding sub-sections present the processes in detail. The analysis results are presented in Table 5.

The first step involved the introduction of the prosocial voice variable into the model the model was found to be significant at ($F = 45.4$, $p<0.01$) with the adjusted R^2 of 3% and significant F change at the significant level of 0.01. Table 4 presents that Prosocial Voice (PV) significantly affects patient safety culture with the indicator values ($\beta = 0.157$, $t = 6.737$, $p<0.01$).

In the second step, the Prosocial Voice (PV) and Self-Monitoring (SM) were entered into the model for their power to predict Patient Safety Culture (PSC) after which the model was found to be significant at ($F = 33.2$, $p<0.01$) and adjusted R^2 of 4%. Although, the model revealed 0.01 level of significance, it failed to enhance the explanatory power of the model with (R^2 change = 0.011, $p<0.01$), where the model explained 3% of the variance. Table 4 shows that the prosocial voice was found to significantly affect patient safety culture with the following indicators; ($\beta = 0.124$, $t = 5.11$, $p<0.01$). Added to this, Self-Monitoring (SM) was revealed to significantly and positively impact Patient Safety Culture (PSC) with the following indicators; ($\beta = 0.11$, $t = 4.54$, $p<0.001$).

In the third step, the interaction terms Prosocial Voice (PV) and Self-Monitoring (SM) were tested for moderating effects. The model reported significance level of 0.01 with ($F = 28.4$, $p<0.01$). This model found to be insignificant (R^2 change = 0.01, $p< 0.01$).

The results in Table 5 present that Prosocial Voice (PV) significantly and positively impacted Patient Safety Culture (PSC) with the following indicators ($\beta = 0.66$, $t = 5.17$, $p<0.01$) and self-monitoring significantly and positively impacted patient safety culture with ($\beta = 0.54$, $t = 5.22$, $p<0.001$). The results obtained concerning the interaction terms evidence the significant moderating effect of Self-Monitoring (SM) on the relationship between prosocial voice and safety culture with the following indicators ($\beta = -0.78$, $t = -4.27$, $p<0.001$).

DISCUSSION

This study aims to examine the relationship between prosocial voice and patient safety culture and the moderating effect of self-monitoring on the association between prosocial voice and patient safety culture. First of all, this study found a positive and significant association between prosocial voice and patient safety culture. Majority of studies among the pro-social voice research conducted the quantitative measurement of the construct of pro-social voice with the help of PSVC (Van Dyne and LePine, 1998). The construct has been examined throughout various organisations but only two studies made use of healthcare workers as a sample population and of these two, only one employed registered nurses in the context of a hospital. Hence, a research gap is evident among studies assessing how registered nurses employ their pro-social voice and its relationship to the patient safety culture of the hospital. This issue needs to be addressed for the improvement of the relationship between pro-social voice and patient safety culture. Moreover, this study revealed a negative and significant moderating effect of the self-monitoring on the association between prosocial voice and patient safety

culture. Based on Hill's study, a significant relationship was revealed between the registered nurses pro-social voice and the enhancement of patient safety culture in the context of hospitals. Nevertheless, studies dedicated to self-monitoring and pro-social voice revealed contradictory results. For instance in Premeaux and Bedeian (2003)'s study, they revealed that high self-monitoring individuals are concerned with their self-image and are not as likely to speak up compared to their low self-monitoring counterparts. In their study, they showed that self-monitoring negatively moderated the relationship between the four antecedents and speaking up behavior. On the other hand, Grant and Mayer (2009) revealed no relationship between self-monitoring and pro-social voice.

CONCLUSION

This study examined the relationship between prosocial voice and patient safety culture and also it investigated the moderating effect of self-monitoring on the relationship between prosocial voice and patient safety culture in Saudi public hospitals. A sample of 127 out of 251 healthcare organizations were selected in Saudi Arabia (MOH, 2002), 73 from the Central 54 from the Western region. These are all public hospital and operate under the Ministry of Health (MOH) in the kingdom. Thirty questionnaires were distributed in each of the 127 public hospitals of Saudi Arabia in two main regions; Central and Western because of the higher populations residing in these regions. The staff workers in the nursing units were the main focus for the data collection through these questionnaires The researcher received a total of 1793 questionnaires and the response rate is calculated by dividing the number of questionnaires returned or completed with the number of participants of the survey (Zikmund *et al*., 2010). This study used multiple regression and hierarchical multiple regression analyses to examine the relationship between prosocial voice and patient safety culture and the moderating effect of self-monitoring on the prosocial voice and patient safety culture relationship. The present study found a positive and significant association between prosocial voice and patent safety culture and self-motoring was revealed to have a significant effect on the prosocial voice and patent safety culture relationship.

RECOMMENDATIONS

Like other researchers, the present research provides specific recommendations and avenues for future studies. First of all, this study calls for future researchers to re-study these variables in countries located in same region like Oman, Kuwait, Bahrain., etc. Second, this study recommends that future researchers examine other variables (e.g., structural empowerment) with patent safety culture and third, this study urges future researchers to study some mediating variables effect on the relationship between prosocial voice and patent safety culture. Finally, this study suggests future studies to use other methods in testing the relationship between dependent variables and dependent variable such as Structure Equation Modeling (SEM).

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