

The Effect of Leader's Interpersonal Communication Skills on Nurses Innovative Behaviour

Darma Tasiyah Gumbri¹, Siti Asiah Md. Shahid^{2*}, Abdul Kadir Othman³
and Shariff Harun³

¹SMK San Min, 36000 Teluk Intan, Perak, Malaysia

²Institute of Business Excellence UiTM Shah Alam and Faculty of Business Management,
Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia

³Faculty of Business and Management, Universiti Teknologi MARA, 40450 Shah Alam,
Selangor Malaysia

*Corresponding author's e-mail: sitia348@uitm.edu.my

Received: 27 January 2021

Accepted: 10 March 2021

Online first: 29 March 2021

ABSTRACT

The aim of this study is to examine the relationship between leaders' interpersonal communication skills and nurses' innovative behaviour. Moreover, innovative behaviour is essential for nurses in today's dynamic healthcare systems whereby, the interpersonal communication skill has become an increasingly important factor in enhancing innovative behaviour. This study is based on the conceptual framework of interpersonal communication skills, innovative behaviour, and perceived trustworthiness. Using stratified sampling technique, questionnaires were distributed to 246 nurses' grade U29 in three public state hospitals in the northern region of Peninsular Malaysia. Since this is a correlational study, a quantitative research method is employed to determine the existing relationship between the variables. Findings indicated that the head nurses implemented moderately all the five components of interpersonal communication skills. The existence of perceived trustworthiness was found to improve the interaction between both parties to transform nurses to generate innovation in their work. The study concluded that interpersonal communication skills are required to be implemented by leaders in enhancing nurses' innovative behaviour.



Keywords: *interpersonal communication skills, innovative behaviour, perceived trustworthiness, nurses, leadership*

INTRODUCTION

In today's healthcare organisations nurses' jobs are not specified to only cure patients but also to handle multiple rare diseases. Their new duties are beyond the expectations although they are equipped with Nursing Acts and they are following the Standard Operating Procedures (SOPs) to achieve their Key Performance Indicators (KPIs) that have been outlined by the Ministry of Health (MOH) in serving their clients and patients (MOH, 2011). The global challenges and the burden of disease continue to present new demands on the health care delivery systems (Amo, 2006a). Nurses must also have advanced knowledge in medical instruments and technology in order to form a significant drive to change in clinical practice that demands new skills and techniques as well as new ways of working (Huber, 2014). Besides, nurses are the 'ambassadors' that reflect the public healthcare organisational image as they are always dealing with patients on a daily basis and thus, leaders have to treat them well.

The government has also invested in a lot of efforts and costs including allowances and intensive training, to improve and upgrade the nurses' quality of work, however the leaders' disability when approaching and communicating with their subordinates will affect the subordinates' quality of work and poor services to patients. In addition, subordinates will behave accordingly when they are perceived as trustworthy by their leaders. Besides that, nurses need to consider cost-effectiveness as a significant driver for innovation when responding to varying patients' expectations and values (Xerri & Stuard, 2017). Nurses also spend a lot of time in meeting and communicating with patients (Baumann, 2011; Tung, Akkadechanunt & Chontawan, 2014). Almost all of their working time and activities involved dealing with their leaders, collaborating with doctors, team members, patients, clients as well as carrying out procedures related to the health care delivery systems (MOH, 2014;2017). They are the front-liners of the organisation and the mirror of the government sector's image because they always deal with clients every day (Aiken, 2010; MOH, 2010;2018).

The innovations in nursing profession can solve some of the rising issues related to the healthcare delivery system (Yuan & Woodman, 2010). The essence of creating innovative behaviour is the capability of nurses to operate the innovation technology systems and creating a repository of best practices in nursing informatics (Effken, Weaver, Cochran, Androwich & O'Brain, 2016). Since innovative behaviour is complex, when employees respond to innovation, a correlation exists between innovation and sustainable development (Janssen, 2005).

Background

Past evidence has shown that leaders' position is the power source to influence the follower's work behaviour (Khalili, Muenjohn & McMurray, 2015). By using their power, leaders can exert participatory leadership to influence subordinates to behave innovatively (Khalili *et al.*, 2015) and to seek collaboration with subordinates through dialogue and subordinates' engagement (Howaldt, Oeij, Dhondt & Fruytier, 2016). With that emphasis, the head of nurse should act as an educator to manage the learning environment rather than being the main conduit of information to subordinates (Knol & Van Linge, 2009). Through the greater demands of accountability in the nursing profession, leaders need to demonstrate good examples and delegate effectively to gain subordinates' trust and achieve the organisational goals (Tung, Akkadechanunt & Chontawan, 2014).

Nevertheless, this statement has not yet to be justified when it comes to nurses working in public hospitals in the northern region of Peninsular Malaysia. Due to the regulations and Nursing Acts that have already existed, the barrier that could reduce the spirit and self-esteem of nurses were not frequently discussed (Darma Tasyah, Siti Asiah & Abd Kadir, 2016; MOH, 2010;2017). Only few studies have been conducted on innovative behaviour in nursing studies. Additionally, the factors that are associated with nurses' innovative behaviour have not been investigated in depth.

The sources from the Human Resource Management (HRM) reported that about 70% of nurses spent time performing functions that did not call upon their professional training, while care activities requiring their skills and expertise were often left undone (MOH, 2017). Consistently, nurses are required to complete the tasks assigned as their KPI benchmarks and should

be achieved excellently. Thus, the only form of communication that leaders have with nurses is only in the form of order and instruction (Darma Tasiyah *et al.*, 2016; MOH, 2010;2017). This paper seeks to examine the factor that could influence the nurses to behave innovatively in their daily work.

A model of innovative behaviour was adapted from Janssen (2000) and interpersonal communication skills was adapted from Jablin and Krone (1994) whereas, perceived trustworthiness utilise Mayer, Davis and Schoorman's (1995) model of organisational trust.

Innovative Behaviour

Based on past literature, innovation can be defined as the industrial power in creating a change and it can be interpreted as any potential factor in creating new resources, processes, or values in the organisation (Janssen, 2000; Thomas, Seifert & Joyner, 2016). Janssen (2000) identified three theoretical approaches to innovation behaviour. It consists of idea generation, idea promotion, and idea realisation which refers to championing and application of efforts, building up the coalition and finding support for the novel ideas and, introducing concrete change through realising the new ideas that are oriented to transforming work environment (Janssen, 2000). These are new and useful ideas, processes, products or procedures that require organisational and management support. Often, it is seen as a task that is not required for nurses to meet under their required performance indicators (Janssen, 2000; 2005).

Specifically, leaders' support includes emotional support, instrumental support for technology advancement or task and social support (Amabile, Conti, Coon, Lazenby & Herron, 1996). With these recognitions, subordinates will then initiate more innovations and be more productive in their work (Khodakarami & Zakaria, 2015; Yan, Yang & Zhang, 2016).

Interpersonal Communication Skills

The interpersonal communication skills in this study are defined as the skills possessed by head nurses that could influence subordinates to act innovatively through face-to-face interaction. It can be utilised through nonverbal and oral communication channels (Jablin and Krone, 1994). The

five dimensions used include awareness of self and self-disclosure, self-expression and clarity, awareness of others, acceptance of feedback and evaluation and, coping with feelings and differences of leaders.

The first thing that leaders need to emphasise is in improving and enhancing their two-way communication practices successfully in order to create the nurses' innovation mood and adapt to the nurses' work environment (Darma Tasiyah *et al.*, 2016). Only with effective communication, that the working style of subordinates can be altered to create the spirit of innovative ideas (Jablin & Krone, 1994, Thomas *et al.*, 2016).

Perceived Trustworthiness

In this study, nurses' perceived trustworthiness is referred to as the subordinates' (nurses) perception of their leaders (head nurses) based on three conditions that lead to trust which are ability, benevolence, and integrity as defined by Mayer *et al.* (1995).

Once subordinates feel that their leaders really listen to them, their trust and performance will increase (Tung *et al.*, 2014). The undeniable fact is that every rule and act must be communicated and disseminated to subordinates in order to get their participation (Broca & Ferreira, 2016).

LITERATURE REVIEW

The review of previous studies shows lack of communication practices among leaders to influence subordinate's innovative behaviour in health care organisations. However, Scott and Bruce (1994) found a correlation between innovative behaviour and leadership roles. Janssen (2005) stated that subordinates' innovative behaviour is essential in creating organisational effectiveness especially in terms of serving high-quality work, and good hospitality (Lachman, Glasgow, & Donnelly, 2009).

Innovation by nurses within health care is important in addressing the problems present within the current system with various unexpected diseases (Amo, 2006a; Tung *et al.*, 2014). The good implementation of interpersonal communication skills shown by leaders, the intentional

behaviour to produce or apply new ideas of procedures, products, service or practices in health care could be realised successfully without prejudice. Baumann (2011) stated that nurses are the key component of the health care system who can stimulate positive aura while giving their commitment to the working environment. This provide innovative solutions to improve quality and safety of patients.

A survey conducted by Kessel, Weber, and Kratzer (2012) on 160 healthcare professionals working in Germany's healthcare organisations indicates that by giving encouragement to nurses their innovative work behaviour increases particularly to implementing new solutions for patients because at that stage, coordination and mutual adjustment with other healthcare professionals are needed. The existence of guidelines for operational processes contributes to the innovative work behaviour by integrating the stages of knowledge acquisition, idea generation, and solution implementation. They found evidence that physicians are more active in acquiring knowledge, whereas nurses show more initiative in generating new ideas. Innovative behaviour not only consist of the initiation and realisation of novel approaches but also of the accumulation of knowledge taking as a basis for the aforementioned activities (Kessel *et al.*, 2012).

Tung *et al.* (2014) conducted a study on 384 nurses in tertiary at General Hospital in the central region of the Socialist Republic of Vietnam. Their results showed that there was a significant relationship between proactive and innovative behaviour and a significant relationship between creative efficacy and innovative behaviour. The overall score of innovative behaviour among nurses was 21.20 with SD = 3.19 indicating a low level of innovative behaviour among nurses. The nurses argued that the lack of interaction between leaders and nurses caused them to have less opportunity to show their ideas. Nurses argued that their leader entrust them to carry out only routine or direct care to patients. They were not asked to give ideas or not given the opportunity to handle problems (Tung *et al.*, 2014).

A pilot study was conducted to 35 nurses in public district hospitals in the northern region of Peninsular Malaysia. The results revealed that 77.1% of nurses with more than five years of working experience with their immediate leaders have admitted that they experienced least support to be more committed in their job. Results also indicate that leaders' interpersonal

communication skill was associated with perceived trustworthiness that stimulates nurses' innovative behaviour with r values in the range of .333 to .464, denoting good convergent validity.

As highlighted by Jablin and Krone (1994), building trust is considered a pivotal activity in managerial and must be led by good interpersonal communication practices. In return, nurses will be satisfied with the leaders and be motivated to cooperate very well, thereby having an effect in their behaviour to behave innovatively. Thus, the pilot study supports the importance of individual and organisational characteristics of which, communication skills is fundamental as it plays an important role that unites all the activities that exist in the whole department (Darma Tasiyah *et al.*, 2016).

Consistently, the ability of a leader to be more concerned with the subordinates' problems by providing advice and counselling, by showing the importance of communication in reducing the employees' burden, problem and provide a space for employees to express their opinion and ideas relating to their work and commitment (Mohamad Said & Zul Hamri, 2012). Additionally, Siti Asiah (2011) and Xerri and Stuard (2017) have proved in their study that communication from the leaders play an important role in stating clearer visions and missions of the organisation. The skills possessed by leaders in demonstrating leadership and good communication tend to foster positive behaviours in others (Xerri & Stuard, 2017).

Jablin and Krone (1994) identified that one of the communications in leadership that potentially affects the nurse's behaviour to be energetic and innovative in their work is the interpersonal communication skills. The lack of interpersonal communication skills by the leaders have caused the subordinates to deal with conflict within the workplace. Compared to general communication, interpersonal communication is critical in building good relationship between two parties (Jablin & Krone, 1994; Scott & Bruce, 1994). Leaders can make improvements in building good relationships and gaining trust from subordinates by providing constructive feedback to their subordinates (Mayer *et al.*, 1995).

METHODOLOGY

This study is a correlational study since it is intended to examine the extent of the relationship between the two constructs: interpersonal communication skills and innovative behaviour. Data were collected through the distribution of questionnaire through stratified sampling technique. The focus of the study was nurses' grade U29 from public hospitals located in northern region of Peninsular Malaysia.

The survey questionnaires were equally distributed to 246 respondents. The head nurses (matron) as the unit of observation were monitored or evaluated by her/his subordinates. Respondents were asked to rate their head nurses in terms of the five components of interpersonal communication skills.

The research instruments were adopted from various sources based on the suitability. The 40 items of interpersonal communication skills measure were adopted from Jablin and Krone (1994). Interpersonal Communication Inventory scale (ICI), consists of 40 items measuring the five components of interpersonal communication skills. Innovative behaviour measure was adopted from Janssen (2000) Model of Innovative Work Behaviour Scale (IWBS), consists of 12 items, measuring the three components of innovative behaviour. Meanwhile, the moderating variable was adopted from Mayer *et al.* (1995) model of organisation trust, consists of 17 items from the three components of perceived trustworthiness.

A pre-test with several steps of amendment was made and a pilot test was also conducted before the actual study was carried out. A multiple regression analysis, univariate and multivariate techniques and, Cronbach's alpha were applied to ensure that the items adapted are stable and consistent across time. The factor analysis and principal component factor analysis with varimax rotation were used to identify a set of underlying dimensions of the construct.

FINDINGS

Based on the findings, the extreme values from the data analyses was less than 5%. A total of 246 questionnaires were distributed and the same number were returned. The demographic data from the public hospitals showed that all of the respondents were female nurses with grade U29 having been in service for more than two years. The results indicated that no male nurses with working experience of more than two years participated in this study.

Reliability Test

Based on the factor analysis, 17 items of interpersonal communication skills had a high factor loading and these variables were considered as having a strong association with a factor. The analysis produced five distinctive factors explaining a total variance of 87.96%. The Cronbach's alpha recorded a higher value of .915. This indicated that the data analysis had internal consistency and thus, acceptable to be used to produce a reliable scale.

The coefficient values of three variables exceeded .60. All scales reported high coefficient values, with alpha value for interpersonal communication skills ranging from .775 to .967. The dimension of coping with feelings and differences scored a very high inter-item correlation ($\alpha = .967$) whereas, awareness of self and self-disclosure scored lower inter-item correlation ($\alpha = .775$). Hence, all of the 40-item scales scored high internal consistency and were reliable for measuring leaders' interpersonal communication skills. The Cronbach's alpha for innovative behaviour ranged from .818 to .904 with idea realisation recorded higher inter-item correlation ($\alpha = .904$), followed by idea promotion and idea generation were recorded as having $\alpha = .898$ and $\alpha = .818$, respectively. The Cronbach's alpha for perceived trustworthiness ranged from .880 to .987 with integrity recording very high inter-item correlation ($\alpha = .987$). All of the variables scales had high internal consistency. Thus, the overall items from the three variables were accepted as reliable. This is somewhat consistent with the result of the pilot study, which obtained alpha values ranging from .720 to .996 (Darma Tasiyah *et al.*, 2016).

Table 1: Summary of the Scale Reliability (n = 69)

Components	Items	Cronbach Alpha
Overall Interpersonal Communication Skills	40	.911*
Awareness of self and self-disclosure	8	.775
Self-expression and clarity	6	.946
Awareness of others	10	.907
Acceptance of feedback and evaluation	5	.958
Coping with feelings and differences	11	.967
Overall Innovative behaviour	12	.873*
Idea generation	4	.818
Idea promotion	4	.898
Idea realisation	4	.904
Overall Perceived Trustworthiness	17	.931*
Ability	6	.927
Benevolence	5	.880
Integrity	6	.987

Mean and Standard Deviations

As shown in Table 2, the mean scores and standard deviations of the level of implementation of the five components of interpersonal communication skills by head nurses ranged from 3.00 to 3.67. The highest mean value was for coping with feelings and differences variable (M = 3.67, SD = .91) and the lowest mean value was for awareness of others (M = 3.00, SD = .60). This is quite consistent with the result of the pilot study which obtained alpha values ranging from .720 to .996 (Darma Tasiyah *et al.*, 2016). The result also shows that integrity scored the highest mean score (M = 3.63, SD = .92). Additionally, innovative behaviour variables, the idea realisation scored the highest mean values (M = 3.72, SD = .73). Similarly, Darma Tasiyah *et al.* (2016) concluded that leaders implementing moderately the interpersonal communication skills on workers could stimulates and inspires subordinates to achieve beyond expectation to create innovative work behaviour.

Table 2: Level of Agreement (Means and Standard Deviations)

Variables	Mean	Standard Deviation
Interpersonal Communication Skills Variables		
Awareness of self and self-disclosure (ASSD)	3.43	.66
Self-expression and clarity (SEAC)	3.60	.93
Awareness of others (AOFOT)	3.00	.60
Acceptance of feedback and evaluation (AOF AE)	3.65	.90
Coping with feelings and differences (CWFAD)	3.67	.91
Moderating Variables		
Ability	3.61	.98
Benevolence	3.58	1.02
Integrity	3.63	.92
Dependent Variables		
Idea generation	3.67	.81
Idea promotion	3.32	.91
Idea realisation	3.72	.73

The results presented in Table 3 suggest that the correlation between the five components of interpersonal communication skills and innovative behaviour were significant ($p < .01$). Innovative behaviour was significant, positive and moderate to substantially correlated with idea promotion ($r = .214, p < .01$) and idea realisation ($r = .227, p < .01$). However, the correlation between interpersonal communication skills and idea generation is found to be less in common with the other predictors ($r = .103, p < .01$), which had a relatively low average correlation. These coefficients imply that, to a moderate extent, an improvement in each of the five components of interpersonal communication skills will definitely improve the interpersonal communication skills of nurses in public hospital in northern region of Peninsular Malaysia.

Overall, all correlations specified in this study reached a significance value at $p < .01$, two-tailed. Therefore, this generally suggests that all of the predictors of independent variables, dependent variables, and moderating variable are significantly correlated with each other indicating significant

and positive correlation. All of the variables were analysed for subsequent analyses in order to see the interaction effects between the independent and moderating variables and their influence on the dependent variables.

Table 3: Correlation Analysis between the Five Components of Interpersonal Communication Skills and Innovative Behaviour

Components of Interpersonal Communication Skills	Pearson Correlation Coefficient (<i>r</i>)
Idea generation	.103**
Idea promotion	.214**
Idea realisation	.227**

** Significant at the .01; * Significant at the .05.

The Influence of Interpersonal Communication Skills on Innovative Behaviour

Table 4 summarises the results of multiple regression analyses between interpersonal communication skills and employees’ innovative behaviour. The three regression models (idea generation, idea promotion and idea realisation) show significance F change (F (5, 239) = 33.434, *p*= .000; F (5, 239) = 55.316, *p*= .000; F (5, 239) =60.726, *p*= .000, respectively), indicating that the inclusion of independent variables generates a significant model.

From the analysis, the findings also revealed the awareness of self and self-disclosure significantly influenced nurses’ idea generation – obtaining the necessary skills to progress through the organisation ($\beta = .194, p < .01$). The results also indicate that the main predictor of idea promotion is acceptance of feedback and evaluation ($\beta=.502; p < .01$). Meanwhile, acceptance of feedback and evaluation has become the main predictor and has a strong relationship with idea realisation ($\beta=1.113; p < .01$). From the output, R² change of .366, .423 and .484 indicated that the inclusion of independent variables in the respective models explained the additional variance of 36.6%, 42.3% and 48.4% for employees’ intention of idea generation, idea promotion and idea realisation, respectively.

It is found that the acceptance of feedback and evaluation skill has become the main predictor and has the strongest relationship to all of the three dimensions of innovative behaviour. Meanwhile, awareness of

self and self-disclosure was the least factor that could influence nurses in promoting and realising their idea to be innovative. Therefore, it can be predicted that the good output from subordinates was impacted by the leaders' good implementation of interpersonal communication skills when interacting with staff.

Table 4: Summary of the Influence of the Interpersonal Communication Skills Dimensions on the Innovative Behaviour Components

	Idea Generation		Idea Promotion		IdeaRealisation	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Dummy 1	-.225**	-.007	-.368**	-.133*	-.270**	-.038
Dummy 2	.016	-.002	-.018	-.039	-.036	-.036
Dummy 3	.179*	.052	.174*	.125*	.158*	.019
Independent variables						
Awareness of self and self-disclosure		.194**		.026		-.014
Self-expression and clarity		.112		.272*		-.056
Awareness of others		.164**		.182**		-.094
Acceptance of feedback and evaluation		.665**		.502**		1.113**
Coping with feelings and differences		-.202		-.088		-.354*
R	.342	.695	.464	.799	.374	.790
R ²	.117	.483	.216	.639	.140	.624
Adjusted R ²	.106	.465	.206	.627	.129	.611
R ² change	.117	.366	.216	.423	.140	.484
F change	10.623	33.434	22.080	55.316	13.032	60.726
Significant F Change	.000	.000	.000	.000	.000	.000
Durbin Watson		1.593		2.005		2.076

** Significant at the .01; * Significant at the .05.

The series of hierarchical regression analyses were performed to analyse the moderating effects of perceived trustworthiness variable before one is allowed to test for the significance of a regression weight for an interaction term. Perceived trustworthiness is hypothesised to affect the relationship between interpersonal communication skills and innovative behaviour (idea generation, idea promotion and idea realisation). Therefore, another statistical test was conducted to examine the effect of the moderating variables by employing a series of four step hierarchical regression analyses.

The multiple hierarchical regression analyses describing the

moderation effects of ability on the relationships between interpersonal communication skills and idea generation were performed. Based on the result, self-expression and clarity is significant and has inverse relationship with idea generation ($\beta = -1.798, p < .05$). The R^2 change of .030 indicates the inclusion of independent variables in the respective models explained additional variance of 3.0%. Results also indicated the ability of the leaders is high and the level of idea generation of nurses is also high. It also showed that the ability is a full moderator to idea generation ($F(14,230) = 2.876, p = .015$) and significantly influenced nurses' idea generation ($\beta = -1.7984, p < .05$). It is probably the clarity of the head nurses while building a communicative interaction with subordinates that determine their clear thoughts. It is also most probably due to the nurses' perception that both of these interpersonal communication skills dimensions and idea generation do not thoroughly affect the nurses' intention to generate ideas in the work place as long as they trust their leaders (Darma Tasiyah *et.al*, 2016).

It is found that there is a significant relationship between interpersonal communication skills and idea promotion when moderated by ability but insignificantly moderates the relationship between interpersonal communication skills and idea realisation as the significant value is more than .01 and .05. The result found that ability as a partial moderator in the relationship between awareness of others and idea promotion ($\beta = -.886, p > .01$), between acceptance of feedback and evaluation and, idea promotion ($\beta = 2.298, p < .05$) and between coping with feelings and differences and, idea promotion ($\beta = 2.204, p < .05$). The results also explained that the main predictor of idea promotion is acceptance of feedback and evaluation ($\beta = 2.298, p < .05$). This indicate that the ability of leaders to accept the criticism and admission of error, receptive, appreciative, accepting of feedback and listens to subordinates before reacting can lead in influencing the idea promotion through developing work processes and persuading others to adopt the novel ideas and to build up coalitions around them (Mayer *et al.*, 1995).

The results also indicate that benevolence partially moderated the relationship between each components of interpersonal communication skills and idea promotion except for the relationship between coping with feelings and differences and idea promotion. Benevolence is high, positive, and significantly moderates the relationship between both variables ($\beta = 1.459, p < .05$). The F value also indicates that benevolence is a significant

moderator of the relationship between interpersonal communication skills and idea promotion ($F(14,230) = 2.797, p = .018$) indicating that the inclusion of independent variables improved the models significantly.

It is found that benevolence act as a full moderator on the relationship between interpersonal communication skills and idea realisation ($\beta = -.760, p < .05$). Benevolence is positive and significantly moderates the relationship between awareness of others and idea realisation ($\beta = .527, p < .05$). The R^2 of .026 indicates the inclusion of interpersonal communication skills' variables in the respective models explained additional variance of 2.6% of idea realisation when moderated by benevolence. However, idea generation is not influenced by the five components of interpersonal communication skills. It may be due to the reasons that other leadership soft skills or communication skills may affect the innovative behaviour of idea generation of nurses in this study.

In terms of the relationship between interpersonal communication skills and idea promotion, the result shows that only integrity was established to significantly moderate the relationships between self-expression and clarity and idea promotion ($\beta = -2.114, p < .05$), between awareness of others and idea promotion ($\beta = -.681, p < .05$), between acceptance of feedback and evaluation and idea promotion ($\beta = -3.213, p < .05$) and between coping with feelings and differences and idea promotion ($\beta = 4.160, p < .01$). The insignificant relationship between interpersonal communication skills and other innovative behaviour dimensions may be influenced by other factors that associated with moderating variables.

Nevertheless, it is predicted that the poor moderating effect of one of the perceived trustworthiness components by no means has no effect in enhancing the nurses' innovative behaviour since there could be other factors associated with perceived trustworthiness variables can influence the relationship between both independent and dependent variables but cannot explain in this study due to the limitation occurred.

In relation to the moderating effect of ability, the output showed that only self-expression and clarity is not the salient predictor to idea generation. Meanwhile, awareness of self and self-disclosure and, self-expression and clarity are the salient predictors to the idea promotion while the five dimensions of interpersonal communication skills are the salient predictors to idea realisation. The moderating effect of benevolence result

reveals all of five dimensions of interpersonal communication skills are the salient predictors to idea generation. However, the coping with feeling and differences and awareness of others are not the salient predictors to idea promotion and idea realisation, respectively.

The result of the moderating effect of integrity has turned the five interpersonal communication skills dimensions to be the salient predictors to idea generation. On the other hand, awareness of self and self-disclosure is the only salient predictor to idea promotion. Meanwhile, three of the interpersonal communication skills dimensions; awareness of self and self-disclosure, self-expression and clarity and awareness of others are the salient predictors to idea realisation. Overall, the moderators posited are qualified; however, based on the certain limitation of the study, the findings failed to produce significant results.

CONCLUSION

The findings of this study have proven the significant relationship between interpersonal communication skills and innovative behaviour through the engagement of certain components from both variables. However, the key issue focused in this study then is how well the head nurses in public state hospitals in the northern region of Peninsular Malaysia in putting into practice their interpersonal communication skills to influence their subordinates' intentional behaviour to innovate in their daily work activities. In fact, some of the interpersonal communication skills dimensions showed a strong and significant relationship with innovative behaviour dimensions such as coping with feelings and differences, and integrity. The presence of perceived trustworthiness as a moderating variable is predicted to stimulate the nurses' intentional behaviour to be innovative when they perceive that their leaders have to practise good communication skills to enhance their behavioural of innovation (Knol & Van Linge, 2009). Trust is the basic component of the effectiveness of the social process and it can also be an effective predictor of subordinates' positive attitude and behaviour. Failure to understand and confide with subordinates' reaction would create a negative perception among them that would hinder their intentional behaviour to be creative and innovative (Abdul Kadir, 2011; Jablin & Krone, 1994).

In conclusion, to foster innovative behaviour within organisations, and creating a positive aura in the workplace, head nurses who implement active interpersonal communication skills need to form relationships and alliances based on mutual trust with nurses. Both parties need to cooperate, and the head nurses need to increase the level of implementing interpersonal communication skills to enhance the innovative behaviour of nurses. Only then, innovative behaviour can be stimulated among them. Accordingly, having staff who are creative and innovative can assist the Ministry of Health in mitigating the cost of healthcare and ensuring the quality of healthcare can be delivered through the appropriate healthcare delivery system. It is hoped that this study has provided a foundation and paved the way for future studies that focus on the topics discussed in this study.

REFERENCES

- Abdul Kadir, Othman (2011). Emotional intelligence and employees' innovator role: The moderating effect of service type. *Asian Social Science*, 7(10), 151-160. DOI:10.5539/ass.v7n10p151
- Aiken, L.H., Sloane, D.M., Cimiotti, J.P., Clarke, S.P., Flynn, L., Seago, J.A., Spetz, J. & Smith, H. (2010). Implications of the California nurse staffing mandate for other states. *Health Services Research*, 45(4),904-921. DOI:10.1111/j.1475-6773.2010.01114.x
- Amabile, T.M., Conti, R., Coon, H., Lazenby, J. & Herron, M. (1996). Assessing the work environment for creativity. *Journal Academy of Management*, 39(5), 1154-1184. DOI:10.5465/256995
- Amo, B.W. (2006a). Employee innovation innovative behaviour in health care: The influence from management and colleagues. *International Council of Nurses*, 5(3), 231-237. DOI:10.1111/j.1466-7657.2006.00455.x
- Baumann, P.K. (2011). The relationship between individual and organisational characteristics and nurses innovative behaviour. Unpublished PhD dissertation, Indiana University, United States. Retrieved from <https://scholarworks.iupui.edu/bitstream/handle/1805/2603/Baumann%20Final%20Defended%20Dissertation%20for%20Binding.pdf?sequence=1>

Broca, P.V. & Ferreira, M.D.A. (2016). Action plan for the communication process in nursing team. *Acta Scientiarum, Health Sciences*, 38(1), 23-31. DOI:10.4025/actascihealthsci.v38i1.29758

Darma Tasiyah, Gumbri, Siti Asiah, Md. Shahid and Abd Kadir, Othman (2016). The influence of leaders' interpersonal communication skills on employees' innovative behavior: A pilot study. *Business and Management Research Journal*, 6(12), 118- 123.

Effken, J., Weaver, C., Cochran, K., Androwich, I. & O'Brain, A. (2016). Toward a central repository for sharing nursing informatics' best practices. *Computers, Informatics, Nursing*, 34(6), 245-246. DOI:10.1097/cin.0000000000000258

Howaldt, J., Oeij, P.R.A., Dhondt, S. & Fruytier, B. (2016). Workplace innovation and social innovation: An introduction. *World Review of Entrepreneurship, Management and Sustainable Development*, 12(1), 1-12. DOI: 10.1504/wremsd.2016.073433

Huber, D. (2014). *Leadership and Nursing Care Management*. 5th ed. United State: Elsevier

Jablin, F. M. & Krone, K. J. (1994). Task/work relationship: A life-span perspective. In M. L. Knapp, G. R. Miller (Eds.). *Handbook of Interpersonal Communication*. 2nd. Edition. Beverly Hills, CA: Sage Publication, 621-675.

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, 73(3), 287-302. DOI: 10.1348/096317900167038

Janssen, O. (2005). The joint impact of perceived influence and supervisor supportiveness on employee innovative behaviour. *Journal of Occupational and Organisational Psychology*, 78(4), 573-579. DOI: 10.1348/096317905x25823

Kessel, M., Weber, H. H. & Kratzer, J. (2012). Innovative work behaviour in healthcare: The benefit of operational guidelines in the treatment

of rare diseases. *Health Policy*, 105(2-3),146-153. DOI: 10.1016/j.healthpol.2012.02.010

Khalili, A., Muenjohn, N. & McMurray, A. (2015). Leadership behaviour, creativity and innovative behaviour: Instrument development inquiry. Paper presented at proceedings of the International Conference on Business and Information, Hawaii, United States.

Khodakarami, P. & Zakaria, Z. (2015). The relationship between innovative behaviour and sustainable development. *European Journal of Business and Management*, 7(23), 160-169. DOI:10.1.1.735.4644&rep=rep1&type

Knol, J. & Van Linge, R. (2009). Innovative behaviour: The effect of structural and psychological empowerment on nurses. *Journal of Advanced Nursing*, 65(2), 359-370. DOI: 10.1111/j.1365-2648.2008.04876.x

Lachman, V. D., Glasgow, M. E. & Donnelly, G. F. (2009). Teaching Innovation. *Nursing Administration Quarterly*, 33(3), 205-211.

Mayer, R. C., Davis, J. H. & Schoorman, F.D. (1995). An integrative model of organisational trust. *Academy of Management Review*, 20, 709-734. DOI: 10.2307/258792

Ministry of Health Malaysia (2010). Country Health Plan. 10th Malaysia Plan. Retrieved from <http://www/moh.gov.my>.

Ministry of Health Malaysia (2011). 1Care for 1Malaysia. Strategic Plan 2011-2015. Retrieved from <http://www.moh.gov.my>

Ministry of Health Malaysia (2014). Annual Report 2014. Retrieved from: www.moh.gov.my.

Ministry of Health Malaysia (2017). Annual Report 2017. Retrieved from <http://www/moh.gov.my>.

Ministry of Health Malaysia (2018). Annual Quarterly Report 2018. Retrieved from <http://www/moh.gov.my>

Mohamad Said Awang & Zulhamri Abdullah (2012). Relationships among leader's discretion, communication exchange and organisational commitment. *Malaysian Journal of Communication*, 28(1), 121-136.

Scott, S.G. & Bruce, R.A. (1994). Determinants of innovative behaviour: A path model of individual innovation in the workplace. *Journal Academy of Management*, 38,1442-1465.

Siti Asiah, Md.Shahid (2011). A study on perceived leadership soft skills, trustworthiness and structural empowerment of deans in three Malaysian public universities. Unpublished Phd dissertation. Universiti Sains Malaysia, Penang, Malaysia.

Thomas, T.W., Seifert, P.C. & Joyner, J.C. (2016). Registered nurses leading innovative changes. *Online Journal of Issues in Nursing*, 21(3), 3. DOI:10.3912/OJIN.Vol21No03Man03

Tung, L.V., Akkadechanunt, T. & Chontawan, R. (2014). Factors related to innovation behaviour among nurses in tertiary general hospitals, the central region, the Socialist Republic of Vietnam. *Nursing Journal*,41(2), 117-132.

Xerri, M. J. & Reid Stuard, R.M. (2018). Human resource and innovative behaviour: Improving nursing performance. *International Journal of Innovation Management*, 22(2). DOI:10.1142/s1363919618500196

Yan, X., Yang, T. & Zhang, B. (2016) The impact of superior support on the behaviours of technology innovators in biological agricultural industry. *Journal of Human Resource and Sustainability Studies*, 4, 80-84. DOI:10.4236/jhrss.2016.42009

Yuan, F. & Woodman, R.W. (2010). Innovative behaviour in the workplace: The role of performance and image outcome expectations. *Academy of Management Journal*, 53(2), 323-342. DOI: 10.1108/dlo.2010.08124fad.010