NURSE LEADERSHIP STYLE AND QUALITY OF CARE IN CLINICAL SETTING: A SYSTEMATIC REVIEW

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ABSTRACT

Keywords:
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Nowadays there are mounting concerns about leadership style because of its critical role in job satisfaction and the quality of care of patients. To explore different of leadership style to improve quality of care in healthcare setting upon empirical literature published in the last ten years. Literature review. A comprehensive electronic database search was conducted in PubMed Web of Science, CINAHL, Embase to retrieve relevant articles published in English from January 2011 until January 2021. Key terms and phrases associated with leadership style, quality of care and nurses. The abstracts or full texts of research papers were reviewed prior to their inclusion in the review. A total of 18 papers were included in this review. There are thirteen articles using transformation leadership style, and the other are transactional leadership style and autocratic leadership style, passive avoidant and resonant leadership style. The impact of leadership style to improve quality of care in decreasing cost, increasing patient satisfaction, and patient safety has been identified in a number of research studies. Leadership style is closely related to quality of care, extra effort, effectiveness, job satisfaction, organizational commitment, staff intention to stay, inspirational motivation, general health well being, sex, age, educational background and nurses' assigned unit. Various mediating or moderating pathways have been identified with leadership style and quality of care such as work environment, structural empowerment, organizational commitment and job satisfaction. It is vital to choose effective leadership style because this has the potential both to improve quality of care and ensure an adequate nursing workforce. The indirect relationships and predictors of leadership style and quality of care contribute to a more comprehensive understanding of the complex phenomenon of leadership style which in turn may aid the development of effective strategies to address the nursing shortage and increase the quality of patient care.

BACKGROUND

The World Health Organization's designation of 2020 as the Year of the Nurse and Midwife creates an exciting, timely opportunity to see nurses as patient-centered leaders, change makers and problem solvers, who serve as engines of innovation in transforming healthcare. Leadership style of nurses will be positively or negatively impact outcomes for health care facility, providers and patients (Cummings, 2008). Transformational leadership style and transactional leadership style or mix of them are mostly used in nursing field. Transformational leaders generally have the capacity to influence trust, respect and communicate loyalty to employees by shared vision, resulting in increased productivity, build up employee morale, and job satisfaction (Burns, 1978; Frandsen B, 2014). In transactional leadership, the leader acts as a change manager, providing exchanges with employees that accelerate improved production.

Studies about leadership style have shown association with nurses' job satisfaction, job retention, hospital costs, quality of care, and patient safety (Byrne and Martin, 2014; Lin et al, 2015; Boamah et

al, 2018; Asif et al, 2019). Zaghini et al (2019) also found that when nurses were satisfied with leadership, they felt less wore out and stressed in relational connections, they connected less in misbehaviour, and, thus, patients were increasingly satisfied with the quality of the care given by the nurses. Contrary study came from Iran (Bahadori et al., 2016) which reported that there was no relationship between leadership style and patient satisfaction.

Quality of care as defined by WHO (2016) as the extent to which health care services provided to individuals and patient populations improve desired health outcomes. To accomplish this, health care should be safe, effective, timely, efficient, equitable and individuals-centred. Quality of care as one outcome of nurse services in health care setting is also indicator of performance of nurses and their team. A nurse leader in that team have a big role to ensure they provide excellent quality of care for patients. A leader needs to choose leadership style that is appropriate to the resources in the ward or departement he/she lead. The organizational commitment of nurses results in lower attrition rates and improves patients satisfaction (Marshall et al., 2001). The organizational commitment of nurses are influenced by attitude and leadership style of the immediate supervisor.

Abisilim et al (2019) found that leadership style have significant relationship with age, marital status, academic qualification, employment status and year of service. Regarding of academic qualification, In Indonesia, based on data from Ministry of health, until December 2019 there were 376,136 nurses in Indonesia and majority their education background is 3rd Diploma (study nursing for 3 years in college). From many research in Indonesia, mentioned that leadership style they used were democratic leadership or authority leadership or mix leadership and a few is transformational leadership (Rahardjo, 2019; Roostyowati, 2017, Suratno, 2018).

Study from New Zealand (Parr et al., 2020) found a new outcome related to leadership style. On their study, resonant leadership have significantly and positively reduced falls rate. Besides this study, the reason for the systematic review is to update the previous systematic review (Sfantou et al., 2017), which used articles from 2004 to 2015.

METHODS

The literature relating to leadership style and quality of care in nursing area was identified through electronic databases. The electronic databases searched were: PubMed (2011-2021), Web of Science (2011-2021), CINAHL (2011-2021), Embase (2011-2021). The search terms (title, abstract, key words) used were: "nurse", "nursing", "nurses", nursing staff, AND "leadership style", "nurse leadership style", "leadership qualities", "leadership behaviours", AND "quality of care", "quality improvement", "patient care", "patient safety", "patient outcomes", "health outcomes", "quality of service", "error", "safety".

Inclusion criteria were: nurses working in hospitals or healthcare setting, published in English, address on one of leadership style, publish between 2011 to 2021. Exclusion criteria were: population is student nurses, nurse assistants and other health provider. We limited the work setting with inpatient ward because nurses working in these areas are frequently given with complex nursing decisions, long hours, shift work and rapid patient turnover (Hayes et al., 2010).

After found article based on keywords, all articles were exported to Endnote X9 and the duplicates were removed. This step identified a total of 3301 published research papers from all the databases searched. The next step was screened for eligibility and relevance based on titles and abstracts. If title or abstract did not gave adequate information or if a final decision could not be made, we evaluated the full article. After screening process, papers that did not meet the inclusion criteria were removed. Disagreements happening in KMC selection procedure were resolved by discussion in order to reach a consensus. Finally, only 19 paper that included in this review (Figure 1). Testing quality of articles used appraisal from The Joanna Briggs Institute (JBI) for cross sectional study, cohor study (longitudinal) and qualitative study.

RESULT

The Type of Leadership Style Among Nurse

From eighteen articles which reviewed, nurse leaders use directive (autocratic) leadership style, supportive (transformational) leadership style, participative (democratic) leadership style, achievement-oriented (transactional) leadership style, resonant leadership style, ethical leadership style, laissez-faire leadership style and passive avoidan leadership. Thirteen articles mention about transformational leadership style in their article. Alloubani et al (2018) found that the private hospitals prefer use the transformational leadership while the public hospital prefer transactional leadership.

Influencing Factors of Leadership Style
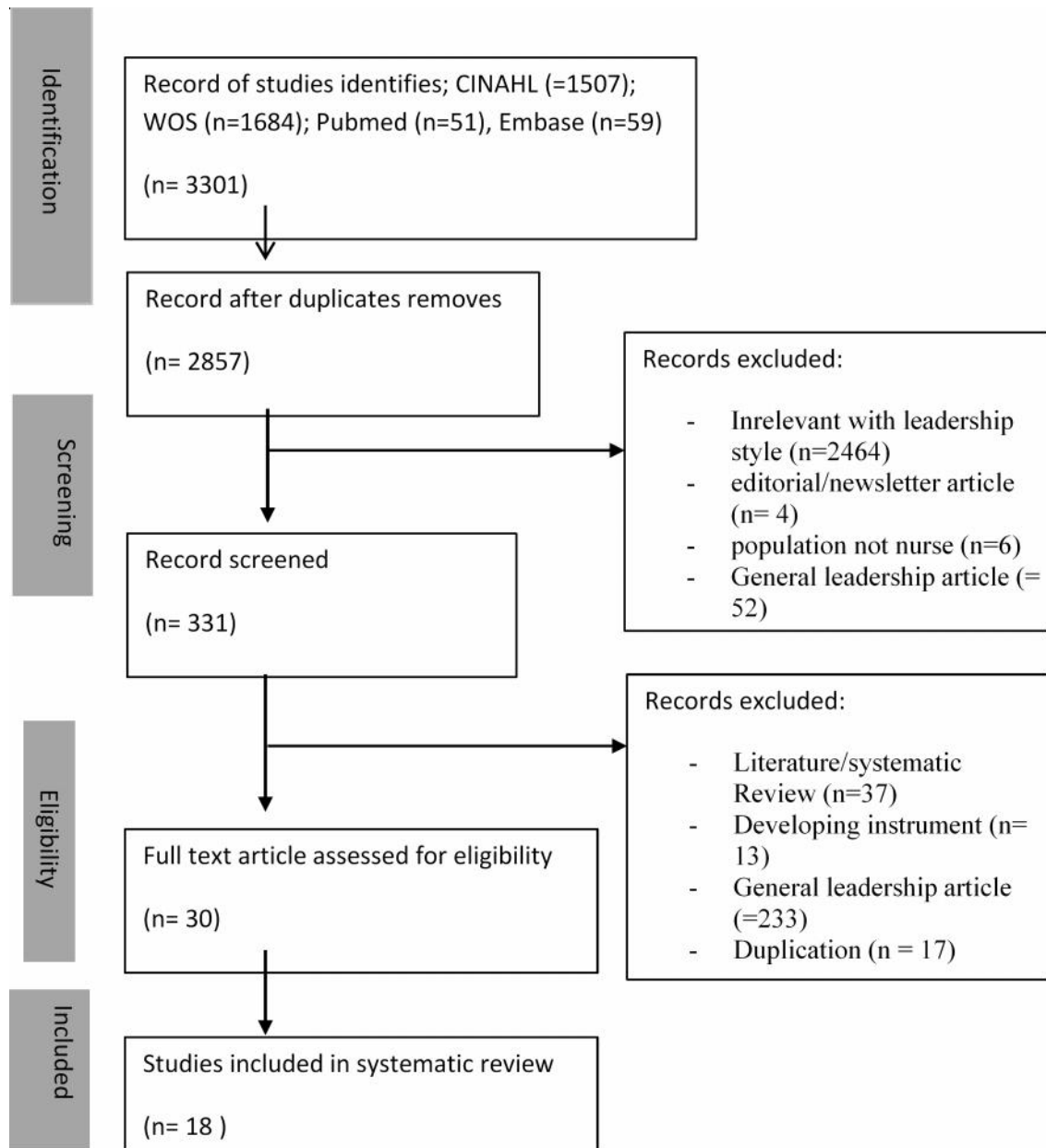
Beside the effects of leadership style on nurse

Figure 1. Step of selection article

quality of care, it also have impact in job satisfaction, extra effort, effectivenes, organizational commitment, staff intention to stay, inspirational motivation, general health and well being.

Quality of Care

Regarding the effect of leadership style on quality of care, there were some similar findings in the different studies. Recent study from Ngabonzima et al (2020) reported service provisions indicated a positive relationship with four leadership style (directive leadership style, supportive leadership style, participative leadership style and achievement oriented leadership style), but more with directive leadership style than others (mean 18.8, SD 0.730). Service provision measured quality of service provided to the patients, commitment of the colleagues in provision good health service, commitment to provide better quality of service, and satisfaction of the patients. From four items above, highest mean reported is commitment to provide better quality services (mean 4.14).

Another study from Alloubani et al (2018) showed there was a significant positive relationship among the transformational leadership and quality of nursing care (r= 0.87; p <0.001). There was a significant negative correlation between transactional leadership with quality of nursing care (r=-0.22; p <0.001). Additionally, there is no significant relation-

Table 1. An Overview of Studies' Characteristic and Main Findings

No	Author/ year	Aim of the study	Study design, Sample	Leadership style, Measure	Main Findings
1	Jenny M. Parr, Stephen Teo, Jane Koziol-McLain/2021. New Zealand	explore the effect of resonant leadership and perceives organizational support on work engagement & patients outcomes	Cross sectional. 20 unit adult inpatient medical surgical wards/ 252.	Resonant leadership. The 10 item Resonant Leadership Scale, The 8-item Perceived Organization Support Scale, LMX-7, The Ultrecht Work Engagement Scale	The final model was fit to the data (2 (22, N = 252) = 39.048, p = 0.014) = 39.048, p = 0.014). Resonant leadership was signifcantly and positively associated with relationship at work, perception of unit care quality (= 0.28, p , 0.001), reduced falls rates ((= −0.14, p < 0.05) and better patient satisfaction (= −0.41, p < 0.001). A direct effect of resonant leadership was demonstrated on patient satisfaction (= 0.20, p < 0.01)
2	Anaclet Ngabonzima, Domina Asinggizwe, Kyriakos Kouveliotis (2020). Rwanda	To examines the relationship between managerial leadership style and job satisfaction, intention to stay and service provision	Cross sectional study. 3 public hospital, 2 faith-based hospital/ 162	Directive/ autocratic leadership style, Supportive / transformational leadership style, Participate leadership style, achievement-oriented leadership style (transactional). Path-Goal Leadership tool	Leadership style: Autocratic leadership (mean: 18.8) Tranformational leadership (mean:17.3) Job satisfaction (m= 3.68), Intention to stay (3.42), service provision (m=3.85) Correlation between leadership style and job satisfaction, intention to stay, and service provision: There was significant positive weak relationship between transformational & autocratic leadership and staf intention to stay (r=.15, p<0.001 and r=.25 p<0.001) and both of them positively correlated with the level of service provision.
3	Margit Lappalainen, marja Harkanen, Tarja Kvist/2019. Finland	to desribe medication safety, transformational leader and their relationship	cross sectional. central hospital/ 161	Transformational leadership. TLS, MSS	Nurses evaluated medication safety and transformational leadership in their units was excellent and good, respectively. There was a moderate but statistically significant correlation between transformational leadership and medication safety. The medication competence of nurses and the management of nursing processes were significantly related to medication safety.
4	Asif, M. Jameel, A. Hussain, A. Hwang, J. Sahito, N. (2019). Pakistan	To examine relationships between transformational leadership. Structural empowerment, nurse-assessed adverse patient outcomes, and quality of care	Cross sectional study. 17 government hospital/ 600	Tranformational leadership. 7 item scale developed by Carless et al. The 12 items' SE scale. Medical error for APO 4-item QOC scale	Correlation among TL, SE, JS, and QOC are positive & significant, but the correlation of TL, SE, JS and QOC with APO are significant negative. TL is positively related to nurses'JS (r= 0.43, ß = 0.37, t = 7.71 p < 0.01) TL is positively related to SE (r= 0.38, ß = 0.41, t = 8.72 and p < 0.01), SE is positively related to nurse-assessed QOC (r= 0.41, ß = 0.43, t = 8.96 p < 0.01), JS is positively related to nurse-assessed QOC (r= 0.36, ß = 0.31, t = 6.08 p < 0.01). SE negatively related to APO & a negative association between SE and APO (r= -0.34, ß =- 0.32, t = -6.53 p < 0.01). nurses' JS is negatively related to APO (r= -0.24, ß = -0.29, t = -6.04 p < 0.01)

No	Author/year	Aim of the study	Study design, sample	Leadership style, Measure	Main Findings
5	Nicolas Gillet, Evelyne Fouquereau, Helen Coillot, Franck Bonnetain, Sophie Dupont, Leila Moret, Amelie Anota, Philippe Colombat/ 2018. France	Examine indirect effects of ethical leadership on patients' perceptions of quality of care.	cross sectional. 12 oncology units at public & private hospital/ 296	Ethical Leadership. Ethical Leadership Scale, JAWS	Mean of Ethical Leadership are 2.47; well being (m=3.20); quality of care (m=3.81). Well being was significantly linked to perceived quality of care (p < .05), & the initial relationship between ethical leadership and perceived quality of care was not significant (P = .17). Oncology HC professionals'well being significantly mediated the relationship between ethical leadership and perceived quality of care by the mediation of well being (p < .05)
6	Maasoumeh Barkhordari-Sharifabad, Tahereh Ashktorab, Foroozan Atashzadeh-Shoorideh/ 2017. Iran	to elaborate on the ethical leadership and its role in professional progress	Qualitative study. hospital and school/ 14	Ethical Leadership. Ethical Leadership Scale	There five categories found: inner satisfaction of the leader, employees' job satisfaction, patient's satisfaction, providing better service, and inspiring ethical behaviours in the employees
7	Sheila A. Boamah, Heather K. Spence Laschinger, Carol Wong, Sean Clarke/2017. Canada	Investigate the effects of the nurse managers' transformational leadership behaviour on job satisfaction & patient safety outcomes	cross sectional. acute care hospital/ 378	Transformational leadership. MLQ, form 5X-short, the 38-item climate inventory, Odenburg burnout inventory, patient satisfaction scale, turnover intention subscale	Nurses reported a moderate degree of transformational leadership in their managers (X = 2.05; SD = 0.99). Access to work environment factors that empower nurses to work effectively was slightly above the midpoint of the scale (X = 11.91; SD = 3.77; range, 4-20). Nurses reported that patient and/or family complaints (36%) and nosocomial infections (28%) occurred occasionally to frequently. On average, nurses were moderately satisfied with their jobs (X = 3.05; SD = 0.97) as 55% of nurses agreed or strongly agreed with statements regarding their satisfaction with the job. Transformational leadership had a strong and significant positive direct effect (b = 0.77; p < .001) on structural empowerment, had a positive effect on job satisfaction (b =0.86; p < .001), and a negative direct effect on adverse events (b =-0.35; p < .05).

No	Author/year	Aim of the study	Study design, Sample	Leadership style, Measure	Main Findings
8	Amany Farag, Susan Tullai-McGuinnes, Mary K. Anthony, Christopher Burant/2017. USA	examining if leadership style and unit climate can predict safety climate	cross sectional. Hospital / 246	Transformational leadership, Transactional leadership, passive-avoidant. MLQ, form 5X-short, M-LSOCQ, AHRQPSC, ISMP self-assessment survey	Nurse Managers (NMs) showed behaviours related to transformational (mean [SD], 2.5[0.7]) and transactional (mean [SD], 2.4 [0.5] leadership style almost equally and more frequently than passive-avoidant style (mean [SD], 1.0 [0.8]). Within transformational leadership style, nurses perceived that their NMs displayed inspirational mo- tivation attributes more often (mean [SD], 2.8 [0.7]) than the other attributes. Leadership styles and warmth climate explained a significant amount of variance in all safety climate dimensions; they explained 20% on error feedback, 22% on organizational learning, 23% on nonpunitive response to error, 30% on communication openness, 45% on managers-safety actions, and 52% on team work. Transactional and passive-avoidant leadership styles indirectly (through organizational learning) explained 6% of variance on safe medication administration.
9	Aladeen Alloubani, Laila Akhu-Zaheya, Ibrahim Mubarak Adelhafiz (2017). Jordan	To investigate managers' leadership styles, from the perspective of registered nurses, and its effects on the quality of nursing care in both the private and public healtcare sectors	A cross sectional, descriptive. 3 private hospitals & 3 public hospitals/ 400	Transformational leadership, transactional leadership (TAL), laissez-faire leadership. MLQ 5X, PSNCQQ	The participants in the private hospitals prefer transformational style more than public hospital (2.97, 0.54), (1.37, 0.54), t= 38.6, p< 0,001. For the transactional leadership, the mean and SD were (2.10, 0.60), (3.14, 0.49) for the private and pub;ic hospital, which was significant (t= 48.5, p< = < 0.001), this would indicate that participants in the public hospital prefer the TAL style. For the laissez-faire leadership style, the mean and SD were (1.19, 0.93), (1.23, 0.83) for the private and public hospital. The patient's perception of quality of nursing care revealed a significant difference between private and public hospitals (t=22.5, p = <0.001). All transformational leadership subscales were significantly positively correlated with effectiveness, extra effort, satisfaction and the quality of nursing care. The overall TAL was found to have a significant negative correlation with effectiveness, extra effort, satisfaction and quality of care.
10	Zahra Lotfi, Foroozan Atashzadeh-Shoorideh, Jamileh Mohtashami, Maliheh Nasiri (2017). Iran	To determine relationship between ethical leadership, organizational commitment of nurses and their perceptional of patient safety	Correlational study. seven educational hospital/ 340	Ethical leadership (EL). Ethical leadership questionnaire, OC questionnaire, POPSC	The average EL score of nursing manager was 133.42±22.36, which is above average; the OC of nurses at 74.1 ±6.34 namely at high level and POPSC was an acceptable level 125.08 ± 16.38. There was a positive statistical correlation between nursing managers' EL from the nurses view point & the OC of nurses (P<0.002, P=0.21). However there was no significant relationship between the OC and nurses' POPSC (P=.13, r=.08)

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11	Bahadori A., Peyrovi H., Ashghali-Farahani M., Hajibabaee F., Haghani, H. (2016). Iran	To determine the relationship between word-level leadership and patient satisfaction of nursing care	A cross sectional study. five teaching hospital under authority of Iran University of Medical Science/ 306	Transformational leadership, transactional leadership, passive-avoidant leadership. MLQ, PSI	The transformational leadership style was 29.4%, transactional leadership was 50% and passive/avoidant leadership style was 20.6 %. There was no significant relationship between leadership style and patient satisfaction. However, the highest satisfaction level (3.52 ± 0.63) of the patients was reported in the wards whose head nurses applied a transformational leadership style. In comparison patient satisfaction in ward with transactional and passive/avoidant leadership style were 3.31 ± 0.61 and 3.29 ± 0.37
12	Melanie Lavoie-Tremblay, Claude Fernet, Genevieve L. Lavigne & Stephanie Austin/2015. Canada	to investigate the impact of nurse managers exercising transformational vs. abusive leadership practice with novice nurses	cross sectional. health facility/ 541	transformational leadership, abusive leadership. GTL, abusive leadership scale, 4-item scale measuring QoL, single items turnover	Transformational leadership significantly predicted quality of care score (b = 0.21, t(534) = 4.28, P < 0.0001) and abusive leadership practices negatively and significantly predicted quality of care scores (b = -0.13, t(534) = -2.62, P < 0.01). Transformational leadership negatively and significantly predicted the intention to quit the healthcare facilities scores (b = 014, t (349) = 234, P < 005) and abusive leadership positively and significantly predicted the intention to quit the health care facilities scores (b = 023, t(349) = 382, P < 00001. Abusive leadership posi- tively and significantly predicted the intention to quit the healthcare facilities scores (b = 026, t(352) = 444, P < 00001).
13	Cindy Cheng, Timothy Bartram, Leila karimi & Sandra Leggat/2015. Australia	to examine the role of transformational leadership (TL) in developing social identity	cross sectional. Health facility/ 201	Transformational leadership. MLQ, form 5X-short, the 38-item climate inventory, Odenburg burnout inventory, patient satisfaction scale, turnover intention subscale	TL is significantly negatively correlated with burnout (r=−0.311, p<0.01) and turnover intention (r=−0.276, p<0.01) and significantly positively correlated with perceived quality of care (r=0.209, p<0.01), social identity (r=0.341, p <0.01) and team climate (r=0.486, p<0.01)
14	Katreena Collette Merrill/2015. USA	to explore the relationship between nurse manager (NM) leadership style and safety climate	correlational study. 9 hospital/ 466	transformational leadership, transactional leadership, laissez-faire. HUSC, MLQ-5XS	Nurses in ICU departments reported a slightly lower but statistically significant (.029) to socialization and training score than did those in non-ICU departments (mean, 3.9, 4.0, respectively). The mean MLQ scores were transformational (2.97), transactional (2.56), and laissez-faire (0.93).No significant difference in MLQ scores was identified by department type. Transformational leadership have positive contributor to safety climate, but laissez-faire leadership style have negatively relationship with socialization, culture blame.

No	Author/ year	Aim of the study	Study design, Sample	Leadership style, Measure	Main Findings
15	Ping-yi Lin, Sara MacLennan, Nigel Hunt, and Tom Cox (2015). Taiwan	To understand the influences of nursing transformational leadership style on the quality of nurses' working lives in Taiwan	Cross sectional study. 12 hospital: public hospital, private hospital, hospital run by religious organization/ 651	transformational leadership style. MLQ, Karasek's Job content Questionnaire, OSI, OCQ, General Health Questionnaire	The strongest correlation as between supervisor and transformational leadership style (r= 0.735). The average number of errors was significantly lower in the private hospital (M=49.57, SD = 11.93), than in the public and religious hospital. Regarding the score of general health status, it was significant statistically in three ownership hospitals, F (2.648) = 6.798, p = 0.001. The score were significantly higher in private hospitals (M= 15.07, SD=5.00) which revealed the worse health status.
16	Raija Mantynen, Katri Vehvilainen-Julkunen, Pirjo Partanen, Hannele Turunen, Merja Miettinen & Tarkja Kvist/2014. Finland	describe the change in transformational leadership & quality outcomes	longitudinal study. Finnish University hospital/ 3182	Transformational leadrship. TLS, KUHJSS, HSPSC, RHCS	In 2008, mean total transformational leadership score was 3.34, while that in 2010 was 3.39. mean scores for transformational leadership subscales were generally somewhat higher, with exception for leadership nursing directors in 2010. management nursing process was considered to be at same level in both surveys, with SD values of 0.87 for 2008, 0.88 for 2010. scores for most job satisfaction subscales increased between 2008 and 2010, with 2010 values ranging from 3.16- 4.27. sole exception was working environment sub area, for which mean score was 3.28 in both cases for 2008 and 0.95 for 2010). changes were statistically significant ($P<0.05$) for all subscales other than working welfare, working environment.
17	Ahmad E. Aboshaiqah, Ayman M. Hamdan-Mansour, Dennis R. Sherrod, Ahmed Alkhaibary, Sultan Alkhaibary (2014). Saudi Arabia	To examine leadership style, factors, and outcome	cross sectional study. 2 regional hospital in Riyadh/. 272	Transformational leadership, transactional leadership and laissez-faire leadership. The Multifactor Leadership questionnaire Rater Form (5x-Short)	There was positive, highly significant correlation between outcome factors (effectiveness, extra efforts, satisfaction) and transformational, transactional leadership styles, negative significant correlation with laissez-faire leadership style. There were significant differences between male, female nurses in regards to using transactional leadership style, laissez-faire leadership style with male nurses mean score higher than female nurses mean score in both styles (transactional style: male, female; laissez-faire leadership style: male, female). Regarding nurses' educational level, length work in nursing, there were no significant differences between nurses' perceptions leadership styles, factors, outcomes. Regarding differences related to nurses' assigned unit, there were significant differences in transformation leadership style, transactional leadership style post hoc analysis showed nurses working in medical- surgical units have almost lower perception all leadership outcome factors than nurses working in oncology, critical care, other units at hospitals

No	Author/year	Aim of the study	Study design, Sample	Leadership style, Measure	Main Findings
18	Carol A. Wong, Lisa M. Giallonardo/ 2013. Canada	To test a model examining relationships among authentic leadership, nurses' trust in their manager, areas of work life and nurse-assessed adverse patient outcomes	cross sectional. acute care hospital/ 280	authentic leadership. ALQ, Trust in Management Scale, AWS, Nursing Quality Indicators	The final model fit the data acceptably (v2 = 1.30, df = 2, P = 0.52, IFI = 0.99, CFI = 1.00, RMSEA = 0.00). Authentic leadership was significantly associated with decreased adverse patient outcomes through trust in the manager and areas of work life. IFI = 0.99, CFI = 1.00, RMSEA = 0.00).

The 7-Item Leader-Member Exchange, LMX-7; Transformational Leadership Scale, TLS; Kuopio University Hospital Job Satisfaction Scale (KUHJSS), Hospital Survey on Patient Safety culture, HSPSC, Revised Humane Caring Scale, RHSC; Multifactor Leadership Questionnaire, MLQ; The Authentic Leadership Questionnaire, ALQ; The Areas of Worklife Scale, AWS; Hospital Unit Safety Climate, HUSC; Agency for Healthcare Research and Quality Hospital Survey, AHRQPSC, Modified version of the Litwin and Stringer Organizational Climate Questionnaire, M-LSOCQ; The Medication Safety Scale, MSS; Perception of Patient Safety Culture, POPSC; Patient satisfaction with nursing care quality questionnaire, PSNCQQ; Patient Satisfaction Instrumen, PSI; Occupational Stress Indicator, OSI; Organizational Commitment Questionnaire, OCQ.

ship between laissez-faire and quality of nursing care (r=-0.04; p <0.645). Slightly different findings came from Asif et al (2019), reported that transformational leadership have a significant relationship with structural empowerment (alpha = 0.57; p <0.01), and structural empowerment have a significant relationship with quality of care (alpha = 0.39; p <0.01). Also transformational leadership have a significant relationship with job satisfaction (alpha = 0.43; p <0.01), and job satisfaction have a significant relationship with quality of care (alpha = 0.23; p <0.01).

Study of Lotfi et al (2017) to determine the relationship between ethical leadership, organizational commitment of nurses and their perceptional of patient safety also reported that there was a positive relationship between ethical leadership and perception of patient safety culture (r = 0.29; p <0.001). A different finding reported by Bahadori et al (2016) which show that there was no significant relationship between leadership style (transformational and transactional) and patient satisfaction. However, the highest satisfaction level (3.52 ± 0.63) of the patients was reported in the wards whose head nurses used a transformational leadership style. Study from Parr et al (2021) showed that resonant leadership reduced falls rates (alpha = 0.14, p <0.05). Similar study from

Finland (Lappalainen et al., 2019) showed that transformational leadership have significant relationship with medication safety. It was also similar from USA (Faraq et al, 2017) which reported Transformational leadership have significant relationship with safe medication.

Extra Effort

Alloubani et al (2017) showed there was a significant positive relationship among the transformational leadership and extra effort (r= 0.76; p <0.001). There was a significant negative correlation between transactional leadership with extra effort (r=-0.32; p <0.001). Additionally, there is no significant relationship between laissez-faire and extra effort (r=-0.04; p <0.912). Slightly different findings came from Aboshaiqah et al(2014), reported that extra effort of their supervisors' leadership style are fair. The analysis showed that nurses had fair perception in regards extra efforts (M= 2.69, SD = 0.97). Nurses had fair perception of the expected outcome of their supervisors' leadership style.

Effectiveness

Study from Alloubani et al (2017) reported there was a significant positive relationship among

the transformational leadership and effectiveness (r= 0.79; p <0.001). There was a significant negative correlation between transactional leadership with effectiveness (r=-0.26; p <0.001). There is no significant relationship between laissez-faire and effectiveness (r=0.08; p <0.912). This findings also similar to study from USA (Faraq et al., 2017) that mentioned transformational leadership style associated with effectiveness. A different findings came from Aboshaiqah et al (2014), showed that effectiveness of their supervisors' leadership style are fair. The analysis showed that nurses had fair perception in regards extra efforts (M=2.92, SD = 0.91). This results indicate nurses had fair perception of the expected outcome of their supervisors' leadership style.

Job Satisfaction

Recently Ngabonzima et al. (2020) conducted a cross-sectional in Rwanda, and found that directive leadership style, supportive leadership style, participative leadership style and achievement oriented leadership style have a positive significant with job satisfaction (r = 0.58, 0.52, 0.49,0.36; p <0.05). It was also similar to qualitative study from Iran (Barkhordari-Sharifabad et al, 2017). They reported that ethical leadership gave employee satisfaction. Slighly different study from Alloubani et al (2018) reported there was a significant positive relationship among the transformational leadership and job satisfaction (r= 0.81; p <0.001). There was a significant negative correlation between transactional leadership negative correlation between transactional leadership with job satisfaction (r=-0.38; p <0.001). Additionally, there is no significant relationship between laissez-faire and job satisfaction (r=-0.06; p <0.376). Similar findings came from Asif et al (2019), reported that transformational leadership have a significant relationship with job satisfaction (alpha = 0.43; p <0.01). Another similar findings also came from Lin et al (2015), which transformational leadership stily have a positive significant with job satisfaction (r= 0.48; p <0.01).

Organizational Commitment

Using cross sectional study Lin at al (2015) investigated the influences of nursing transformational leadership style on the quality of nurses' working lives in Taiwan, which transformational leadership style have a positive significant with organizational commitment (r= 0.32; p <0.01). Another study from Lotfi et al (2017) also showed that ethical leadership style have a positive significant with organizational commitment (r = 0.21; p <0.001).

Staff Intention to Stay

Recent study from Ngabonzima et al (2020) reported directive leadership style and supportive leadership style have a positive relationship with staff intention to stay (r= 0.25, 0.15 p <0.01 and <0.05). Participative leadership style and achievement oriented leadership style have no significant relationship with staff intention to stay (r= 0.06, 0.08). This study quite similar from Canada (Laovioe-Tremblay et al., 2015) showed that transformational leadership style predict intention to quit. Contrary evidence came from Australia (Cheng et al., 2015) reported transformational leadership style have negative correlation with turnover intention.

Inspirational Motivation

Study of Faraq et al (2017) showed that in transformational leadership style, nurses perceived that their nurse manager displayed inspirational motivation attributes more often (mean (SD), 2.8 (0.7)) than the other attributes. This is similar with study from Iran (Barkhordari-Sharifabad, et al, 2017) who reported ethical leadership inspire employees behaviour.

General Health Well-Being

Lin et al (2015) on their research found that transformational leadership style have a negative significant with general health well-being (r= -0.15; p <0.01). The scores were significantly higher in private hospitals (M = 15.07, SD = 5.00) which revealed the worse health status.

Mediators between leadership style and quality of care among nurses The direct effects of various factors influencing leadership style and quality of care have been verified but the indirect effects have yet to be identified. While trying to fill the gap, mediation analysis and pathway analysis are being used diation analysis and pathway analysis are being used by growing numbers of researchers to recognize and clarify different pathway. From some researcher found that work environment, supervisor support, structural empowerment and job satisfaction are mediators between leadership style and quality of care.

Work Environment

Study of Suratno et al (2018) in 5 type of hospital in Indonesia (military hospital, police hospital, public hospital, private hospital, and teaching hospital) found that transformational leadership style have a positive significant relationship with work life (r= 0.27 at p value <0.01).

Structural Empowerment

Study of Asif et al (2019), reported that transformational leadership have a significant relationship with structural empowerment (alpha = 0.57; p <0.01), and structural empowerment have a significant relationship with quality of care (alpha = 0.39 ; p <0.01). So structural empowerment is mediator between leadership style and quality of care.

Organizational Commitment

Lin et al (2015), which transformational leadership style have a positive significant with supervisor support (r = 0.74; p <0.01), and supervisor support have a positive significant with job satisfaction (r= 0.52 at p value 0.01). Job satisfaction have a positive significant with organizational commitment (r = 0.56; p <0.01). From Lotfi et al (2017) study found that leadership style have a significant relationship with organizational commitment. Based on that, organizational commitment is mediator between leadership style and quality of care.

Job Satisfaction

Study of Asif et al (2019), transformational leadership have a positive significant relationship with job satisfaction (alpha = 0.43; p <0.01), and job satisfaction have a significant relationship with quality of care (alpha = 0.23 ; p <0.01). Job satisfaction is mediator between leadership style and quality of care.

DISCUSSION

Effective leadership in health services has already been extensively studied in the literature, but it mostly come from developed country. Not much research is published from developing countries, especially quantitative research in last 10 year. Many challenges have found the urgent need for effective leadership styles in health services (Schreuder, 2011). The current literature review endeavored to fill this gap, while it figured out how to distinguish the latest publication to evaluate the relationship between leadership style with quality of care.

Among the main findings reported that the quality of service received by patients in the form of satisfaction, safety, and cost (Alloubani, 2018; Bahadori,2016). This finding is consistent with recent study which transformational leadership have a positive relationship with safety climate in hospital (Merril et al, 2015). Passive-avoidant leadership style have relationship with nurses' willingness to report medication error, and transactional leadership style have relationship with safe medical administration. Similar

finding also came from Zaghini et al (2020), counter productive work behaviour and depersonalization were linked to patient satisfaction. A investigation of Canadian nurses, Higgins (2015) also found that nurses' perceptions of their managers' transformational leadership behaviors had negative effects on equitably estimated adverse events (i.e., patient falls and hospital infections) through supportive practice environments and organizational citizenship behaviors.

From all literature which review in this article, mostly using transformational leadership style, participate leadership style and transactional leadership style. This condition is influenced by the level of education, work experience, age and length of work in the current work unit of nurses leader. Many of them graduate from diploma, were young (22-40 years old), experience below five years and working in current unit below five years (Ngabonzima, 2020; Asif, 2019; Suratno, 2018; Alloubani, 2017; Olu-Abiodun, 2017; Lotfi, 2017; Bahadori, 2016). Previous study reported that age, education background and year of experience in current unit have positive significant with leadership style (Abasilim, 2019; Yoon, 2016). Graduate level of education has good leadership knowledge. Likewise, the maturity of the age and length of work in the unit enable to think logically in choosing the appropriate type of leadership. The combination of the three makes it possible to produce nurse leaders who are able to improve the quality of care.

Furthermore, increased quality of care in healthcare settings has been found to be closely related to transformational leadership style and transactional leadership style (Asif, 2019; Allouboni, 2017; Bahadori, 2016).For instance, transformational leadership and transactional leadership increases nursing unit organization culture and structural empowerment [Asif, 2017]. This has an impact on organizational commitment for nurses and in return higher levels of job satisfaction, intention to stay, quality nursing work life , general health well being patient safety and quality of care (Ngabonzima, 2020; Asif, 2019; Suratni, 2017; 2017, Bahadori, 2016). In transformational leadership nurse's leader motivate nurse to achieve the goals as yet never achieved before, give attention for nurse, able to train, and make nurse loyal to her/his unit. In transactional leadership, nurse leaders exchanging followers who lead to improvement in production, and are interested in processes rather than shared values with forward-thinking. In Transcactional leadership also offering rewards for attractive satisfaction and retaining incentives for poor outcomes

(Boldy et al, 2013).

Those article in this review vary from developed to developing countries with sizeable sample size ranging from 262 to 3182, from rural hospital to urban hospital. In addition, this article also finds a new outcome of leadership style and quality of care, namely reduced falls.

Although this review have such strenght above, it also have some limitation. This review mostly come from cross sectional study which is can not explain how those outcome of leadership style change after a period of time. Beside that, the article included in this review only in English.

CONCLUSSION

Transformational leadership style is effective leadership to improve quality of care in hospital in developing country or and country in Asia, Africa and South American region. With a limited number of professional nurses capable of being leaders, it is necessary to consider update leadership training in hospitals. In addition, director of hospital encourage their nurse staff to pursue their degree to high level nursing education.

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