Analysis of the influence of intergenerational differences on cross-generational cooperation among nurses

Analiza wpływu różnic generacyjnych na współpracę międzypokoleniową wśród pielęgniarek

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STRESZCZENIE	ANALIZA WPŁYWU RÓŻNIC GENERACYJNYCH NA WSPÓŁPRACĘ MIĘDZYPOKOLENIOWĄ WŚRÓD PIELĘGNIAREK
	Wprowadzenie. Grupa zawodowa pielęgniarek charakteryzuje się różnorodnością pokoleniową. Przedstawiciele poszczególnyc
	wiekowych prozentuje podobno postewy i wartości krztatkowego przez środowisko społeczno, kulturowe. Póżnice pokoleć oraz bud

oleniową. Przedstawiciele poszczególnych grup wiekowych prezentują podobne postawy i wartości kształtowane przez środowisko społeczno-kulturowe. Różnice pokoleń oraz budowanie wielopokoleniowych zespołów w placówkach medycznych, daje szereg korzyści w świadczeniu usług pielęgniarskich na najwyższym poziomie. **Cel pracy.** Celem pracy była analiza wpływu różnic generacyjnych na współpracę międzypokoleniową wśród pielęgniarek.

Materiał i metodyka. Zastosowano niesystematyczny przegląd i analizę piśmiennictwa naukowego polsko- i anglojęzycznego. **Omówienie.** Każde pokolenie ma inne wartości i przekonania. Dlatego zachowania oraz praktyka pielęgniarska mogą się od siebie różnić. Istnieje wiele wyzwań w wielopokoleniowych środowiskach pracy. Są to m.in. komunikacja w zespole, konflikty, równowaga między życiem zawodowym a prywatnym oraz umiejętności nauki od współpracowników w zakresie doświadczeń klinicznych i technologicznych. Główne zróżnicowanie międzypokoleniowe można zauważyć w obszarach postawy wobec pracy i rozwoju zawodowego, komunikacji, przywództwa oraz zarządzania.

Podsumowanie. Wykorzystywanie potencjału pracowników powinno opierać się na ich zasobach, przy jednoczesnym wspieraniu ich w obszarach zwiększonych trudności. Bardzo ważnym aspektem pracy dla pielęgniarek rozpoczynających praktykę zawodową jest wsparcie mentorów oraz możliwości rozwoju. Efektywność komunikacji zespołowej można podnosić poprzesz zachęcenie współpracowników do otwartego dialogu z zachowaniem szacunku dla pielęgniarek każdego pokolenia. Promowanie wymiany wiedzy oraz doświadczenia zawodowego w codziennej praktyce pomoże wykorzystać potencjał każdego pokolenia, co umożliwi świadczenie opieki na najwyższym poziomie, przy jednoczesnym poczuciu satysfakcji i spełnienia pracowników. pielęgniarka, pokolenie, wielopokoleniowe, relacje, praca zespołowa

Słowa kluczowe:

ABSTRACT

ANALYSIS OF THE INFLUENCE OF INTERGENERATIONAL DIFFERENCES ON CROSS-GENERATIONAL COOPERATION AMONG NURSES

Introduction. The professional group of nurses is characterized by generational diversity. Representatives of different age groups have similar attitudes and values shaped by the socio-cultural environment. Understanding the differences between generations and building multi-generational teams help in providing nursing services of the highest level.

Aim. The aim of the study was to analyze the influence of generational differences on intergenerational cooperation among nurses. Material and methods. A non-systematic review and analysis of published articles both in Polish and English.

Discussion. Each generation has its own values and beliefs. Therefore, behavior and nursing practice may differ among generations. There are many challenges in multi-generational work environments, e.g. team communication, conflicts, work-life balance, and the ability to learn from colleagues with regards to everyday nursing practice and the use of technology. The main intergenerational differentiation can be seen in attitudes to work and professional development, communication, leadership and management.

Summary. Managing a team should involve identification of the employees' strengths, while addressing their weaknesses in certain skills. The support of mentors and development opportunities are crucial aspects of work for nurses at the beginning of their career. The effectiveness of team communication can be increased by encouraging open communication with respect for members of each generation. Promoting the exchange of knowledge and work experience in daily nursing practice will help each generation achieve its full potential, which will, in turn, enable the provision of both high quality patient care and employee satisfaction.

Key words:

nurse, generation, multigenerational, relationship, teamwork

INTRODUCTION

A generation is a cohort of people born around a specific time. Members of particular generations have similar attitudes and values shaped by the socio-cultural environment [1].

The literature on the subject distinguishes four generations: Baby Boomers, Generation X, Generation Y (Millennials) and Generation Z [2-4]. The Baby Boomers generation (1945-1964) grew up in a healthy post-war economy, where jobs were widely available [1-5]. Baby Boomers are considered to be the most influential group with a direct influence on the development of Generation X. Generation X (1965-1980) is characterized by resourcefulness and independence [2,3]. They usually look for work-life balance. Members of Generation Y (1981-1996) also strive primarily to maintain a balance between home and work [5]. The youngest generation to start working today are those born after the year 1997. This is Generation Z, which has new expectations and ideals concerning both work and personal life [6].

According to data provided by the Poland Main Chamber of Nurses and Midwives, in 2020, the number of nurses representing different generational groups was as follows: Baby Boomers – 41.5%, Generation X – 43.3%, Generation Y – 13.7% and Generation Z – 1.4% [7]. The population forecast for the upcoming years indicates that a large group of nurses will reach retirement age. According to the above-mentioned data, a systematic increase in the shortage of nurses is estimated as the number of nurses entering the system is not the same as the estimated number of retiring nurses [7-8].

As demonstrated above, the professional group of nurses is characterised by generational diversity. Differences between members of particular generations may affect well-being at work, work-efficiency and employee productivity [9]. In addition, they can cause misunderstandings and conflicts between colleagues [10]. Building multi-generational teams helps to provide high quality nursing services [4]. Nurses cooperating in multigenerational teams have the opportunity to share their professional experience, knowledge and skills regarding the use of technological innovations. Cooperation helps to build mutual trust, resolve conflicts and develop a sense of responsibility for the team [4]. Teamwork towards a common purpose should be grounded in effective communication, which is the basis for ensuring patient safety. Moreover, it has been shown that the lack of cooperation significantly reduces the quality of the care provided [11]. Integrating teamwork increases job satisfaction and contributes to the reduction of nursing staff turnover [4, 11].

Both those responsible for the management and organization of the work of nurses and individual team members should strive for better understanding, communication and integration; and also appreciate the need for respect in multigenerational teams. This can be facilitated by educating nurses about generational differences, similarities and transparent communication, as well as effective team building [12]. This literature review study was undertaken due to limited published research on generational differences in the working environment of nurses and the organization of multigenerational teams, taking into account the individual needs of each employee.

AIM

The aim of the study was to analyze the influence of generational differences on intergenerational cooperation among nurses.

MATERIALS AND METHODS

This paper is based on a non-systematic review and analysis of Polish and English-language published articles. The analyzed research papers discussed differences between the generations and their impact on intergenerational cooperation. The following electronic databases were searched: PubMed, Google Scholar, Scopus, and Wiley. The search was limited to publications that have been published in peer-reviewed journals between the years: 2000-2020. The following keywords in various combinations were used: "nurse", "generation", "multigenerational", "relationship", "teamwork". A total of 127 papers were identified during the search. After removing duplicates and papers which did not meet inclusion criteria, 50 papers were included in this analysis. Eventually, 31 items were qualified for detailed analysis. The collected information was compiled and presented according to selected thematic areas.



Generational differences among nurses

Each generation has its own values and beliefs, therefore various generations representatives' behaviour and practice may differ [13-16]. The Baby Boomers generation demonstrate a strong work ethic, professionalism and the need for independence in nursing practice [1-5]. They are usually optimistic and have well-developed social skills. They derive their self-esteem from their own motivation [17]. They are referred to as workaholics who care about the good results of their work, while being loyal to their co-workers [4-5]. In the era of challenges related to the declining number of nurses around the world, working overtime, both voluntarily and as expected by employers [18], is not a problem for most of them. A different approach, focused primarily on maintaining the balance between work and private life, is characteristic of members of Generation X. They pay less attention to the financial aspect in their professional life; they do not want to sacrifice their personal lives for the sake of a career [1,4-5,14]. They have an underlying need to accept their professional situation and enjoy their duties. They often change jobs if they are dissatisfied with the current professional situation [1-3]. They prefer workplaces where their talent, creativity and experience are appreciated [1]. Generation Y is self-confident;

its representatives know how to use new technologies, and in everyday practice they look for a reliable source of information and positive support from their leaders [19]. They do not like hierarchy and therefore, experience more difficulties in accepting a superior who is older [14,16]. The study by Hisel showed that nurses of the X and Y generations do not differ statistically from the Baby Boomers generation in terms of the level of dedication and loyalty to the employer [20].

Generation Y nurses are good with technology; they expand their knowledge by acquiring information with the use of multimedia [1-3]. They seek positive changes, convenient shifts, favourable working hours and good working conditions [21]. Nurses of earlier generations consider nurses from Generation Y to be disloyal to their employers, stubborn, and unable to cope with criticism [21].

Generation Z nurses are now entering the labor market. This generation is known for growing up in the world of technology. Generation Z members are tolerant and oriented towards social change [3]. They show willingness to make decisions in many areas of life [6]. The values they hold are optimism, self-confidence, modesty and a sense of morality [6]. Generation Z expects continuous self-development, mentoring and a sense of security. They equate rapid career development with the hard work that they have to put into the tasks entrusted to them [22]. In a similar way to Baby Boomers, Generation Z scrupulously adheres to the work ethic [23]. Generation Z nurses are well prepared in terms of theoretical knowledge and are open to constant self-development. However, they have shortcomings in transferring theoretical knowledge into practical skills [22]. Moreover, they have difficulties when it comes to team communication, decision making and coping with stress [22].

Work organization and working environment of nurses with regards to generational differences

According to Stutzer, there are many challenges in multi-generational work environments, e.g. team communication, intergenerational conflicts, work-life balance, and the ability to learn from colleagues with regards to everyday nursing practice and the use of technology. Cross-generational differences among nurses have been identified in the area of professional attitudes, emotional aspects of nursing, leadership preferences, and nursing practice [24]. Therefore, understanding the similarities and identifying the strengths of each generation is an important aspect when developing a strategy to improve the quality of team collaboration [4]. Therefore, when planning the organization of nurses' work, it is necessary to take into account the characteristic features of each generation and the differences between them in order to build positive relations between colleagues [4, 25]. Improving cooperation between different age groups reduces the level of negative emotions among staff and the level of stress, which directly translates into an improvement in the quality of nursing care and care for patients' outcomes [26].

Generational diversity in the workplace can lead to conflicts and difficult situations. Each generation has its own distinct values, which may be contradictory to those of other generations [27]. Moreover, each group has different expectations regarding the workplace, supervisors and co-workers [27]. It is well known that each generation has its own set of values, opinions and attitudes towards life. The characteristics of the intergenerational differentiation in selected areas of professional work are presented below.

Attitudes towards work and professional development

The study by Thompson showed that nurses from the Baby Boomers generation show greater commitment to work than Generation X nurses [28]. Baby Boomers and Generation X nurses show differences in the degree of commitment and job satisfaction compared to nurses from Generation Y and Generation Z. Baby Boomers and Generation X nurses attribute a decline in their commitment to work to the impact of negative aspects of work, although at the same time they show commitment to their workplace. In the Huber & Schubert study, the surveyed nurses and supervisors confirmed that the members of Generation Y are less willing to sacrifice and attach less importance to work than the representatives of the previous generations. At the same time, Generation Y nurses have higher career ambitions than Generation X and Baby Boomers [29].

The most effective measures to reduce the stress of long shifts and of hard physical work, which would translate into improved job satisfaction for Baby Boomer nurses, is to offer them reduced workload, flexible shift hours and work schedule sharing [30]. At the same time, it has been shown that in order to increase the job satisfaction of nurses from Generations X and Y, they should be encouraged to pursue continuous personalized self-development with subsequent changes in their remuneration and range of duties [30]. Strategies to improve the job satisfaction of younger generations of nurses can include creating a shared management framework in which nurses have decision-making powers. Moreover, being able to plan or divide work independently may also constitute a potential way of increasing job satisfaction, especially for the younger generation of nurses [5].

Generations Y and Z see themselves as less committed to their workplace. At the same time, these people are sensitive to the lack of motivation on the part of the superior [3,26-27]. Generation Z nurses expect continuous professional development [31]. They are ready to work hard and take on challenges, but they need recognition and appreciation.

Communication

One of the major differences between each generation is the style of communication. To ensure safe and high-quality patient care, it is essential that healthcare professionals communicate effectively with each other in multidisciplinary teams as well as with patients and their families [32]. The ability to communicate is crucial for the effectiveness of work in intergenerational teams [12]. Competences in this area are also fundamental

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to nursing practice and may constitute the basis for other nursing interventions. Therefore, they should be supported by professional training [32]. Differences in the style of communication of particular generations result primarily from the increased level of digitization and the transfer of communication channels to the virtual space among the youngest generations [33]. Therefore, it is important to understand that each generation has its own distinctive communication style. Older generations prefer face-to--face communication, while younger generations rely on digital ways of passing information, such as e-mail, chat and text messages [33]. Members of Generation Y, who prefer fast communication channels, are the main representatives of the so-called Digital Nation [34]. Therefore, in order to increase the effectiveness of communication with this group of employees, it is recommended to communicate via digital messengers or e-mail. Nevertheless, it has been shown that, in the professional setting, the best way to communicate with Generation Z nurses, who grew up in the era of widespread digitization and show deficiencies in communication skills, is through direct contact [35].

Leadership and Management

To cope with rapid changes in healthcare and the growing needs of the aging population, the healthcare system must find new ways to improve the quality of care services. In this situation, human resources play a key role as they are responsible for the outcomes of nursing care [15].

The study by Wieck showed that, regardless of their age and generation affiliation, nurses expect teamwork and support from their supervisors [15].

The organization of the work in a multigenerational nursing environment should take into account the great need for independence and autonomy in Generation X nurses [2-3], and at the same time high expectations for positive leadership, which is typical for Generation Z nurses [19].

A characteristic feature of nurses now entering the labour market – Generation Z nurses – is the need for mentoring and a sense of security in their professional adaptation [31]. The factors motivating them to act may vary; therefore, the case of each employee should be considered individually [36].

Due to the fact that a large group of nurses will reach retirement age in the upcoming years, there will emerge a need for nurses of the younger generations to take over managerial positions. As shown in the study by Moyo, despite significantly less professional experience, these nurses have high aspirations for managerial positions [37].

The process of building a good working environment should be based on implementing strategies that enable present and future generations to operate effectively and to have a sense of involvement. Therefore, it is important for team leaders to be knowledgeable about the management of multigenerational teams.

DISCUSSION

The results of the analyzes were aimed at assessing the influence of generation differences on intergenerational cooperation among nurses. The first step towards identifying the disadvantages resulting from intergenerational differences may be activities such as encouraging an open dialogue, striving to achieve the desired respect, and positive behavior in the nursing work environment [1]. At the same time, effective management in the workplace will avoid serious consequences for employees, but also health care organizations, such as premature departure from practice. Training for the management of teams from different generations should be organized to strengthen their competencies in this area and to make people aware of the differences [38].

Based on the results of the research, development programs for individual generations can be planned. Such activities will contribute to improving the health of employees as well as increasing their efficiency, which will be reflected in the quality of nursing care that strengthens the health protection system.

CONCLUSIONS

Building a work environment for multigenerational nursing teams should be based on knowledge regarding intergenerational differences. Each generation has its own attitudes and expectations towards work; thus, the professional development of the employees should be based on building up their strengths and, at the same time, supporting them in areas of increased difficulties. Managers, who are usually accustomed to the attitudes and values of Baby Boomer and Generation X nurses (willing to work overtime with great commitment), should also take into account the need for a work-life balance in employees of the younger generations. The support of mentors and development opportunities are crucial aspects of work for nurses at the beginning of their professional careers. Encouraging colleagues to engage in open dialogue with respect for nurses of every generation will help to increase the effectiveness of communication. At the same time, it is important to develop skills in this area through training sessions and workshops in multigenerational groups. Promoting the exchange of knowledge and work experience in daily nursing practice will help each generation to achieve its full potential, which will, in turn, enable nurses to provide high quality patient care, and, at the same time, achieve job satisfaction.

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REFERENCES

- Leiter MP, Jackson NJ, Shaughnessy K. Contrasting burnout, turnover intention, control, value congruence and knowledge sharing between Baby Boomers and Generation X. J. Nurs. Manag. 2009 Jan; 17(1): 100-109. doi: 10.1111/j.1365-2834.2008.00884.x. PMID: 19166528.
- Kupperschmidt BR. Multigeneration employees: strategies for effective management. Health Care Manag (Frederick). 2000 Sep; 19(1): 65-76. doi: 10.1097/00126450-200019010-00011. PMID: 11183655.
- Hampton D, Welsh D. Work Values of Generation Z Nurses. J. Nurs. Adm. 2019; 49(10): 480-486.
- Stutzer K. Generational Differences and Multigenerational Teamwork. Crit Care Nurse. 2019 Feb; 39(1): 78-81. doi: 10.4037/ccn2019163. PMID: 30710039.
- Wilson B, Squires M, Widger K, et al. Job satisfaction among a multigenerational nursing workforce. J Nurs Manag. 2008 Sep; 16(6): 716-723. doi: 10.1111/j.1365-2834.2008.00874.x. PMID: 18808466
- Hampton D, Welsh D, Wiggins AT. Learning Preferences and Engagement Level of Generation Z Nursing Students. Nurse Educ. 2020; 45(3): 160-164.
- Naczelna Izba Pielęgniarek i Położnych. Liczba pielęgniarek i położnych wg przedziałów wiekowych a podstawie daty urodzenia. https://nipip.pl/liczbapielegniarek-poloznych-wg-przedzialow-wiekowych-podstawie-daty-urodzenia/ [data dostępu: 18.01.2021r.]
- Naczelna Rada Pielęgniarek i Położnych. Wstępna ocena zasobów kadrowych pielęgniarek i położnych w Polsce do roku 2020. Warszawa, czerwiec 2010.https:// arch.nipip.pl/attachments/article/1782/Wstepna.ocena.zasobow.kadrowych.pdf [data dostępu: 18.01.2021r.].
- 9. Grubb VM. The new workplace reality. In clash of the generations. Hoboken NJ. USA: John Wiley & Sons; 2016. https://doi.org/10.1002/9781119220640.
- 10. Zemke R, Raines C, Filipczak B. Generations at work: Managing the clash of boomers, Gen Xers and Gen Yers in the workplace. New York; 2013, NY: AMACOM.
- 11. Babiker A, El Husseini M, Al Nemri A, et al. Health care professional development: Working as a team to improve patient care. Sudan J. Paediatr. 2014; 14(2):.9-16. PMID: 27493399; PMCID: PMC4949805.
- Moore JM, Everly M, Bauer R. Multigenerational Challenges: Team-Building for Positive Clinical Workforce Outcomes. Online J. Issues Nurs. 2016 May 31; 21(2): 3. doi: 10.3912/0JIN.Vol21No02Man03. PMID: 27854424.
- 13. Ridley D. The literature review: A step-by-step guide for students. London 2012, UK: Sage.
- Brunetto Y, Shriberg A, Farr-Wharton R, et al. The importance of supervisor-nurse relationships, teamwork, wellbeing, affective commitment and retention of North American nurses. J. Nurs. Manag. 2013 Sep; 21(6): 827-837. doi: 10.1111/jonm.12111. Epub 2013 Jul 29. PMID: 23890080.
- Wieck K, Dols J, Landrum P. Retention priorities for the intergenerational nurse workforce. Nurs. Forum. 2010; 45: 7-17.
- Brunetto Y, Farr-Wharton R, Shacklock K. Communication, training, well-being, and commitment across nurse generations. Nurs. Outlook. 2012 Jan-Feb; 60(1):.7-15. doi: 10.1016/j.outlook.2011.04.004. Epub 2011 Jun 23; PMID: 21703652.
- Cahill TF, Sedrak M. Leading a multigenerational workforce: strategies for attracting and retaining millennials. Front Health Serv. Manage. 2012 Fall; 29(1): 3-15. PMID: 23050333.
- Haile KK, Asnakew S, Waja T, et al. Shift work sleep disorders and associated factors among nurses at federal government hospitals in Ethiopia: a crosssectional study. BMJ Open. 2019; 9: e029802.
- Anselmo-Witzel S, Heitner KL, Dimitroff LJ. Retaining Generation Y Nurses: Preferred Characteristics of Their Nurse Managers. J. Nurs. Adm. 2020 Oct; 50(10): 508-514. doi: 10.1097/NNA.00000000000926. PMID: 32889974.
- Hisel ME. Measuring work engagement in a multigenerational nursing workforce. J Nurs Manag. 2020 Mar; 28(2): 294-305. doi: 10.1111/jonm.12921. PMID: 31788903.
- Bittner A. Mentoring millennials for nursing leadership. Nursing. 2019 Oct; 49(10): 53-56. doi: 10.1097/01.NURSE.0000580656.81188.ee. PMID: 31568084.
- Serafin L, Danilewicz D, Chyla P, et al. What is the most needed competence for newly graduated generation z nurses? Focus groups study. Nurse Educ. Today. 2020 Nov; 94: 104583. doi: 10.1016/j.nedt.2020.104583. Epub 2020 Aug 29. PMID: 32920466.
- Hampton D, Keys Y. Generation Z: emerging force in the work- place. Voice Nurs. Leadersh. 2016; 14(6): 14-16.
- Stutzer K. What's age got to do with it? Managing a multigenerational workforce. Session presented at: National Teaching Institute & Critical Care Exposition; May 21, 2018; Boston, MA.
- Stanley D. Multigenerational workforce issues and their implications for leadership in nursing. J. Nurs. Manag. 2010; 18(7): 846-852.
- Riggs CJ. Multiple generations in the nursing workplace: part I. J. Contin. Educ. Nurs. 2013 Mar; 44(3): 105-106. doi: 10.3928/00220124-20130222-04. PMID: 23444877.

- Stevanin S, Bressan V, Vehviläinen-Julkunen K, et al. The Multidimensional Nursing Generations Questionnaire: development, reliability, and validity assessments. J. Nurs. Manag. 2017 May; 25(4): 287-296. doi: 10.1111/jonm.12465. Epub 2017 Feb 6. PMID: 28164399.
- Thompson JA. Why work in perioperative nursing? Baby boomers and Generation Xers tell all. AORN J. 2007 Oct; 86(4): 564–587. doi: 10.1016/j.aorn.2007.03.010. PMID: 17931539.
- 29. Huber P, Schubert HJ. Attitudes about work engagement of different generations-A cross-sectional study with nurses and supervisors. J. Nurs. Manag. 2019 Oct; 27(7): 1341–1350. doi: 10.1111/jonm.12805. Epub 2019 Jul 17. PMID: 31136020.
- Saber DA. Generational differences of the frontline nursing workforce in relation to job satisfaction: what does the literature reveal? Health Care Manag (Frederick). 2013 Oct-Dec; 32(4): 329-335. doi: 10.1097/HCM.0b013e3182a9d7ad. PMID: 24168868.
- Iorgulescu MC. Generation Z and its perception of work. Cross-Cultural Management Journal. 2016; 18(1): 47-54.
- Bullington J, Söderlund M, Bos Sparén E, et al. Communication skills in nursing: A phenomenologically-based communication training approach. Nurse Educ. Pract. 2019 Aug; 39: 136-141. doi: 10.1016/j.nepr.2019.08.011. Epub 2019 Aug 28. PMID: 31487674.
- David L, Alderson GG, Brown W, et al. Operational Models of Infrastructure Resilience. Risk Analysis. Vol. 35, Issue 4 p. 562-586. https://doi.org/10.1111/risa.12333.
- Skiba DJ, Barton AJ. Adapting your teaching to accommodate the net generation of learners. Online J. Issues Nurs. 2006 May 31; 11(2): 5. PMID: 17201579.
- NDMU Celebrates Graduation 2019. https://notredamegators.com/news/2019/5/20/ general-ndmu-celebrates-graduation-2019.aspx [data dostępu:10.02.2021r.]
- Singh AP, Dangmei, J. Understanding the Generation Z: the future workforce. South-Asian Journal of Multidisciplinary Studies (SAJMS). 2016; 3(3): 1–5.
- Moyo MR. Adapting the Nurse Manager Role to Attract Generation X and Millennial Nurses. Am. J. Nurs. 2019 Mar; 119(3): 11. doi: 10.1097/01.NAJ.0000554016.08401. b7. PMID: 30801296.
- Tan TC, Zhou H, Kelly M. Nurse-physician communication An integrated review. J. Clin. Nurs. 2017 Dec; 26(23-24): 3974-3989. Doi: 10.1111/jocn.13832. Epub 2017 May 18. PMID: 28370533.

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