



Shared Decision-Making in Emergency Room Setting: A Concept Analysis

Aric Vranada^{1,2,*}, Jiin-Ru Rong², Satriya Pranata¹

¹ Faculty of Nursing and Health Sciences; Universitas Muhammadiyah Semarang

² Nursing Department, School of Nursing, National Taipei University of Nursing and Health Sciences

ARTICLE INFO

Article history:

Received 15 July 2021
Accepted 29 October 2022
Published 10 November 2022

Keyword:

share decision-making,
emergency room
concept analysis

*) corresponding author

Aric Vranada

Nursing Department, Faculty of
Nursing and Health Sciences,
Universitas Muhammadiyah Semarang
Jl. Kedungmundu Raya, No.18,
Tembalang, Semarang, Jawa Tengah,
Indonesia, 50273

Email: aricvranada@unimus.ac.id
DOI: 10.30604/jika.v7iS2.1393

Copyright @author(s)

ABSTRACT

Shared decision-making (SDM), a cooperative process that allows health professionals and patients to share the best accessible evidence for making decisions, is extensively accepted and developed in general ward of hospital settings. However, the concept's implementation in an emergency department (ER) setting has not been comprehensively clarified. The objective of this analysis was to describe and elucidate the concept of SDM in the ER setting. The Walker and Avant's concept analysis process was used to analyzing the concept of SDM. Four key defining attributes were identified: "active participation of health professionals and patients or their surrogates; collaborative partnership; reaching a compromise; and common goal for patient's health care". The antecedent's analysis included "several options with different possible outcomes, substantial decisional conflict, the need to recognize the patient's health situation decision making, and willingness to participate in decision making". The consequences were identified as "decreased decisional, mutual empowerment, and patient health status improvement". SDM in the ER setting is a communication process involving health care professionals, patients, and patients' surrogates. The process has the potential to overcome traditional power dynamics and encourage changes that could improve the dyadic relationship.

This open access article is under the CC-BY-SA license.



INTRODUCTION

The practice of "shared decision-making" (SDM) is fundamental in the healthcare professional and patient relationship (Elwyn et al., 2012), particularly in the emergency room (ER), where SDM can face distinctive challenges since patients or their surrogates and emergency health care professionals frequently have no accustomed mutual relationship, and most of the decisions about patient's diagnosis, treatment, and arrangement are time-dependent (Kraus & Marco, 2016). In the ER circumstances, the relationship between patients, surrogates, and healthcare providers is integrally intricate (Flynn et al., 2012). The interaction between people engages communication in imbalanced positions, is often unintended and involuntary

that may induce emotionally loaded issues of critical importance to the patient and needs close collaboration between both parties (O' Connor et al., 2003).

According to the development of the healthcare management system, healthcare delivery has changed from a "paternalistic decision-making" relationship to SDM in the past two decades (Park & Cho, 2018). The paternalistic relationship is a relationship between the healthcare provider and patient or their surrogates that decision-making is more executed by healthcare providers (Flynn et al., 2012). Whereby SDM is determined, wherein both healthcare professionals and patients or surrogates play vigorous responsibilities by exchanging information and achieving agreement according to recent healthcare evidence (Park & Cho, 2018). With the increasing

development of medical technology and challenging decision-making encountered due to trade-offs between the pros and cons of various available options in the ER area, there is an emergent necessity to understand the concept of "decision-making" in the ER (Kanzaria et al., 2015)

To date, SDM is broadly accepted and explored in the general wards of hospital settings, focusing on "medical decisions" correlated with substantial status of morbidity (Hess et al., 2015). Considering the achievement of SDM implementation within these settings, integrating SDM into emergency care settings is an important point to be implemented (Kanzaria et al., 2015). However, developed concepts and evidence of SDM from general wards cannot always be adapted and applied on the ER setting (Park & Cho, 2018). Proxy "decision-making" in the ER varies from that in general wards settings (Pham et al., 2011). Furthermore, considering the situation, patients are unconscious, facing critical conditions, or unresponsive to getting involved in decision-making, the process might involve family or patients' surrogates (Hess et al., 2015). Moreover, the simple decision in the general ward might become more complicated in emergency care settings, mainly because ER circumstances are usually very crowded, stressful, and need a very rapid time to decide on every condition (Flynn et al., 2012).

To date, the implementation of the SDM concept in an ER setting has not been comprehensively clarified. Therefore, identifying and analyzing the concept of SDM in the ER setting is magnificent to provide clear evidence for its application in the ER setting.

The foremost aim of the current concept analysis was to elucidate the concept of SDM in the ER setting by identifying "attributes, antecedents, and consequences" that contributed to understanding its application within the healthcare system and provided an operational definition for upcoming studies and investigations.

METHOD

This written paper provides an operational definition of SDM as the first step in the analysis concept. Applying the method described by Walker & Avant (2018), this analysis study identifies a systematic eight-phase analytical procedure that includes: "1) selecting a concept; 2) determining the purposes of analysis; 3) identifying all uses of the concept; 4) determining of the defining attributes; 5) identifying a model case; 6) identifying additional related concepts; 7) identifying antecedents and consequences, and 8) defining empirical referents". The first and second phases of Walker and Avant's method are mentioned in the earlier section, while the subsequent phases are described in the following result and discussion sections.

This analysis used "shared decision-making" as a concept of interest, which is articulated in diverse terminologies in the literature, including: "collaboration," "discussion," "participation," and "partnership" between healthcare providers and patient or their surrogates. These terminologies were reflected to have similar characteristics with the selected concept. For the analysis, the resource finding was limited to nursing literature from various bibliographical databases such as "Web of Science, MEDLINE, CINAHL, and PubMed". Peer-reviewed English research articles published between 2000 and 2021 were identified and evaluated. Additional relevant resources that supplemented and enhanced the study analysis were also discovered and appraised. A total of 122 publications were identified in the preliminary search. After eliminating duplications using Endnote, the relevant title and abstract

were assessed. Twenty-five publications that fit with the inclusion criteria were retrieved. Moreover, these articles were carefully analyzed and evaluated to identify the "attributes, antecedents, and consequences" of SDM.

RESULTS AND DISCUSSION

Identifying Uses of The Concept'

The preliminary phase of analysis was identifying the general definition of "shared decision-making" terminologies in the dictionaries and relevant-published resources. According to 'The New Oxford Dictionary of English' (2010), SDM is derived from two words: 'shared' and 'decision-making.' Shared is an adjective form that means distributed between members of a group. Another definition describes that shared is having a portion of something with another or another, telling someone about something, and having a part in something, especially an activity. The synonym of shared, based on the oxford dictionary, is mentioned, such as split, divide, apportion, allocate, distribute, dispense, deal out, take part in, have a role in, contribute to and play a part in. However, 'decision-making' is a noun that means the action or process of making the decision, especially the important one. So, based on The Oxford Dictionary, shared decision-making can be defined as participation between members of a group to take action in making the decision, in which every member has an equal role within the process.

The literature discovery outlined a vast amount of literature from numerous disciplines such as medical ethics and health services research. The term SDM arose in the medical field, defined as "a process in which both the patient and physician contribute to the medical decision-making" (Bae, 2017). Another preceding study also supported that during the implementation of SDM, "health care providers explain treatments and alternatives to patients to provide the necessary resources to choose the treatment option that best aligns with their unique cultural and personal beliefs" (Florin et al., 2008). Furthermore, previous literature also mentioned that SDM had been defined as "an approach where clinicians and patients share the best available evidence when faced with the task of making decisions, and where patients are supported to consider options, to achieve informed preferences" (Elwyn et al., 2012).

SDM is a major element of 'patient-centered health care' (Johnson, 2021). It is "a process in which clinicians and patients work together to make decisions and select the specific assessments, treatments, and care plans based on clinical evidence that balances risks and expected outcomes with patient preferences and values" (Oshima Lee & Emanuel, 2013). In addition, SDM is also defined as "a collaborative process that allows patients and healthcare providers to make decisions together when more than one reasonable alternative exists, accounting for the patient's unique preferences and priorities and the best scientific evidence available" (Akl et al., 2007; Montori et al., 2006)

Determining Of Attributes

According to the previous literature review described in the earlier steps, the next phase of concept analysis was exploring the concept's attributes. Outlining attributes, "similar to signs and symptoms", are essential elements that assist to discriminate one specific concept from another associated concept and elucidate its meaning (Walker &

Avant, 2018). Four key defining attributes have been identified for the concept of the SDM in the ER setting such as “(1) Active participation of health professionals and patients or their surrogates, (2) collaborative partnership, (3) reaching a compromise, and (4) common goal for patient’s health care”. Those defining attributes are described as follows:

Active Participation of Health Professionals, Patients and Family or Their Surrogates

The robust attribute defined in this study analysis was “the active participation of health professionals and parents or their surrogates”. Majority of articles described that SDM was expressed “as the active participation of more than one patient and professional in single or sequential medical encounters” (Smalley et al., 2014). During the SDM, “at least two participants actively interacted to reach an agreement, and if one participant was unwilling or unable to participate, it was not considered as the SDM” (Flynn et al., 2012). Hess et al., (2015) suggested that “SDM in the ER field is distinctive because the challenges often occur in a chaotic setting with no pre-established relationship between the patient or surrogates and the healthcare providers”. However, the patients who come to the emergency room, particularly those considered with the illness acuity were barely involved or unlikely to participate in clinical discussion in the ER setting (Pham et al., 2011). In the ER settings, patient’s families or surrogates were considered the important participants in the decision-making procedure and eventually responsible for the patients (Su et al., 2020). They possessed willingness to make decisions that “represented the best options for the patients” (Probst et al., 2016). Therefore, preceding studies have considered this triadic nature relationship and generally focused on the interaction between patient’s family or’ surrogates and health care providers (Park & Cho, 2018). Family or patient surrogates’ participation can take several forms, including communicating opinions on the accessible preferences, providing or withholding agreement, collaborating with health care providers, and performing independent decision-making (Pham et al., 2011). Another prior study showed “the extent of patients’ participation varied according to their acuity of illness and environmental factors, and they desired to participate more than they could” (Coyné et al., 2014). Coyné et al., (2014) also stated that “patients with acute stage of disease were showing less willingness to participate in decision-making”. Butler et al., (2015) also found that “patients with psychological health and comorbid conditions were showing lower decision-making participation levels than were those with physical illness disorders”.

‘Collaborative Partnership’

The subsequent attribute of SDM in emergency care settings was a “collaborative partnership”, which was defined as “mutuality and equality between patients, family or surrogates and health professionals” (Hess et al., 2015). According to the existed study, “open-mindedness, mutual respect, and trust” were principal factors of this partnership (Flynn et al., 2012). Hess et al., (2015) recommended that “the SDM process included each individual’s perception of their expertise and respect for others”. Health professional expertise can be considered as their guidance capability in framing diagnosis, etiology, prognosis, treatment preferences, and outcome probability (Allen, 2014), while

patient, family or surrogates’ expertise included “knowledge, experience with the patient’s illness, and social situations” (Aarthur & Akerjordet, 2014). Confessing preferences, as well as understanding patients and families or surrogates’ experiences and values, is contributed a fundamental function in SDM (Lipstein et al., 2012). The partnership also encompasses “sharing information and responsibility” and it is reported to be a principal part of decision-making by parents for the patients (Hess et al., 2015). Ideal SDM engages “equal and balanced information exchange, rather than merely transferring information from the experts” (Flynn et al., 2012). Evolving effective-collaborative partnerships such as sharing an information and target outcome with patients and their families or surrogates, is considered essential to family-centered care (Mckenna et al., 2010). Allen (2014) suggested that SDM should allow for open communication because it can decrease miscommunication, which contribute to distrust. Hence, “good clinical communication skills that include the development of a rapport are necessary for constructing partnerships”. SDM could be enhanced when the healthcare providers and patient, family, or surrogates share knowledge and responsibility, and also proportionately contribute to determining the best treatments for patients in an ER setting (Flynn et al., 2012).

‘Reaching a Compromise’

The third identified attribute of the concept was “Reaching a compromise”. It refers to “achieving an outcome via mutual agreement” (Hess et al., 2015). The collaboration process between healthcare professionals and patients, family, or surrogates is described as “a negotiation that should ideally result in an agreement or joint decision” (Probst et al., 2016). In the decision-making practice, healthcare professionals naturally describe and explain the patients’ health problems and provide the available options for the treatments along with the advantages and disadvantages information (Kanzaria et al., 2015). Patients, family or surrogates, and health care professionals then discuss the evidence for the possible therapies, benefits and risks (Barry & Edgman-Levitan, 2012). After determining the outcomes, determining the preferences during the deliberation process is another substantial aspect for the patient and family or surrogates. Then it is progressed to decision-making action (Probst et al., 2016). Thus, “patients, family or surrogates, and healthcare providers interacted while reaching a compromise”, resulting in reciprocated agreement about the patient’s care plans and treatments in the ER setting (Flynn et al., 2012)

‘Common Goal for Patient’s Health’

The last attribute was “the common goal for the patient’s health”. In general, “SDM can be regarded as a process that involves seeking a common goal or shared purpose” (Elwyn & Vermunt, 2020). In majority studies, patients, family or surrogates, and healthcare providers involve in this procedure to accomplish a definite purpose. Having the patient’s best preferences in mind was essential to “decision-making” based on the acuity of illness and condition in an ER setting (Lighthall & Vazquez-Guillamet, 2015). Sometimes, families’ views about the patient’s best preferences differ from those of health professionals (Kanzaria et al., 2015). However, during decision-making process they considered and intended to enhance the

patient's health and well-being. Probst et al., (2016) conveyed that "patients' quality of life and well-being were the most important issues in decision-making regarding their care". The mutual objectives of SDM elaborated in the literature were achieving illness control and maintaining a patient's health and well-being.

'Identifying The Antecedents and Consequences'

Walker & Avant (2018) describe "antecedents as events or incidents that must occur before the occurrence of a concept, while consequences are events that occur as a result of it. Identifying antecedents and consequences can shed light on the social contexts within which the concept is used and help in refining the defining attributes; an attribute cannot be an antecedent or consequence at the same time"

Antecedents

Identifying "antecedents" assists to "delineate attributes or events that emerge before the embodiment of the concept" (Walker & Avant, 2018). Rodgers & Knafel (2000) explained "antecedents as preceding causes associated with the concept of interest". In this study analysis, the main antecedent to SDM in ER setting was "*the existence of several options with different outcomes: substantial decisional conflict*". Hargraves et al., (2019) conceived that "SDM was particularly helpful in clinical situations involving multiple evidence-based options with other pros and cons". The demand for 'preference-sensitive judgments' might raise 'decisional conflict'. Decisional conflict is "a condition of uncertainty over a course of action when two or more clinically appropriate alternatives contain benefits and risks that patients value differently". (Stacey et al., 2008). In the ER setting, patients, family or surrogates, and health professionals face extensive uncertainty because of insufficient or inconclusive results of research evidence (Hess et al., 2015). Furthermore, Flynn et al., (2012) recommended that SDM requires "*recognizing the patient's health situation* or condition, and the case in which the decision is required should be agreed upon". "*Participants' willingness to participate in decision-making*" was another important key of antecedent. After being presented with a variety of options, patients or families may prefer to let healthcare providers make the decision (Levinson et al., 2005). Hence, their preferences for the involvement level must be taken into account before including them in decision-making (Allen, 2014). Furthermore, if patients or families or surrogates are willing to participate but healthcare providers do not, then "SDM do not occur". Therefore, SDM requires patients, family, or surrogates, and healthcare providers' involvement in the procedure of decision-making.

'Consequences'

In concept analysis, "consequences are defined as situations following the occurrence of a concept" (Walker & Avant, 2018). The analysis indicated "decreasing decisional conflict" as the most frequent outcome or consequences. In most studies, family or patient's surrogates expressed reduced uncertainty regarding the patient's future health status (Flynn et al., 2012). Furthermore, previous investigations have shown that "SDM could help clarify the ambiguity regarding patients' future health, as decisions were made by considering the best evidence and patients'

values and preferences, improving decision quality" (Hess et al., 2015). Moreover, one study conducted by Coyne et al., (2014) revealed that parents with more involvement in the decision-making practice when their children were admitted to ER, they experienced "less decisional conflict" than those "less engaged". SDM also demonstrates shared benefits. Hess et al., (2015) reported that SDM leads to "mutual empowerment and personal development", as it provides participants an opportunity for involvement in decisions affecting mutual understanding. Another advantage of the SDM has "improved patients' health". Some studies reported the consequences of SDM positively contributed to patients' health outcomes (Jenkinson et al., 2002). Ultimately, the consequences of active engagement in SDM improved "patient's healthcare quality" (Barry & Edgman-Levitan, 2012)

Model Of Concept Analysis

According to the explanation mentioned and described above in the previous steps of concept analysis, the model concept of SDM in the ER setting can be defined in figure 1.

Identifying Related Concepts

Related terminologies were identified as "expressions used interchangeably with SDM in the literature". "*Collaborative decision-making*", described as "involving family or patient's surrogates in treatment planning and encouraging decision-making in the context of the family's personal values" (Mak et al., 2014), was applied as an alternative term for SDM. Earlier study recommended that collaboration in decision-making improved patient's health outcomes, relationships between patients' families and professionals, and satisfaction among the patient's surrogates or family members (Mak et al., 2014). Walker & Avant (2018) encouraged "identification of related concepts, which bear some relationship to the concept of interest but do not share the same attributes, to clarify concepts further". The results of reviewed studies revealed that various terminologies, including "decision aids and decision coaching" were correlated to SDM. In the major articles, these concepts were applied as an approach or method to promote patient, family, or surrogates' involvement and empowerment in the SDM procedure. (O'Connor et al., 2003). For the illustration, Stacey et al., (2008) conceived "decision coaching" as the "key feature mediating effective SDM". Decision coaching efficiently assisted patients "consider their informed values, which directed them through the decision-making practice" (Jull et al., 2019). Some healthcare providers can implement it as the patients' guideline through decision-making and assist them elucidate their personal principles using evidence-based outcomes of the presented treatment preferences (Stacey et al., 2008). Moreover, "patient decision aids" improve "knowledge and realistic insight of benefits and risks, reduce decisional conflict and improve the match between patients' informed values and chosen options" (O'Connor et al., 2003). Many researchers suggest that nurses are well positioned to use patient decision aids and decision coaching strategies to identify decisional conflict and provide decisional support (Bejarano et al., 2015). Decision coaching combined with patient decision aids led to patients exhibiting higher decision-making participation and knowledge (O'Connor et al., 2003), thereby encouraging higher patient involvement in decision-making.

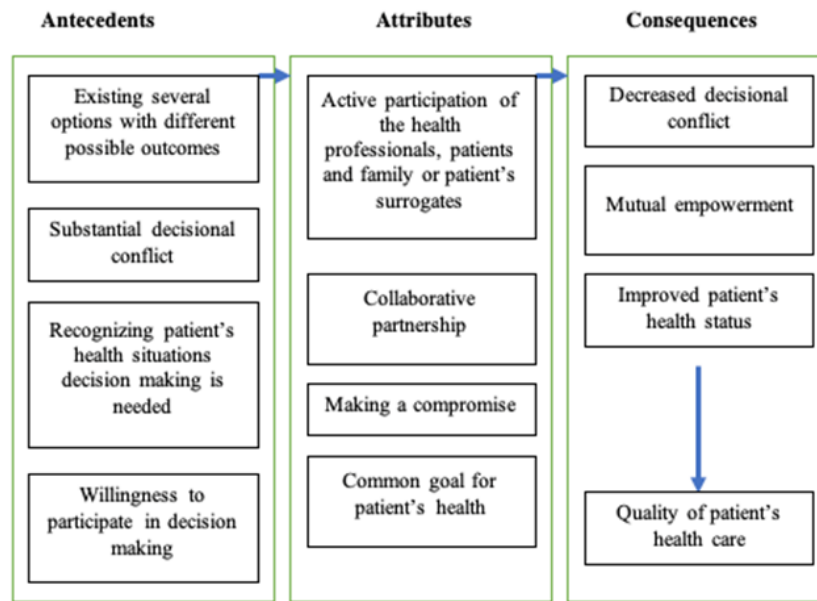


Figure 1. SDM Model in the emergency care setting

Identifying Case Studies

To broaden expand the analysis of SDM concept in ER settings, three classifications of case studies are described. “The model case demonstrates all of the defining attributes of the concept”, while “the borderline case contains most of the attributes, but not all of SDM attribute are mentioned”. Both of these two cases studies help to articulate the concept’s meaning more fully. The last case study is contrary case that reflects an absence of the attributes of SDM (Walker & Avant, 2018)

Model Case

Mr. S, a 16-year-old, came with his parents to the emergency room of B hospital with an open fracture with a visible rupture bone in his left foot because of a motorcycle accident. The condition of Mr. S was conscious, but he looked painful and mostly crying. ER physicians and nurses quickly did an assessment and treated the bleeding. The Doctor then performed an X-ray and concluded the diagnosis that Mr. S had encountered a complete fracture. ER Doctor and nurse came to the patient, and both his parents told and described the patient’s condition, explaining the medical treatment risk and benefits for the patient. The parent showed enthusiasm in discussing the patient’s condition and the best treatment for the patient. As the one closer to the patient, the parent also explained that the patient had never been experiencing hospitalized before. He might be afraid and anxious about all the hospital equipment during hospitalization. The parent asked the health care provider to decrease patient’s anxiety level and fear before the surgery. Then the healthcare provider agreed to do some skills of giving information that easy to understand for patient.

This model case study fully demonstrated all four attributes of shared decision-making: “*active participation of health professionals and patients or their surrogates, collaborative partnership, reaching a compromise, and a common goal for patient’s health care*”.

Borderline Case

Mr. S, a 16-year-old, came with his parents to the emergency room of B hospital with an open fracture with a visible rupture bone in his left foot because of a motorcycle accident. The condition of Mr. S is conscious, but he looked painful and mostly crying. The ER physician and nurses quickly did an assessment and treated the bleeding. The doctor then did an X-ray and concluded that Mr. S had encountered a complete fracture. ER doctor and nurse come to the patient, and both his parents sit together to discuss the patient’s condition based on the result of the assessments. Because this is the first time the parent experiencing this condition in their family life, both father and mother act stressfully and very anxious. Otherwise, the parent still showed a willingness to discuss the patient’s condition and the best treatment for the patient. On the other hand, although the doctors explained the assessment result, doctors mostly used medical terms to describe the patient’s condition that did not explain properly using language that parents could understand. In the final decision, the doctor only gave a choice to do surgery without defining the exact type of surgery. Afterward, the parent agreed to do surgery without deeply understanding about that. In their mind, it is the best choice to solve their kind’s problem.

Based on the borderline scenario case above, only two attributes of shared decision-making are realized: “*an active partnership between health professionals and parents and a decision of a common health goal for the patient*”. Although the active discussion participation between doctor and parent is acknowledged, the communication tends to be one way. However, collaborative partnership and making compromises be could not be realized.

Contrary Case

Mr. S, a 16-year-old, came with his parents to the emergency room of B hospital with an open fracture with a visible rupture bone in his left foot because of a motorcycle accident. The condition of Mr. S is conscious, but he looked

painful and mostly crying. The ER physician and nurses quickly did an assessment and treated the bleeding. After that, the doctor did an X-ray, concluding that Mr. S encountered a complete fracture. Without telling the prognosis of the patient's condition, options of treatment or risks, and benefits of the therapy, the ER doctor came to the parent and let them know the patient needed to do surgery. Because this is the first time the parent experiencing this condition in their family life, both father and mother act stressfully and very anxious. The parent was less willing to listen to the doctor's suggestion because of anxiety. In the final decision, the parents let the doctor do surgery without further discussion. After 8 hours of surgery was done, there was a problem with the patient encounter. The patient never screams out for the pain he feels. Then parents begin to be stressed and anxious, expressing their emotion and anger to the ER doctor and health professionals that they did not do the best treatment for the patient.

This final case reflects an absence of the attributes of SDM. "Active participation of health professionals and patients or their surrogates, collaborative partnership, reaching a compromise, and common goal for patient's health care" are not met in the realization".

Identifying Empirical Referents

The last stage of the concept analysis method is determining empirical referents for the defining attributes. Empirical referents are "measurable ways to demonstrate the occurrence of the concept" (Walker & Avant, 2018). In Walker and Avant's opinion, "the existence of the concept through measurement must be determined when a concept is unclear" (Walker & Avant, 2018). There are several measures of SDM available that may help quantify the process and its outcome. First, the "Decisional Conflict Scale" was developed by O'Connor et al., (2003). It comprises a "16-item survey that measures the degree of conflict patients' experience related to feeling uncertain when choosing between management options. The survey has five subscales: uncertainty, informed, values clarity, support, and effective decision". A short four-item version called the SURE scale is available. The second instrument, identified as "Decision Regret", developed by Brehaut et al., (2003) which, consists of "five items that assess the amount of regret after a decision". Third, "SDM-9", developed by Kriston et al., (2010), consists of "a nine-item survey that measures shared decision-making in the clinical encounter". Two versions are available: "one for patients (SDM-9-Q)" and "another one for doctors (SDM-9-Doc)". The last measurement tool is the "Decision Quality Instrument" developed by Sepucha et al., (2016). It comprises "a short form that includes five decision-specific knowledge items and one treatment preference item".

LIMITATION OF STUDY

This current study was conducted as a concept analysis by utilizing Walker & Avant's concept analysis method. In order to shed light on concept constructs, they propose that researchers need to discover at least 25-30 relevant articles. However, this current analysis study only involve 25 publications elaborating SDM in the ER for this study. Thus, it might not be comprehended that the study reveals the entire construct of the concept.

CONCLUSION & SUGGESTION

In this concept analysis, four attributes, three antecedents and four consequences were extracted. The concepts involved in decision-making by healthcare providers, patient and families choosing the treatment in ER. SDM in the ER setting is a communication process, involving health care professionals, patients and patients' surrogates. The process has the potential to overcome traditional power dynamics and encourage changes that could improve the dyadic relationship. This study presents a theoretical understanding of the concept of SDM in the ER setting. Additionally, by integrating this concept into ER setting, it can benefit to decrease gap between 'theory and practice'. This study could shape a foundation to cultivate upcoming "interventions and situation-specific theory" for encouraging high-quality decision-making and also provide nursing scholars with insight into SDM in ER setting.

Acknowledgment

We gratefully acknowledge Ms. Stefanie, the editor from the "National Taipei University of Nursing and Health Sciences" who proofread this English manuscript. We also would like to thank to "National Taipei University of Nursing and Health Sciences" for providing us access to electronic nursing publication databases.

Funding Statement.

The study received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors

Conflict of Interest Statement

We disclose no potential conflicts of interest, financial and otherwise

REFERENCES

- Aarhun, A., & Akerjordet, K. (2014). Parent participation in decision-making in health-care services for children: an integrative review. *Journal of Nursing Management*, 22(2), 177–191. <https://doi.org/10.1111/J.1365-2834.2012.01457.X>
- Akl, E. A., Grant, B. J. B., Guyatt, G. H., Montori, V. M., & Schünemann, H. J. (2007). A decision aid for COPD patients considering inhaled steroid therapy: development and before and after pilot testing. *BMC Medical Informatics and Decision Making*, 7. <https://doi.org/10.1186/1472-6947-7-12>
- Allen, K. A. (2014). Parental decision-making for medically complex infants and children: an integrated literature review. *International Journal of Nursing Studies*, 51(9), 1289–1304. <https://doi.org/10.1016/j.ijnurstu.2014.02.003>
- Bae, J. M. (2017). Shared decision making: relevant concepts and facilitating strategies. *Epidemiology and Health*, 39, e2017048. <https://doi.org/10.4178/EPIH.E2017048>
- Barry, M. J., & Edgman-Levitan, S. (2012). Shared decision making--pinnacle of patient-centered care. *The New England Journal of Medicine*, 366(9), 780–781. <https://doi.org/10.1056/NEJMP1109283>
- Bejarano, C., Fuzzell, L., Clay, C., Leonard, S., Shirley, E., & Wysocki, T. (2015). Shared decision making in pediatrics: A pilot and feasibility project. *Clinical Practice in Pediatric Psychology*, 3(1), 25–36. <https://doi.org/10.1037/CPP0000086>
- Brehaut, J. C., O'Connor, A. M., Wood, T. J., Hack, T. F., Siminoff, L., Gordon, E., & Feldman-Stewart, D. (2003). Validation of a

- decision regret scale. *Medical Decision Making: An International Journal of the Society for Medical Decision Making*, 23(4), 281–292. <https://doi.org/10.1177/0272989X03256005>
- Butler, A. M., Elkins, S., Kowalkowski, M., & Raphael, J. L. (2015). Shared decision making among parents of children with mental health conditions compared to children with chronic physical conditions. *Maternal and Child Health Journal*, 19(2), 410–418. <https://doi.org/10.1007/S10995-014-1523-Y>
- Coyne, I., Amory, A., Kiernan, G., & Gibson, F. (2014). Children's participation in shared decision-making: children, adolescents, parents and healthcare professionals' perspectives and experiences. *European Journal of Oncology Nursing: The Official Journal of European Oncology Nursing Society*, 18(3), 273–280. <https://doi.org/10.1016/J.EJON.2014.01.006>
- Elwyn, G., Frosch, D., Thomson, R., Joseph-Williams, N., Lloyd, A., Kinnersley, P., Cording, E., Tomson, D., Dodd, C., Rollnick, S., Edwards, A., & Barry, M. (2012). Shared decision making: a model for clinical practice. *Journal of General Internal Medicine*, 27(10), 1361–1367. <https://doi.org/10.1007/S11606-012-2077-6>
- Elwyn, G., & Vermunt, N. P. C. A. (2020). Goal-Based Shared Decision-Making: Developing an Integrated Model. *Journal of Patient Experience*, 7(5), 688–696. <https://doi.org/10.1177/2374373519878604>
- Florin, J., Ehrenberg, A., & Ehnfors, M. (2008). Clinical decision-making: predictors of patient participation in nursing care. *Journal of Clinical Nursing*, 17(21), 2935–2944. <https://doi.org/10.1111/J.1365-2702.2008.02328.X>
- Flynn, D., Knoedler, M. A., Hess, E. P., Murad, M. H., Erwin, P. J., Montori, V. M., & Thomson, R. G. (2012). Engaging patients in health care decisions in the emergency department through shared decision-making: a systematic review. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine*, 19(8), 959–967. <https://doi.org/10.1111/J.1553-2712.2012.01414.X>
- Hargraves, I. G., Montori, V. M., Brito, J. P., Kunnehan, M., Shaw, K., LaVecchia, C., Wilson, M., Walker, L., & Thorsteinsdottir, B. (2019). Purposeful SDM: A problem-based approach to caring for patients with shared decision making. *Patient Education and Counseling*, 102(10), 1786. <https://doi.org/10.1016/J.PEC.2019.07.020>
- Hess, E. P., Grudzen, C. R., Thomson, R., Raja, A. S., & Carpenter, C. R. (2015). Shared Decision-making in the Emergency Department: Respecting Patient Autonomy When Seconds Count. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine*, 22(7), 856–864. <https://doi.org/10.1111/ACEM.12703>
- Jenkinson, C., Coulter, A., Bruster, S., Richards, N., & Chandola, T. (2002). Patients' experiences and satisfaction with health care: results of a questionnaire study of specific aspects of care. *Quality & Safety in Health Care*, 11(4), 335–339. <https://doi.org/10.1136/QHC.11.4.335>
- Johnson, C. B. (2021). A Personalized Shared Decision-Making Tool for Osteoarthritis Management of the Knee. *Orthopaedic Nursing*, 40(2), 64–70. <https://doi.org/10.1097/NOR.0000000000000739>
- Jull, J., Köpke, S., Boland, L., Coulter, A., Dunn, S., Graham, I. D., Hutton, B., Kasper, J., Kienlin, S. M., Légaré, F., Lewis, K. B., Lyddiatt, A., Osaka, W., Rader, T., Rahn, A. C., Rutherford, C., Smith, M., & Stacey, D. (2019). Decision coaching for people making healthcare decisions. *The Cochrane Database of Systematic Reviews*, 2019(7). <https://doi.org/10.1002/14651858.CD013385>
- Kanzaria, H. K., Brook, R. H., Probst, M. A., Harris, D., Berry, S. H., & Hoffman, J. R. (2015). Emergency physician perceptions of shared decision-making. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine*, 22(4), 399–405. <https://doi.org/10.1111/ACEM.12627>
- Kraus, C. K., & Marco, C. A. (2016). Shared decision making in the ED: ethical considerations. *The American Journal of Emergency Medicine*, 34(8), 1668–1672. <https://doi.org/10.1016/J.AJEM.2016.05.058>
- Kriston, L., Scholl, I., Hölzel, L., Simon, D., Loh, A., & Härter, M. (2010). The 9-item Shared Decision Making Questionnaire (SDM-Q-9). Development and psychometric properties in a primary care sample. *Patient Education and Counseling*, 80(1), 94–99. <https://doi.org/10.1016/J.PEC.2009.09.034>
- Levinson, W., Kao, A., Kuby, A., & Thisted, R. A. (2005). Not All Patients Want to Participate in Decision Making: A National Study of Public Preferences. *Journal of General Internal Medicine*, 20(6), 531. <https://doi.org/10.1111/J.1525-1497.2005.04101.X>
- Lighthall, G. K., & Vazquez-Guillamet, C. (2015). Understanding Decision Making in Critical Care. *Clinical Medicine & Research*, 13(3–4), 156. <https://doi.org/10.3121/CMR.2015.1289>
- Lipstein, E. A., Brinkman, W. B., & Britto, M. T. (2012). What is known about parents' treatment decisions? A narrative review of pediatric decision making. *Medical Decision Making: An International Journal of the Society for Medical Decision Making*, 32(2), 246–258. <https://doi.org/10.1177/0272989X11421528>
- Mak, L., Hiebert-Murphy, D., Walker, J. R., & Altman, G. (2014). Parents' Decision Making and Their Information Needs Concerning Treatments for Child Anxiety: Implications for Family-Centered Practice. *Journal of Family Social Work*, 17(1), 51–67. <https://doi.org/10.1080/10522158.2013.809671>
- Mckenna, K., Collier, J., Hewitt, M., & Blake, H. (2010). Parental involvement in paediatric cancer treatment decisions. *European Journal of Cancer Care*, 19(5), 621. <https://doi.org/10.1111/J.1365-2354.2009.01116.X>
- Montori, V. M., Gafni, A., & Charles, C. (2006). A shared treatment decision-making approach between patients with chronic conditions and their clinicians: the case of diabetes. *Health Expectations: An International Journal of Public Participation in Health Care and Health Policy*, 9(1), 25–36. <https://doi.org/10.1111/J.1369-7625.2006.00359.X>
- O'Connor, A. M., Légaré, F., & Stacey, D. (2003). Risk communication in practice: the contribution of decision aids. *BMJ (Clinical Research Ed.)*, 327(7417), 736–740. <https://doi.org/10.1136/BMJ.327.7417.736>
- Oshima Lee, E., & Emanuel, E. J. (2013). Shared Decision Making to Improve Care and Reduce Costs. *New England Journal of Medicine*, 368(1), 6–8. <https://doi.org/10.1056/NEJMP1209500>
- Oxford Dictionary. (2010). *Oxford dictionary of English*. UK: Oxford University Press.
- Park, E. S., & Cho, I. Y. (2018). Shared decision-making in the paediatric field: a literature review and concept analysis. *Scandinavian Journal of Caring Sciences*, 32(2), 478–489. <https://doi.org/10.1111/SCS.12496>
- Pham, J. C., Seth Trueger, N., Hilton, J., Khare, R. K., Smith, J. P., & Bernstein, S. L. (2011). Interventions to improve patient-centered care during times of emergency department crowding. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine*, 18(12), 1289–1294. <https://doi.org/10.1111/J.1553-2712.2011.01224.X>
- Probst, M. A., Kanzaria, H. K., Frosch, D. L., Hess, E. P., Winkel, G., Ngai, K. M., & Richardson, L. D. (2016). Perceived Appropriateness of Shared Decision-making in the Emergency Department: A Survey Study. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine*, 23(4), 375–381. <https://doi.org/10.1111/ACEM.12904>
- Rodgers, B. L., & Knafel, K. A. (2000). *Concept Development in Nursing: Foundation Techniques, and Applications* (2nd ed.). Saunders.
- Sepucha, K. R., Simmons, L. H., Barry, M. J., Levitan, S. E., Licurse, A. M., & Chaguturu, S. K. (2016). Ten Years, Forty Decision Aids, And Thousands Of Patient Uses: Shared Decision Making At Massachusetts General Hospital. *Health Affairs*, 35(4). <https://doi.org/10.1377/hlthaff.2015.1376>

- Smalley, L. P., Kenney, M. K., Denboba, D., & Strickland, B. (2014). Family perceptions of shared decision-making with health care providers: results of the National Survey of Children with Special Health Care Needs, 2009-2010. *Maternal and Child Health Journal*, *18*(6), 1316–1327. <https://doi.org/10.1007/S10995-013-1365-Z>
- Stacey, D., Murray, M. A., Légaré, F., Sandy, D., Menard, P., & O'Connor, A. (2008). Decision coaching to support shared decision making: a framework, evidence, and implications for nursing practice, education, and policy. *Worldviews on Evidence-Based Nursing*, *5*(1), 25–35. <https://doi.org/10.1111/J.1741-6787.2007.00108.X>
- Su, Y., Yuki, M., & Hirayama, K. (2020). The experiences and perspectives of family surrogate decision-makers: A systematic review of qualitative studies. *Patient Education and Counseling*, *103*(6), 1070–1081. <https://doi.org/10.1016/J.PEC.2019.12.011>
- Walker, L. O., & Avant, K. C. (2018). *Strategies for theory construction in nursing* (6th ed.). Pearson.