



Developing Family Satisfaction with Care in Adult Critical Care Public Hospital Terengganu, Malaysia

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Received: 22nd March 2021

Accepted: 25th April 2021

Published: 6th May 2021

Abstract

In admissions to the intensive care unit (ICU), there is a high possibility of a life-threatening condition and possible emotional distress for family members. When the family is distressed and hospitalized, a significant level of stress and anxiety will be generated among family members, thereby decreasing their ability to make responsible decisions. As a result, the family members need full and up-to-date details, helping them to retain hope, and this contributes to lower stress levels. While there is growing evidence of the effectiveness of shared decision-making for family members who are directly involved in decisions, particularly regarding shared decision-making in the Malaysian context, there is less evidence that supported decisions help overall outcome. This study aims to developing the family satisfaction with decision making in the Intensive Care Unit (FS-ICU)-33 Malay language version of family member's satisfaction with care and decision making during their stay at the intensive care units. A quantitative, cross-sectional validation study and purposive sampling was conducted from 1st November 2017 and 10 October 2018 to January 2020 among 208 of family members. The family members of the ICU patients involved in this study had an excellent satisfaction level with service care. Higher satisfaction in ICU care resulting in higher decision-making satisfaction and vice versa.

Keywords: family, satisfaction, satisfaction care, care service, developing, adult critical care

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INTRODUCTION

A family satisfaction had identified the importance of improving communication among physician and family members to increase family satisfaction in ICU (Ali et al., 2019). Effective communications are needed in fulfilling the families' needs for obtained information and supported by physician and nurses (Frivold et al., 2018) with the guideline to engagement and support when families present in ICU, structured information dan support during the consultation with their family (Brown SM, 2015; Davidson & Zisook, 2017) are important to increase satisfaction among family members in decision making.

Inconsistent information provided to the family members by the ICU staffs may influence their decision-making ability and overall satisfaction with ICU care (Hwang et al., 2014). Consistency of information had been identified as one of the predictors for family satisfaction (Pagnamenta et al., 2016). Exclusion from communication with ICU staffs (doctors or nurses) resulted in family members feeling left out during the decision-making process (Hansen et al., 2016). Organizing communication training programs for the health care professionals to increase their communication skills is one of the strategies that can be done to increase the satisfaction of

families with ICU management and care (Ludmir & Netzer, 2019). The findings from the family surveys that covered different aspects of patients care especially in intensive care settings were used as an indicator for initiating quality improvement programs (Maxim et al., 2019). Besides, assessing family satisfaction is important because it was used to assess how well the health care staff took care of their patients (Scott et al., 2019). Previous studies measuring family satisfaction on ICU care using FS-ICU in UAE (Ali et al., 2019), Hong Kong (Lam et al., 2015), German (Schwarzkopf et al., 2013), Swiss (Stricker et al., 2009), Australia (McLennan & Aggar, 2020) and UK (Ferrando et al., 2019), reported that the high score was high both satisfaction with care and satisfaction with decision making. The characteristics for both patients (severity of illness) and their families (age, race, patient relationship and visitation frequency) had been identified as determinants for families' satisfaction (Ferrando et al., 2019). Thus, the study aimed to examine care for the family satisfaction level in the Intensive Care Unit, Hospital Sultanah Nur Zahirah Malaysia (HSNZ).

MATERIALS AND METHODS

Study design and sample size

A cross sectional study was conducted from 1 November 2017 to 10 October 2018 in the medical and surgical ICU Hospital Sultanah Nur Zahirah, Terengganu. This study involved closed family members of patients such as spouse, son or daughter, siblings or parents who stayed together with the patient and who accompanied the patient in the ICU for at least 48 hours of admission and exclusion criteria are under age 18 years, hospital staff (health care provider), unable to read and foreigner family patient. All family members attended the Intensive Care Unit at Hospital Sultanah Nur Zahirah, Terengganu was recruited in this study by using Roasoft sample size such as population size, confident interval and margin error. Sample size obtained for this study was 292 with 95% confident interval, margin error and population size 1200 patients who were admitted in adult ICU Hospital Sultanah Nur Zahirah, Terengganu.

Sampling frame and data collection

Purposive sampling was performed in this study. The purposive sampling is a type of non-probability sampling in which researchers use their own autonomy in selecting family members to take part in the study in the Intensive Care Unit. The purpose of choosing this method is because the researcher wants to avoid bias information given by among health care provider family during data collection according to exclusion criteria. Data were collected using a questionnaire form which consists of a dual language in Malay version. To protect the rights of the individuals participating in the research study, the participants were given the patient information sheet and consent form to be signed. The briefing was given to family members on the purpose of the study at awaiting room ICU. They also were explained in the data collection procedure. Before conducted this study, a pre-test questionnaire was administered to all respondents upon consent to participate was signed. The questionnaire was collected by the researcher once the respondents have completed it. The objective of the research was also explained. The questionnaires later were distributed personally by the researcher to the participant. As been said earlier code of numbering system was used to make the process of distribution and collecting back the questionnaire more organize.

Study instrument

Since many Malaysian populations are Malays and the Malays language are the national language, it is extremely crucial to validate FS-ICU into the Malay language. Hence, the phase one goal of this study is to adopt, adapt, modified, and translate the FS-ICU questionnaire (FS-Care) in intensive care settings among family members in a Malaysia culture context and to further inspire future researchers to conduct studies related to family satisfaction with ICU in Malaysia. The researcher to get granted permission from original author Daren K. Heyland Director Clinical Evaluation Research Unit, Kingdom General Hospital. This newer version family satisfaction with care subscale includes questions about the care of the patient and family members as well as nurse's communication skills. The score for questionnaire was calculated by transforming the scale in score ranging from 10 to 100. The present FS-ICU-18 Malay language satisfaction care item with through the process of forward and backward translation, content validation, and face-to-face validation and modified in the Malay language.

The pre-test stage was conducted to check its clarity and duration taken by 30 family members to complete answering all the items in the questionnaire. Exploratory Factor Analysis was used to achieving experimental validity allow the researcher to explore the main variables to create a theory or model from set items. The presents of study, the three dimensions or domains that emerged, and their respective items resulted from the EFA procedure. The factor loading for every item should be greater than 0.6 to be retained for field study (Yahaya et al., 2018). Thus, one item from domain 1 (fsc19) needs to be deleted since it failed to achieve the minimum requirement for factor loading of 0.6 (Hoque et al., 2018; Noor et al., 2015). The deleted items due to low factor loading < 0.6 and the retained items.

Data analysis

Data were processed and analyses using SPSS version 23. Method of analysis was used descriptive statistics, validity, and reliability analyses. *Independent -Sample T-Test, One-way Anova* and correlation data analysis indicates the nature of a relationship between two variables and the magnitude of that relationship.

RESULTS

Table 1 showed the descriptive analysis total of 208 respondents participated and answered the questionnaires. Overall, 71.9% of them were between 17 to 45 years of age, with 190 (96.9%) respondents were Malays, and 132 (76%) respondents had secondary level education. Among the respondents, 95 (48.5%) were government servants and 84 (42.9%) were the patients' spouses.

Table 1: Sociodemographic characteristics of the respondents (n=208)

Variables	Frequency (n)	Percentage (%)	Mean (SD)
Age (Years)			41.21 (11.10)
20-41	86	41.3	
42-63	122	58.7	
Gender			
Male	74	35.6	
Female	134	64.4	
Race			
Malay	193	92.8	
Chinese	2	1.0	
Indian	9	4.3	
Others	4	1.9	
Marital Status			
Single	58	27.9	
Married	142	68.3	
Widow	8	3.8	
Education Level			
None	5	2.4	
Primary School	11	5.3	
Secondary School	103	49.5	
College	25	12.0	
University	64	30.8	
Occupation			
Government	55	26.4	
Private	27	13.0	
Self-employed	45	21.6	
Retired	8	3.8	
Housewife	38	18.3	
Unemployed	35	16.8	
Relationship			
Spouse	36	17.3	
Children	70	33.7	
Parents	59	28.4	
Sibling	43	20.7	

Table 2: Mean scores for ICU-Care Service satisfactions.

Variables	Mean Score (SD)	Category
Family Satisfaction ICU-Care Service	73.47 (9.52)	Excellent
Concern and Caring	76.28 (11.44)	Excellent
Consideration of Your Needs	69.64 (10.23)	Excellent
Skill, Competence and Atmosphere in ICU	74.49 (9.89)	Excellent

Table 3: Level of satisfaction with ICU-Care Service (n=208)

Level	Range Score	n (%)
Poor	≤ 40	0 (0.0)
Moderate	41-70	73 (35.1)
Excellent	>70	135 (64.9)

Family satisfaction with ICU-care service.

The satisfaction level of the family members related to intensive care service in the present study was excellent with the highest satisfaction on the concern and caring domain (1st domain) and the lowest satisfaction on the consideration of the domain of your need (2nd domain). In short, it means that the respondents of our study acknowledged the quality of care of ICU staffs (doctors, nurses) toward ICU patients. Our result was consistent with the study in India (Thimmapur et al., 2018), the United Kingdom (Ferrando et al., 2019) and Australian (McLennan & Aggar, 2020) as they also found that both concern and caring for patient by ICU staff were very highly satisfied with the ICU care service.

Concern and caring (1st domain) for patients by ICU staff was very highly correlated with overall satisfaction (Hunziker et al., 2012). Concern and caring showed by the ICU staffs, particularly nurses enable the family members established trusting relationships with nurses and feel a confidence that the nurses will be there for them and had their back which in turns enable them to leave at night and leave their relatives in the care of the nurses and other ICU staffs (Adams et al., 2017). In contrast, if the nurses showed lack of concerns toward the patients and the family members, then the family members will be reluctant and anxious to leave the patients under the nurses' care (Adams et al., 2017). However Recently study by (Frivold et al., 2018) in General hospital, Kingston Canada found that family members were satisfied with care service to their loves during hospitalization with management of patient's agitation, breathlessness and pain. In the 2nd domain (consideration of your needs), emotional support had the lowest mean satisfaction score. A study at a public hospital in the northern region of Malaysia had classified emotional support as the least important needs for the family members as they were more concerned about the patients' condition over their own needs (Hashim & Hussin, 2012). However, the present study proved otherwise as emotional support had the lowest satisfaction in the 2nd domain, which highlighted the importance of emotional support in the ICU care service. Moreover, the present study also highlighted the importance of emotional support if the health providers wanted to increase the satisfaction of the family members in the ICU care service. This is because emotional support influenced family satisfaction with ICU care (Schwarzkopf et al., 2013). The reason that our respondents had low satisfaction on the emotional supports might be due to a high level of distress, though there was no way to confirm this theory as we did not measure the stress level of the respondents. The other reasons might be because the ICU staffs related to emotional distress of the family and nature of ICU staff workload that makes it realistic

to fulfil the high expectation of every family when being responsible for numerous critical ill patient (Carlson et al., 2015), time constraints with rapid changes of patient condition, workload of heavy clinical works and not enough staff. Lack of awareness such as a lack of soft skills, not in training module in critical care and improperly trained staff to deal with the emotional distress of the family members. The previous study had proved that emotional support was associated with higher decision quality (Torke et al., 2018). A study in at a tertiary hospital in Malaysia found that family members perceived support as the most crucial need for them to cope and adjust themselves to the stress and the situations/ environments (Alsharari, 2019). Nurses usually play an important role in providing emotional support to the family members as the majority of the family members felt comfortable communicating with the nurses because the nurses were there all the time (Hashim & Hussin, 2012). Generally, nurses had the most contact with both patients and family members. Therefore, nurses need to pay more attention to family members by giving support to them and listening to their words and feelings (Mohamed, 2016) and it clearly indicates that the conversation and openness of the plans have a positive impact on the satisfaction of the ICU family (Hummel et al., 2020).

DISCUSSION

The respondents of this present study found to be satisfied with the skill and competence of the ICU nurses, which is similar to the study at the United States and Australian (Hunziker et al., 2012; McLennan & Aggar, 2020). Hunziker et al., 2012 also found that perceived nursing competence was strongly associated with dissatisfaction. Nurses' knowledge and competence were important to make family members feel confident in the care of their sick relatives (McKiernan & McCarthy, 2010). The family satisfaction level for all three domains in the FS-ICU care for the present study was excellent which is in par with the Indian study (Janardhanlyengar et al., 2019). Thus, we can summarize that the medical team and staff of our hospital did not lack skills, competence, and sincerity. Our study however only found that emotional support and atmosphere in the waiting room contributed to the lower FS-ICU service care score.

The respondents of the present study were less satisfied with the atmosphere in the ICU waiting room. As the family members mostly spent their time in the waiting room, thus the result obtained from the present study should be used to improve the quality and environment in the waiting room. The waiting room was overcrowding, and it was difficult to sleep, sit or talk in private in the waiting room because the room was shared with other families. Moreover, most of the government hospitals in Malaysia did not have a proper waiting room with basic amenities (Hashim & Hussin, 2012). This result was on par with the previous studies (Frivold, Slettebo, Heyland, Dale, et al., 2018; Hwang et al., 2014; Karlsson et al., 2011; McLennan & Aggar, 2020) highlighting area to target for improvement. Previous studies had emphasized the need for basic amenities in their ICU waiting rooms such as more chairs, refrigerator, tissues, television and clock (Henrich et al., 2011; Min et al., 2018a). One of the suggestions for improvement was to expand the space or area of waiting rooms for family members (Ahtisham et al., 2016). Some family members even felt the need for a private space or area during difficult times as they need to be alone to cope with their situations and stress (Janardhanlyengar et al., 2019; McLennan & Aggar, 2020). These spaces may

have a huge impact on the emotional aspects of family members. Besides, a previous study had identified that both the ICU waiting room and ICU atmosphere were independently associated with dissatisfaction (Hunziker et al., 2012). However, the respondents of the present study were satisfied with the ICU atmosphere. Previous studies also identified the atmosphere/ environment in the ICU as the factor that affects satisfaction (Janardhanlyengar et al., 2019)

This present study had several limitations. One of them was that this study did not cover all Malaysian hospital settings (government and private hospitals) since this study focused on the family members of patients admitted to the ICU of Hospital Sultanah Nur Zahirah. The family members' level of satisfaction may vary from the admission to discharge of the patients, and therefore the results of this study may not represent overall satisfaction for their whole ICU experience. Besides, the severity of illness and duration of ICU stay were not included and analysed in this study which might cause response bias in this study. Response bias could also occur as the family members who were dissatisfied with the quality of ICU care might not give consent to participate in this study. Second, in the study was limitation to proceed data collection due to pandemic COVID-19 to get more information from family patient's ICU to achieve in our target 292 respondent in the field.

Recommendation for future study

To our knowledge, this is the first study that used adapted and modified FS-ICU of Malay version to measure family satisfaction with ICU in Malaysia. This study will help the healthcare providers in Malaysia to improve the quality and management in the ICU as there was a lack of data and research on the family satisfaction with ICU in Malaysia, particularly in Terengganu. In this study, it was expected that level of satisfaction among family members with nursing intervention would be identified and method of basic care in this group would be introduced by using the Model Family-Centered Care in Intensive Care Unit, Hospital Sultanah Nur Zahirah. However, the implementation of family-based treatment for family members by recent studies indicates that families benefit from active participation and can help in decision-making and patient discharge preparation, involve in fundamental care (holistic), increase satisfaction, reduce long of stay and anxiety during hospitalization. The study will deliver information which contributes to the practice of nursing, nurse education and nursing administration." Nurse *Melati*" as our future research and the development of nursing research.

CONCLUSION

Firstly, implication on nursing practice, future studies should cover more ICU centres in Terengganu. This study only uses a quantitative approach, in which the respondents only need to rate their satisfaction level. Future studies should do both quantitative and qualitative surveys as it is important to learn more about the sources of their dissatisfactions toward the quality of ICU care and management as the respondents can provide written comments such as positive and negative feedback, suggestions, or even some gratitude/ appreciation (Min et al., 2018a). This knowledge can be used to modify ICU so that it can meet the need of the family members of the ICU patients. Thirdly, implication on family satisfaction, future studies also should measure the stress and depression level of the respondents as these two factors

might influence their satisfaction with the quality of ICU care and management. (Lam et al., 2015; Thimmapur et al., 2018) The present study did not consider the level of satisfaction of the respondents based on the severity of the illness, or whether the patients survived, released, or died. Thirdly on health care provider, this study will implementation of a strategy to preserve family satisfaction with ICU staff interest and concern, frequency of communication with ICU physicians, (Frivold et al., 2018) easiness to get information and the family's sense of control over patient care (Mistraletti et al., 2017). Improvement surrounds how to better explain patient care treatment and educate patient-specific medication.

ACKNOWLEDGEMENT

We would like to thank the National Medical Research Register (NMMR-17-2388-37702), Director of Sultanah Nur Zahirah, Hospital, Head of Department, Anaestology of Sultanah Nur Zahirah, Hospital and Faculty of Medicine University Sultan Zainal Abidin for the approval to conduct this study.

REFERENCES

- Adams, A. M. N., Mannix, T., & Harrington, A. (2017). Nurses' communication with families in the intensive care unit – a literature review. *Nursing in Critical Care*, 22(2), 70–80. <https://doi.org/10.1111/nicc.12141>
- Ahtisham, Y., Subia, P., & Gideon, V. (2016). Family satisfaction with patient care in critical care units in Pakistan: a descriptive cross-sectional study. *Nursing Standard (Royal College of Nursing (Great Britain) : 1987)*, 31(13), 43–52. <https://doi.org/10.7748/ns.2016.e10587>
- Ali, A., Krishnareddy, K., Loney, T., & Hon, H. (2019). Family Satisfaction with Intensive Care Services : A Survey from Three Tertiary Hospital Units. *Ibnosina Journal of Medicine and Biomedical Sciences*, 11(2), 62–67.
- Alsharari, A. F. (2019). The needs of family members of patients admitted to the intensive care unit. *Patient Preference and Adherence*, 13, 465–473. <https://doi.org/10.2147/PPA.S197769>
- Brown SM, R. D. et al. (2015). Defining patient and family engagement in the intensive care unit. *AM J Respiratory Critical Care*, 191(3), 358–360. <https://doi.org/doi:10.1164/rccm.201410-1936le>
- Carlson, E. B., Spain, D. A., Muhtadie, L., McDade-Montez, L., & Macia, K. S. (2015). Care and caring in the intensive care unit: Family members' distress and perceptions about staff skills, communication, and emotional support. *Journal of Critical Care*, 30(3), 557–561. <https://doi.org/10.1016/j.jcrc.2015.01.012>
- Davidson, J. E., & Zisook, S. (2017). Implementing family-centered care through facilitated sensemaking. *AACN Advanced Critical Care*, 28(2), 200–209. <https://doi.org/10.4037/aacnacc2017102>
- Ferrando, P., Gould, D. W., Walmsley, E., Richards-Belle, A., Canter, R., Saunders, S., Harrison, D. A., Harvey, S., Heyland, D. K., Hinton, L., McColl, E., Richardson, A., Richardson, M., Wright, S. E., & Rowan, K. M. (2019). Family satisfaction with critical care in the UK: a multicentre cohort study. *BMJ Open*, 9(8), e028956. <https://doi.org/10.1136/bmjopen-2019-028956>
- Frivold, G., Slettebo, A., Heyland, D. K., & Dale, B. (2018). Family members' satisfaction with care and decision-making in intensive care units and post-stay follow-up needs—a cross-sectional survey study. *Nursing Open*, 5(1), 6–14.
- Frivold, G., Slettebo, A., Heyland, D. K., Dale, B. B., Slettebo, Å., Heyland, D. K., & Dale, B. B. (2018). Family members' satisfaction with care and decision-making in intensive care units and post-stay follow-up needs—a cross-sectional survey study. *Nursing Open*, 5(1), 6–14. <https://doi.org/10.1002/nop2.97>
- Hansen, L., Rosenkranz, S. J., Mularski, R. A., & Leo, M. C. (2016). Family perspectives on overall care in the intensive care unit. *Nursing Research*, 65(6), 446–454. <https://doi.org/10.1097/NNR.0000000000000179>
- Hashim, F., & Hussin, R. (2012). Family Needs of Patient Admitted to Intensive Care Unit in a Public Hospital. *Procedia - Social and Behavioral Sciences*, 36(June 2011), 103–111. <https://doi.org/10.1016/j.sbspro.2012.03.012>

- Henrich, N. J., Dodek, P., Heyland, D., Cook, D., Rocker, G., Kutsogiannis, D., Dale, C., Fowler, R., & Ayas, N. (2011). Qualitative analysis of an intensive care unit family satisfaction survey. *Critical Care Medicine*, 39(5), 1000–1005. <https://doi.org/10.1097/CCM.0b013e31820a92fb>
- Hoque, A. S. M., Siddiqui, B. A., Awang, Z., & Baharu, S. M. A. (2018). European Journal of Management and Marketing Studies Exploratory Factor Analysis Of Entrepreneurial Orientation In The Context Of Bangladeshi Small And Medium Enterprises (SMES). *European Journal of Management and Marketing Studies*, 3(2), 81–94. <https://doi.org/10.5281/zenodo.1292331>
- Hummel, K., Presson, A. P., Millar, M. M., Larsen, G., Kadish, H., & Olson, L. M. (2020). An Assessment of Clinical and System Drivers of Family Satisfaction in the PICU*. *Pediatric Critical Care Medicine*, 21(10), E888–E897. <https://doi.org/10.1097/PCC.0000000000002394>
- Hunziker, S., McHugh, W., Samoff-Lee, B., Cannistraro, S., Ngo, L., Marcantonio, E., & Howell, M. D. (2012). Predictors and correlates of dissatisfaction with intensive care. *Crit Care Med*, 40(5), 1554–1561.
- Hwang, D. Y., Yagoda, D., Perrey, H. M., Tehan, T. M., Guanci, M., Ananian, L., Currier, P. F., Cobb, J. P., & Rosand, J. (2014). Assessment of satisfaction with care among family members of survivors in a neuroscience intensive care unit. *Journal of Neuroscience Nursing*, 46(2), 106–116. <https://doi.org/10.1097/JNN.0000000000000038>
- Janardhanlyengar, S. M., Srinivasan, R., Venkateshmurthy, B. M., Katari, Y., & Hiremathada, S. (2019). Family satisfaction in a medical college multidisciplinary Intensive Care Unit (ICU) - How can we improve? *Indian Journal of Critical Care Medicine*, 23(2), 83–88. <https://doi.org/10.5005/jp-journals-10071-23122>
- Jongerden, I. P., Slooter, A. J., Peelen, L. M., Wessels, H., Ram, C. M., Kesecioglu, J., Schneider, M. M., & Van Dijk, D. (2013). Effect of intensive care environment on family and patient satisfaction: A before-after study. *Intensive Care Medicine*, 39(9), 1626–1634. <https://doi.org/10.1007/s00134-013-2966-0>
- Karlsson, C., Tisell, A., Engström, A., & Andershed, B. (2011). Family members' satisfaction with critical care: a pilot study. *Nursing in Critical Care*, 16(1), 11–18. <https://doi.org/10.1111/j.1478-5153.2010.00388.x>
- Lam, S. M., So, H. M., Fok, S. K., Li, S. C., Ng, C. P., Lui, W. K., Heyland, D. K., & Yan, W. W. (2015). Intensive care unit family satisfaction survey. *Hong Kong Medical Journal*, 21(5), 435–443. <https://doi.org/10.12809/hkmj144385>
- Ludmir, J., & Netzer, G. (2019). Family-Centered Care in the Intensive Care Unit-What does best practice tell us? *Seminars in Respiratory and Critical Care Medicine*, 40(5), 648–654. <https://doi.org/10.1055/s-0039-1697957>
- Maxim, T., Alvarez, A., Hojberg, Y., Antoku, D., Moneme, C., Singleton, A., Park, C., & Matsushima, K. (2019). Family satisfaction in the trauma and surgical intensive care unit: Another important quality measure. *Trauma Surgery and Acute Care Open*, 4(1), 1–5. <https://doi.org/10.1136/tsaco-2019-000302>
- McKiernan, M., & McCarthy, G. (2010). Family members' lived experience in the intensive care unit: a phenomenological study. *Intensive & Critical Care Nursing*, 26(5), 254–261.
- McLennan, M., & Aggar, C. (2020). Family satisfaction with care in the intensive care unit: A regional Australian perspective. *Australian Critical Care*, xxxx. <https://doi.org/10.1016/j.aucc.2020.01.003>
- Min, J., Kim, Y., Lee, J.-K., Lee, H., Lee, J., Kim, K. S., Cho, Y.-J., Jo, Y. H., Ryu, H. G., Kim, K., Lee, S.-M., & Lee, Y. J. (2018a). Survey of family satisfaction with intensive care units. *Medicine*, 97(32), e11809. <https://doi.org/10.1097/md.00000000000011809>
- Min, J., Kim, Y., Lee, J. J.-K. K., Lee, H., Lee, J. J.-K. K., Kim, K. S. K., Cho, Y.-J. J., Jo, Y. H., Ryu, H. G., Kim, K. S. K., Lee, S.-M. M., & Lee, Y. J. (2018b). Survey of family satisfaction with intensive care units A prospective multicenter study. *Medicine (United States)*, 97(32), 1–7. <https://doi.org/10.1097/MD.00000000000011809>
- Mistraletti, G., Umbrello, M., Mantovani, E. S., Moroni, B., Formenti, P., Spanu, P., Anania, S., Andrihgi, E., Di Carlo, A., Martinetti, F., Vecchi, I., Palo, A., Pinna, C., Russo, R., Francesconi, S., Valdambri, F., Ferretti, E., Radeschi, G., Bosco, E., ... Iapichino, G. (2017). A family information brochure and dedicated website to improve the ICU experience for patients' relatives: an Italian multicenter before-and-after study. *Intensive Care Medicine*, 43(1), 69–79. <https://doi.org/10.1007/s00134-016-4592-0>
- Mohamed, Z. (2016). Needs of Family Members of Critically Ill Patients in a Critical Care Unit at Universiti Kebangsaan Malaysia Medical Centre. *Medicine & Health*, 11(1), 11–21. <https://doi.org/10.17845/mh.2016.1101.03>
- Norhayati Mohd Noor, Aniza Abd. Aziz, Mohd Rosmizaki Mostapa, Z. A. (2015). Validation of the Malay Version of the Inventory of Functional Status after Childbirth Questionnaire. *BioMed Research International*, 2015(5). <https://doi.org/http://dx.doi.org/10.1155/2015/972728>
- Osborn, T. R., Curtis, J. R., Nielsen, E. L., Back, A. L., Shannon, S. E., & Engelberg, R. A. (2012). Identifying elements of ICU care that families report as important but unsatisfactory: Decision-making, control, and ICU atmosphere. *Chest*, 142(5), 1185–1192. <https://doi.org/10.1378/chest.11-3277>
- Pagnamenta, A., Bruno, R., Gemperli, A., Chiesa, A., Previsdomini, M., Corti, F., Merlani, P., Cottini, S., Llamas, M., & Rothen, H. U. (2016). Impact of a communication strategy on family satisfaction in the intensive care unit. *Acta Anaesthesiologica Scandinavica*, 60(6), 800–809. <https://doi.org/10.1111/aas.12692>
- Schwarzkopf, D., Behrend, S., Skupin, H., Westermann, I., Riedemann, N. C., Pfeifer, R., Günther, A., Witte, O. W., Reinhart, K., & Hartog, C. S. (2013). Family satisfaction in the intensive care unit: A quantitative and qualitative analysis. *Intensive Care Medicine*, 39(6), 1071–1079. <https://doi.org/10.1007/s00134-013-2862-7>
- Scott, P., Thomson, P., & Shepherd, A. (2019). Families of patients in ICU: A Scoping review of their needs and satisfaction with care. *Nursing Open*, 6(3), 698–712. <https://doi.org/10.1002/nop2.287>
- Stricker, K. H., Kimberger, O., Schmidlin, K., Zwahlen, M., Mohr, U., & Rothen, H. U. (2009). Family satisfaction in the intensive care unit: What makes the difference? *Intensive Care Medicine*, 35(12), 2051–2059. <https://doi.org/10.1007/s00134-009-1611-4>
- Thimmapur, R. M., Raj, P., Raju, B., Kanmani, T. R., & Reddy, N. K. (2018). Caregivers satisfaction with intensive care unit services in tertiary care hospital. *International Journal of Critical Illness and Injury Science*, 8(4), 184–187.
- Torke, A. M., Callahan, C. M., Sachs, G. A., Wocial, L. D., Helft, P. R., Monahan, P. O., Slaven, J. E., Montz, K., Burke, E. S., & Inger, L. (2018). Communication Quality Predicts Psychological Well-Being and Satisfaction in Family Surrogates of Hospitalized Older Adults: An Observational Study. *Journal of General Internal Medicine*, 33(3), 298–304.
- Yahaya, T. A. B., Idris, K., Suandi, T., & Ismail, I. A. (2018). Adapting instruments and modifying statements: The confirmation method for the inventory and model for information sharing behavior using social media. *Management Science Letters*, 8(5), 271–282. <https://doi.org/10.5267/j.msl.2018.4.021>