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C E R R A H P A Ş A

**Research Article**

# Validation of the Measurement Model of the Grief Support Healthcare Scale Among the Intensive Care Unit Nurses in Malaysia

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## Abstract

**AIM:** This study aimed to establish the validity and reliability of the measurement model of the Grief Support Healthcare Scale sub-constructs among the intensive care unit (ICU) nurses.

**METHOD:** This methodological study in January 2015 uses the TRIPOD checklist for model validation. A two-order confirmatory factor analysis involving 655 nurses from the adult ICUs of nine hospitals confirmed the validity and reliability of the sub-constructs of grief support. The evaluation of the measurement model was based on the multi-category model fit indices.

**RESULTS:** The convergent and discriminant validities and reliability of the grief support sub-constructs, recognition of the relationship, acknowledgment of the loss, and inclusion of the griever were confirmed, with eight indicators. The measurement model of the revised Grief Support Healthcare Scale had a good model-fit (chi-square (*df*) = 67.586(17); *p* = .000; relative chi-square = 3.976; AGFI = 0.947; GFI = 0.975; CFI = 0.990; IFI = 0.990; TLI = 0.984; RMSEA = 0.067; SRMR = 0.020).

**CONCLUSION:** The validated grief support measurement model allows measurement of grief support for future intensive care unit nurses and the structural model analysis. Nurse managers and co-workers provide support to the grieving intensive care unit nurses based on the essential components of grief support.

*Keywords::* Intensive care unit nurses, grief, support, factory analysis, models

## Introduction

Nurses in the intensive care unit (ICU) who feel supported and mentored will effectively deal with future experiences of patients' death (Gerow et al., 2010; Hinderer, 2012; Sato, 2015). Grief support from the hospital management and colleagues is essential in overcoming the nurses' (Hall, 2020; Kain, 2013) and health professionals' (Forster & Hafiz, 2015) grief because the negative impact of unresolved grief of one member of a team of health professionals can badly affect the other members of the group through constant remembrances of their own unpleasant experience dealing with the patient's death (Forster & Hafiz, 2015).

Debriefing with workmates, superiors, friends, and families about a patient's death provides a sense of great relief to the grieving ICU nurses (Bacon, 2017; Kain, 2013; Shorter & Stayt, 2010). The nurses' colleagues understand their close attachment with the patients (Kain, 2013), provide reassurance and

support (Bacon, 2017), and strengthen their friendship with their co-workers (Shorter & Stayt, 2010). Therefore, formal debriefing in a structured group is not preferred by the critical care nurses, although they consider it good (Shorter & Stayt, 2010). While the nurses' spouses and families offer only limited support due to their poor understanding of the nurses' feelings, nurses occasionally do seek support from their families (Bacon, 2017; Jonas-Simpson et al., 2013). When support from junior fellow nurses is insufficient for the grieving senior nurses, immediate support from the nurse managers is highly needed to help cope with their feelings on the day of the patient's death, to enable them to move forward by facilitating a rapid healing process (Bacon, 2017).

To date, the Grief Support Healthcare Scale (GSHCS) is the only tool designed to measure the level of grief support among healthcare personnel. In previous studies (Barr, 2017; Chang, 2018), support for the grieving nurses was commonly measured with social support scales such as the Supervisor Support

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Scale, Peer Support Scale, and Perceived Social Support Scale, designed for the general population. As the GSHCS by Anderson et al. (2010) was developed among the nursing assistants, compounding its limited use in studies involving the healthcare professionals had contributed to its lack of validation.

According to Anderson et al. (2010), the three sub-constructs of GSHCS (recognition of the relationship, acknowledgment of the loss, and inclusion of the griever) were developed based on Doka's theory of disenfranchised grief and output from experts in the fields of nursing, social work, and psychology. Support for the grieving healthcare professionals is evident when others recognize their relationships with the patients, their loss after the death of their patients is understood and validated by others, and they are included in the grieving rituals of their dead patients (Anderson et al., 2010). The grief support scale was developed using exploratory analysis, with five items each loaded onto three domains (Recognition of the relationship, Acknowledgment of the loss, and Inclusion of the griever). The loading coefficients for the 15 items ranged from 0.55 to 0.85, and the total variance explained by the three sub-constructs of GSHCS was 63.9% (Anderson et al., 2010).

The ICU nurses need support from colleagues, nurse superiors, family, and friends in dealing with their grief. This study was paramount to the hospital and nursing management in identifying the essential elements in grief support that are applicable for the ICU nurses to help them in overcoming their grief. However, to date, no validation study of the measurement model of the Grief Support Healthcare Scale among the nurses has been reported, particularly among the ICU nurses who are highly vulnerable to experiencing grief due to the increased number of patient deaths. A high number of deaths (more than 0.5 million) are reported in the ICU alone, annually (Hall, 2020). The validated and reliable measurement model of sub-constructs of the GSHCS among the intensive care nurses is prognostic and enables measurement of the level of grief support among this group of nurses in the future. This study aimed to establish the validity and reliability of the measurement model of the GSHCS sub-constructs among the ICU nurses.

### Research Question
1. Is the Grief Support Healthcare Scale suitable to determine grief support for the intensive care unit nurses?

## Method

### Study Design
This methodological study on the measurement model validation, reported based on the TRIPOD checklist, was conducted.

### Sample
A total of 660 Registered Nurses (RNs) working in the ICU were involved in this study in January 2015 (response rate 90.9%). The sample size calculation used the general rule of thumb of a minimum of five cases for every individual item used to measure a construct (Reisinger & Mavondo, 2007). Therefore, the minimum required sample for the grief support instrument with 15 items was 75 participants. However, this validation study of the measurement model is a part of a larger study, thus the large sample of RNs.

The ICU RNs in the Malaysian hospitals were required to pursue additional training in intensive care (post-basic) for one year after their basic nursing course, for better patient care. Currently, 1837 RNs with the post-basic course in intensive care are working in the ICUs (Ministry of Health, 2017). The nurse:patient ratio in the ICU is 1:1 or 1:2 per shift, based on the severity of the patient's illness. The participants in this study were RNs who were actively involved in the patients' care and fulfilled the inclusion criteria (minimum working experience of six months in an adult ICU, having dealt with at least one patient's death, and being able to converse in English or the Malay languages). Registered nurses on extended leave and those involved in the pilot study were excluded.

### Data Collection Tools

#### Grief Support Instrument
The GSHCS was used to measure the support to the ICU RNs in overcoming their grief. The GSHCS with five items in each domain (Recognition of the relationship (RR), Acknowledgment of the loss (AL), and Inclusion of the griever (IG)) is a 5-point Likert scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree). Although the authors developed the GSHCS through exploratory factor analysis involving 380 nursing assistants from 11 nursing homes (Anderson et al., 2010), in this study, the validation of the GSHCS was among the ICU nurses cohort. Content validity and good reliability for the overall GSHCS and the three domains revealed Cronbach alpha values ranging from 0.78 to 0.89 among the cohort of nursing assistants (Anderson et al., 2010).

#### Content Validity and Reliability in a Different Language
Two nursing experts modified the GSHCS instrument before data collection in this study. In a minor modification, "residents" in the statements of the original version was changed to "patients," as a better representation of an individual in the hospital setting. The translation of GSHCS to the Malay language in this study was conducted in two stages. Two nursing educators who specialized in psychology translated from English to the Malay language, and two English educators translated back. The stringent requirements in the translation protocol recommended by the World Health Organisation, including electing seven to nine bilingual and monolingual experts in the field of study and translation, adopting several steps in the translation process, and pretesting the instrument before developing the final version (Finnerty, 2020; Kalfoss, 2019), were not applied strictly in this study. The translation to the Malay language was merely to fulfil the ethics approval requirement rather than to develop different language versions of the GSHCS instrument.

The GSHCS instrument was piloted among 27 multi-ethnic ICU nurses in this study. We noted good internal consistency reliabilities for all the sub-constructs of the GSHCS: RR ($\alpha=0.97$), AL ($\alpha=0.94$), and IG ($\alpha=0.94$). The overall internal consistency reliability was also high, with a Cronbach alpha of 0.96.

## Data Collection

After obtaining permission from the hospital directors and the head of the department of the ICUs, data were collected from July 2017 until November 2017. The researcher liaised with the Nurse Manager of the ICUs to get the name list and the recruitment of RNs for this study, based on the fulfilment of the inclusion criteria.

## Handling of Missing Data

The researcher checked all completed questionnaires for missing values, and 10 questionnaires (less than 2%) revealed missing values related to socio-demographic and employment variables. The questionnaires with missing values were returned to the respective participants by the same clinical staff within a few days from the data collection date, to avoid biased results. The participants were encouraged to relook the questionnaires to ensure that the missing values were not intentional, and they were allowed to complete the questionnaires without any obligation. As the analysis in this study involved all completed questionnaires, neither imputation nor a complete case analysis was necessary. Using complete case analysis by excluding participants with missing values could provide biased results as the statistical power is reduced (Kontopantelis et al., 2017). While multiple imputations are the most acceptable approach in dealing with missing values, there were no significant differences between imputation models that used all variables (including data with missing values) and those that used auxiliary variables to replace the missing values (Kontopantelis et al., 2017).

Good cooperation from the participants in completing the questionnaires was possible due to a few factors: the researcher's explanations on the purpose of this study and on the requirement from the participants during the continuous nurse education (CNE) event held in the participating hospitals provided the nurses with a more precise depiction of the study. The senior ICU nurse from each hospital involved in distributing and collecting the completed questionnaires is regarded respectfully and trusted by the participants.

None of the participants reported experiencing severe grief needed consultation from the professionals for psychological and emotional support; thus, no follow-up on the participants was necessary in this study.

## Statistical Analysis

### Psychometric Analyses of the Instrument

The utilization of confirmatory factor analysis (CFA) in the validation and evaluation of the measurement model of the GSHCS in this study was based on the common goodness-of-fit indices and the acceptable value, which varies among the authors (Hair et al., 2011; Kline, 2011; Schreiber et al., 2006; Zainudin, 2015) (Table 1). Reporting a variety of model fit indices is essential as different indices reveal a different aspect of model fit (Hooper et al., 2008; Schermelleh-Engel et al., 2003). A measurement model with a poor fit to the data indicates that some of the observed variables are unreliable and hinder further structural model analysis.

A two-order pooled CFA measurement model was constructed for grief support to help in determining the reliability, the convergent and discriminant validities through the composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), and average shared square variance (ASV) values. We observed that the variables' reliability could be ascertained with the CR value above 0.7 and the AVE value above 0.5 (Hair et al., 2014). An adequate convergent validity is confirmed when the CR value is above the square root of AVE. The MSV and ASV values should be below the square root of AVE for adequate discriminant validity (Hair et al., 2014). Furthermore, the correlation values of below 0.85 between the three sub-constructs confirmed the discriminant validity (Zainudin, 2015). The similarity in the model fit indices value between an individual CFA and a pooled CFA, compounded with the simplicity and time-saving benefits in using pooled CFA (Chong et al., 2014), leads to its use in this study.

As the first-order pooled CFA involves confirming whether the indicators (items) under the same sub-constructs (domains) were independent or interrelated of/with each other, all the indicators of the grief-support construct were scrutinized in-depth. Retaining indicators with an acceptable loading factor (0.7 and above) (Hair et al., 2011; Kline, 2011) and measurement error (15 and below) of the modification indices (MI) value (Zainudin, 2015) is necessary to show that the latent construct explains half of the variance (Gefen et al., 2000).

The second-order pooled CFA involved determining whether the indicators under different sub-constructs were independent or interrelated of/with each other; thus establishing whether the three sub-constructs of the GSHCS tool were independent of each other or correlated. Therefore, the deletion of the indicators in both the first and second-order pooled CFA was done one at a time, by deleting the lowest factor loading value followed by a run of the measurement model. The process of deletion of the lowest factor loading value indicator, followed by a run of the measurement model, was repeated for every sub-construct (recognition of the relationship, acknowledgment of loss, and inclusion of griever) until acceptable value model fit indices were achievable.

## Ethical Considerations

Ethical approval for this study was from the Medical Ethics Committee of the University (MECID:20157-1489) and the National Medical Research Registration (NMRR:15-2 347-2 6880). The nurses' participation in this study was based on their response in the consent forms, which had been completed and returned beforehand. The confidentiality of the participants was maintained throughout the whole process, from data collection to storage of the data.

A clinical staff of the respective ICUs who was impartial to the research project was assigned to administer the questionnaire to the participants after their work shift for the day. The information statement accompanying the questionnaire outlined the purpose of the survey, requesting voluntary participation, with instructions on how to complete the survey and the availability of counselors and emotional support services (the Befrienders) should the grieving participants need to discuss their feelings. The nurse consent form was also included. The staff made it clear to the participants that they were under no

**Table 1.**
*Model Fit Indexes*

| Category | Index | Acceptable cut-off value |
|---|---|---|
| Absolute Fit | $\chi^2$ | *p*-value > .05 (not applicable for large sample size > 200) |
| | RMSEA | ≤.08 |
| | GFI | ≥.90 |
| | AGFI | ≥.90 |
| | SRMR | ≤.08 |
| Incremental Fit | CFI | ≥.90 |
| | TLI | ≥.90 |
| | IFI | ≥.90 |
| Parsimonious Fit | $\chi^2/df$ | ≤ 5.0 |

*Note:* ($\chi^2$ and $\chi^2/df$)=Chi-square statistics; TLI=Tucker-Lewis Index; IFI=Incremental Fit Index; CFI=Comparative Fit Index; GFI=Goodness Fit Index; AGFI=Adjusted Goodness of Fit Index; RMSEA=Root Mean Square Error of Approximation; SRMR=Standardized Root Mean Square Residual.

obligation to complete the questionnaire. The questionnaires were placed into the envelope provided and sealed. The sealed envelopes were then forwarded to the researcher by the same staff.

## Results

Checking of the data revealed no violation of the assumptions: normality (univariate and multivariate); no presence of kurtosis and skewness; linearity of relationships; homoscedasticity; no multicollinearity; no extreme outliers; interval and ratio type data; and sufficient sample (> 200) before analysis. However, the exclusion of five cases from the analysis of CFA was due to a high value of Mahalanobis Distance that indicates extreme multivariate outliers.

**Description of the Sample**
The data were analyzed descriptively using SPSS version 24. The representation of RNs from each hospital was adequate (>50%) (Table 2), and the RNs from all the hospitals, on average, had dealt with the deaths of 10 patients.

**Evaluation of the Measurement Model**
The CFA was conducted among 655 ICU nurses using AMOS version 24. The CFA showed that the original measurement model with 3 sub-constructs and 15 indicators had a poor model fit to the Malaysian nurses' sample as some indices have unacceptable value (*p*-value = .000; relative chi-square = 14.422; AGFI = 0.693; GFI = 0.777; TLI = 0.882; RMSEA = 0.143) (Figure 1).
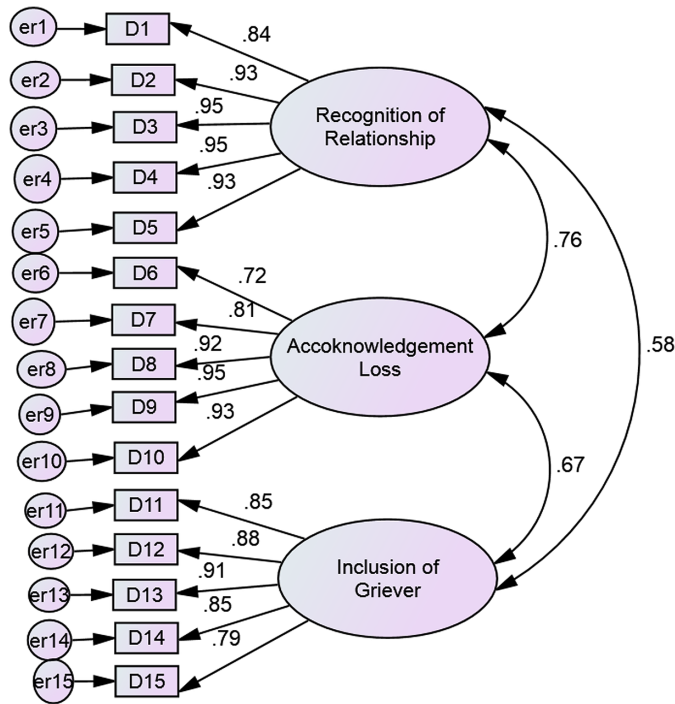
In the first-order pooled CFA for construct grief support, two indicators each from the three sub-constructs (recognition of the relationship, acknowledgment of the loss, and inclusion of the griever) were deleted despite having an acceptable loading factor value of 0.7 (Table 3) because the acceptable value for most of the model fit indices was unachievable. The

**Table 2.**
*Socio-Demographic and Employment Attributes of the RNs (N = 660)*

| Variables | Mean ± SD | n (%) | ICU bed N | Working experience in ICU (Years) Mean ± SD |
|---|---|---|---|---|
| **Age** (Years) | 27.27 ±3.91 | | | |
| **Gender** | | | | |
| Male | | 61 (9.2%) | | |
| Female | | 599 (90.8%) | | |
| **Ethnicity** | | | | |
| Malay | | 609 (92.3%) | | |
| Chinese | | 9 (1.4%) | | |
| Indian | | 31 (4.7%) | | |
| *Others | | 11 (1.6%) | | |
| **Religion** | | | | |
| Islam | | 615 (93.2%) | | |
| Buddhism | | 8 (1.2%) | | |
| Hindu | | 26 (3.9%) | | |
| Christian | | 11 (1.7%) | | |
| **Qualification** | | | | |
| Diploma | | 648 (98.2%) | | |
| Bachelor's | | 12 (1.8%) | | |
| **Hospital** | | | | |
| A | | 51 (71.8%) | 25 | 5.48 ±3.26 |
| B | | 149 (99.3%) | 44 | 4.89 ±3.16 |
| C | | 91 (75.8%) | 38 | 4.26 ±3.10 |
| D | | 51 (99.3%) | 12 | 4.22 ±2.84 |
| E | | 79 (98.7%) | 25 | 4.35 ±3.55 |
| F | | 61 (93.8%) | 13 | 4.95 ±3.44 |
| G | | 12 (70.6%) | 6 | 4.67 ±3.08 |
| H | | 45 (95.7%) | 12 | 9.29 ±4.68 |
| I | | 121 (96.8%) | 32 | 3.75 ±2.75 |

*Note:* *Malaysian Indigenous (Orang Asli, Kadazan Dusun, Iban).

acceptable value of model fit indices was still unattainable despite deleting six indicators. Assessment of the MI revealed the presence of covariance between the measurement error of indicators D8 and D10 from the sub-construct acknowledgment of the loss with a high MI value of 19.967, which indicates redundancy between indicators (Zainudin, 2015). Therefore, the deletion of indicator D8 with a lower loading factor value improved the model fit, and all the model fit indices had acceptable values except for the chi-square statistic (Figure 2). While the significant chi-square statistic does not fulfil the requirement value of model fit indices, the smallest chi-square achievable is sufficient since the chi-square is sensitive to larger sample sizes and power of analysis (Gefen et al., 2000).

**Figure 1.**
*Initial Model among Nurses (N = 655).*
Chi-square (df) = 71.059 (22); p-value = 0.000; relative Chi-Square = 14.422;
AGFI = 0.693; GFI = 0.777; CFI = 0.902; IFI = 0.902; TLI = 0.882; RMSEA = 0.143;
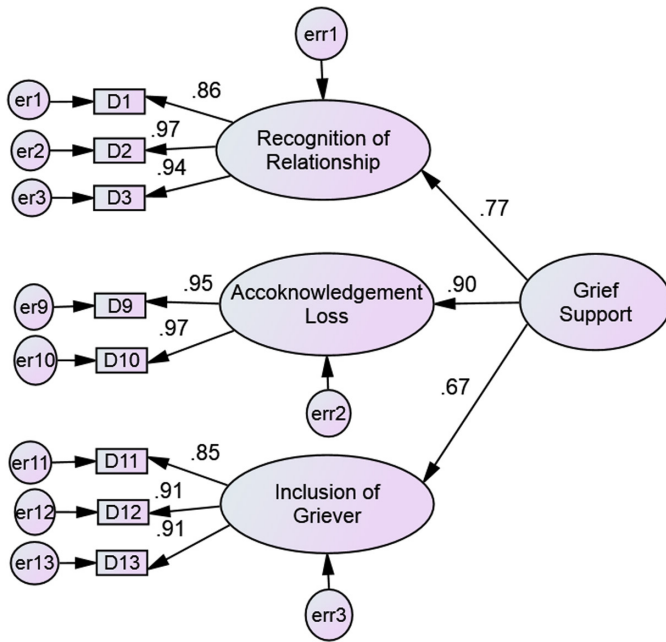SRMR = 0.060.
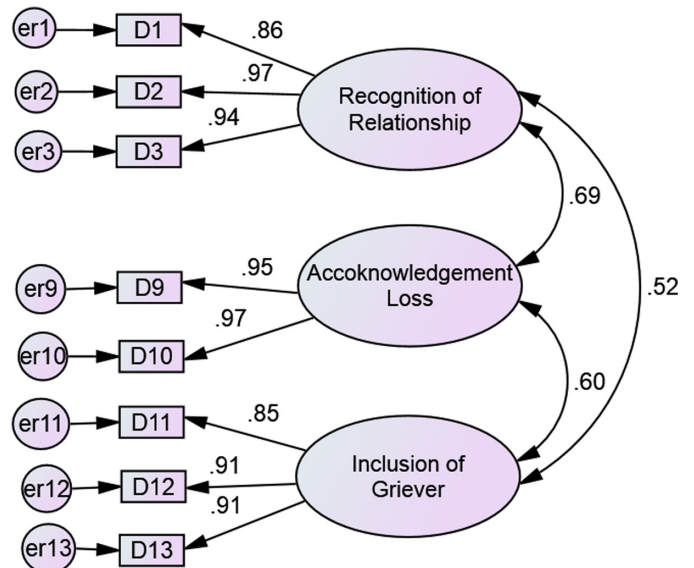


**Figure 2.**
*Modified Model in First Order CFA (N = 655).*
Chi-square (df) = 67.586 (17); p-value = 0.000; relative Chi-Square = 3.976;
AGFI = 0.947; GFI = 0.975; CFI = 0.990; IFI = 0.990; TLI = 0.984; RMSEA = 0.067;
SRMR = 0.020.

In the second-order pooled CFA for construct grief support, retaining all the eight indicators for the three sub-constructs (recognition of relationship, acknowledgment of loss, and

**Table 3.**
*Validities and Reliability in the First and Second Order of Confirmatory Factor Analysis (N = 655)*

| Sub-construct | | Indicators | Loading Factor | CR | AVE | MSV | ASV |
|---|---|---|---|---|---|---|---|
| RR | D1 | My co-workers understand the closeness of my relationships with the patients. | 0.886 | 0.950 | 0.865 | 0.490 | 0.380 |
| | D2 | Family members of the patients understand the closeness of my relationships with the patients. | 0.943 | | | | |
| | D3 | My ward sister recognizes the closeness of my relationships with the patients. | 0.960 | | | | |
| | D4 | My family understands the closeness of my relationships with the patients. | Delete | | | | |
| | D5 | My friends understand the closeness of my relationships with the patients. | Delete | | | | |
| AL | D6 | My Ward Sister knows that I feel grief when patients die. | Delete | 0.957 | 0.918 | 0.490 | 0.384 |
| | D7 | Family members of the patients know that I feel grief when patients die. | Delete | | | | |
| | D8 | My family knows that I feel grief when a patient dies. | Delete | | | | |
| | D9 | My friends know I feel grief when a patient dies. | 0.948 | | | | |
| | D10 | My co-workers know I feel grief when a patient dies. | 0.969 | | | | |
| IG | D11 | The hospital holds memorial services for patients who have died. | 0.854 | 0.921 | 0.795 | 0.384 | 0.327 |
| | D12 | I am invited to attend funeral services outside of the hospital. | 0.907 | | | | |
| | D13 | My hospital gives me time off to attend funeral services. | 0.914 | | | | |
| | D14 | I feel like I have enough time and space to grieve when patients die. | Delete | | | | |
| | D15 | My hospital keeps me informed about the deaths of patients. | Delete | | | | |

*Note:* RR = Recognition of the relationship; AL = Acknowledgment of the loss; IG = Inclusion of the griever; CR = Composite reliability; AVE = Average variance extracted; MSV = Maximum shared variance; ASV = Average shared variance.

**Figure 3.**
*Modified Model in Second Order CFA (N = 655).*
Chi-square (df) = 67.586 (17); p value = 0.000; relative Chi-Square = 3.976; AGFI = 0.947; GFI = 0.975; CFI = 0.990; IFI = 0.990; TLI = 0.984; RMSEA = 0.067; SRMR = 0.020.

inclusion of griever) was possible with an acceptable value of model fit indices, except for the chi-square test (Figure 3).

The grief support construct with eight indicators has acceptable reliability with CR and AVE values above 0.7 and 0.5, respectively (Table 3). High CR values (0.950 to 0.921) for the three sub-constructs confirmed the convergent validity for construct grief support (Table 3). As the AVE values for all the sub-constructs of grief support were above the recommended value (≥ 0.5) and the MSV and ASV values were below the AVE values, the discriminant validity for the construct grief support was confirmed (Table 3). Moreover, the low correlation values of 0.52, 0.60, and 0.69 between the three sub-constructs indicate that discriminant validity has been met (Figure 2).

**Discussion**

In this study, the validation of the grief support measurement model with three essential components (recognition of the relationship, acknowledgment of the loss, and inclusion of the griever), with eight indicators, was confirmed through the CFA with established convergent and discriminant validities and reliability. The stringent CFA used in the evaluation process by reporting various categories of model fit indices with higher acceptable values ascertained the validation of the grief support measurement model among the RNs of the ICU.

As no validation of the grief support measurement model among nurses has been reported elsewhere, and neither was validation of the GSHCS after its development by Anderson et al. (2010) reported among the nursing assistants from the nursing homes, the findings of this study could not be compared.

However, only eight indicators of the three sub-constructs (recognition of the relationship, acknowledgment of the loss, and inclusion of the griever) of the GSHCS were found relevant to the Malaysian ICU nurses' cohort in this study.

Component recognition of the relationship that is related to significance of others' approval of the close nurse–patient relationship, which is viewed as one of the contributors to the nurses' feeling of being supported in this study, was similar to that reported in previous studies (Forster & Hafiz, 2015; Gerow et al., 2010; Jonas-Simpson et al., 2013; Khalaf et al., 2017). The three indicators of this component that were relevant to the ICU nurses were: "*my co-workers understand the closeness of my relationships with the patients,*" "*family members of the patients understand the closeness of my relationships with the patients,*" and "*my ward sister recognises the closeness of my relationships with the patients.*" These indicators were comparable to nurses' feelings that in grieving with the deceased patients, the families who were aware of their close relationship with the patient helped find consolation and were a source of support (Jonas-Simpson et al., 2013). Likewise, fellow nurses who understand the closeness of the nurse–patient relationship usually allow the grieving nurse to cry with the grieving families of the dead patient, and they were considered good role models in shaping the grieving nurse's response to future patient death (Gerow et al., 2010). Besides, the junior nurses who were highly traumatized by the patient's death appreciated grief support from senior colleagues; even shrouding the dead patient alone was impossible for the grieving junior nurses without the support from their seniors (Khalaf et al., 2017). Confiding their feelings of unhappiness following patients' death with their understanding spouse or families was another commonly used support system by the healthcare personnel in Forster and Hafiz's (2015) study. Hall's (2020) findings support the possible explanation of the importance of others recognizing the close nurse–patient relationship. Nurses who have been together supporting their patients during the critical period until the patients' stabilization would encounter difficulty accepting their patients' sudden death (Hall, 2020). The grieving nurses really need support from colleagues and superiors during this trying time.

In this study, grief support for the ICU nurses was also associated with the component "acknowledgment of the loss," which is related to nurses' colleagues, superiors, and families being empathetic toward the grieving nurses. Both indicators: "*my friends know I have grief when a patient dies,*" and "*my co-workers know I have grief when a patient dies,*" of the component "acknowledgment of the loss" which was relevant to the ICU nurses in this study, are similar to the findings in previous studies (Forster & Hafiz, 2015; Jonas-Simpson et al., 2013; Khalaf et al., 2017; Sato, 2015). Immediate sharing of feelings of grief with fellow nurses following a patient's death was therapeutically beneficial to the nurses (Jonas-Simpson et al., 2013). ICU nurses feel supported when their colleagues, friends, families, and superiors acknowledge and understand their grief (Sato, 2015). Support from nurses of the same specialty is cherished, as the unique experiences related to patients' death are only understood by colleagues of the same unit and specialty (Sato, 2015). Grieving nurses felt that sharing information about their feelings

and suffering while dealing with patients' death with the community is necessary to understand better and acknowledge their grief (Khalaf et al., 2017). The grieving nurses highly valued the grief support from senior colleagues, families, and social workers during the grieving time (Khalaf et al., 2017). The importance of sharing grief with peers who appreciate one's feelings better was notable in Forster and Hafiz's (2015) study as the grieving health professionals were willing to wait for the return of their supportive peers from vacation rather than seek help from the counselors. The probable reason for these findings is supported by Chang (2018), as nurses who received peer support were able to cope with their patients' death significantly ($p < .001$) more effectively than those who received supervisor support alone. Comparably, the grieving healthcare professionals (Chen et al., 2021) also frequently talked to colleagues for mutual support. Additionally, most healthcare professionals preferred not burden their families by sharing their grief (Chen et al., 2021).

In this study, the excessive emphasis on the co-workers as a source of grief support to the nurses, rather than the ward sister's awareness of the loss experienced by nurses after the death of patients could probably be due to the immediate accessibility of peer support than support from the nurse leaders (Bacon, 2017). At times, a hug from colleagues alone can provide instant comfort to the grieving nurses during that particular moment of feeling extremely down immediately after a patient's death (Bacon, 2017). Similarly, the Malaysian nurses' view of their colleagues as friends that they can rely on during stressful work conditions (Nasurdin et al., 2018) could likely explain the consideration of the acknowledgment of nurses' loss by their friends as a source of grief support by the grieving nurses in this study.

The relevance of the component "inclusion of the griever," which is related to the grieving nurses' participation in the patients' funeral rituals, and the indicators: *"the hospital holds memorial services for patients who have died," "I am invited to attend funeral services outside of the hospital,"* and *"my hospital gives me time off to attend the funeral services,"* as a form of support for the ICU nurses in this study were identical to the findings in Kain's (2013) study. Nurses felt that attending their patients' funerals could support the grieving family members and bring closure to their special nurse–patient relationship (Kain, 2013). Likewise, a short break of 30 to 40 seconds of silence, to honor the deceased patient and the healthcare personnel's effort in providing care to the dead patient in the hospitals and wards, was beneficial in reducing the healthcare providers' stress. It allowed them time to deal with their feelings, and enhanced their focus in completing other tasks at hand (Cunningham & Ducar, 2019). The possible reason funeral services were viewed as a form of grief support by the nurses in this study, as reported in Mitima-Verloop et al.'s (2021) study, is that funeral services represent the starting point of the recovery process of the grieving person. The funeral remains a significant event for the Asian society to the extent of their willingness to spend considerable financial and labor resources to prepare funeral ceremonies (Shimane, 2018; Tandelilin et al., 2018). The contribution of funeral services toward reducing grief was significantly evident over the post-funeral period when social support for the grieving person decreased (Mitima-Verloop et al., 2021).

## Study Limitations

As the data for the validation study on the grief support measurement model were only among the sample of Malaysian ICU nurses, the generalization of the findings to other healthcare personnel can be improved with further studies. Researchers are also encouraged to validate the model in different cultures in future research.

## Conclusion and Recommendations

The established validity and reliability of the grief support measurement model with three components—recognition of the relationship, acknowledgment of the loss, and inclusion of the griever—through the CFA process in this study can be used to measure the level of grief support of future ICU nurses. However, its use in measuring the level of grief support among nurses from other disciplines is to be done cautiously. The use of the grief support measurement model by researchers in the structural model analysis is encouraged.

Information from the validated grief support model enables the nurse managers and co-workers to support the ICU grief nurses about the three essential components of grief support (recognition of the relationship, acknowledgment of the loss, and inclusion of the griever), for better physical and mental health. The nursing management team should encourage the nurse managers to appreciate the uniqueness of each nurse–patient relationship and provide crafted grief support to the grieving nurses, as nurses with enhanced physical and mental health would provide quality care to their patients. The nursing management should guide employees on how to support their grieving colleagues.

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