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Patients' Discharge Care Experience and its Links to Hospitalisation and Demographic Factors

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Abstract

Discharge care is crucial for maintaining patients' quality of life post-hospitalization. A cross-sectional study in a Malaysian teaching hospital explored patients' discharge care experiences, hospitalization experiences, age, and education level. Using simple random sampling, 118 respondents participated. Data were collected via questionnaires and assessed using DICARES and NORPEQ. Results showed that 71% had an excellent discharge care experience. Significant correlations were found between discharge care and hospitalization experience (rho = 0.539, $p < 0.001$), education level, post-discharge coping, treatment adherence, and discharge planning participation. Nurse Managers should prioritize discharge care and integrate advanced technology for home referrals, promoting healthcare optimism.

Keywords: Discharge care; Hospitalization; Patient Experience; Age and Education level

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1.0 Introduction

The quality of discharge care significantly impacts patients' post-hospitalization quality of life. Discharge care involves collaborative efforts between nurses, patients, and caregivers to ensure continuity of care and necessary treatments post-discharge (Sudrajat et al., 2021). This process typically commences before elective admissions or within 24 hours of urgent admissions and is meticulously documented using discharge care tools throughout the hospital stay (Boge et al., 2019). Critical components of discharge care include providing patients with essential health status information, ongoing illness treatment plans and recommended follow-up procedures (Desai et al., 2021). Effective discharge care necessitates interdisciplinary collaboration among healthcare professionals such as doctors, nurses, physiotherapists, nutritionists, pharmacists, and others to deliver comprehensive health services, making them feel valued and appreciated (Lilleheie et al., 2019). Continuous assessment throughout the discharge process ensures that patient needs, nursing diagnoses, and treatment plans are aligned with healthcare provider actions (Sudrajat et al., 2021).

Nomenclature

A	radius of
B	position of
C	further nomenclature continues down the page inside the text box

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According to Mao et al. (2022), well-prepared patients for discharge show lower readmission rates, mortality, and emergency visits. Conversely, inadequate information about discharge plans leads to poor medication and treatment compliance, compromising patient safety, increasing readmission rates, and decreasing patient satisfaction (Desai et al., 2021). The U.S. Department of Health and Human Services (2019) reported that nearly 20% of patients experience adverse events within three weeks of discharge due to inadequate discharge care. Effective discharge planning ensures safe transitions through the healthcare system and reduces hospital readmissions (Lilleheie et al., 2019).

To maintain a competitive edge, hospitals must prioritize patient experiences as a determinant of organizational performance and sustainability (Birkelien, 2017). Patient involvement in decision-making regarding their care, incorporating their preferences and potential, and combining their personal experiences with professional expertise enhances care quality and makes patients feel empowered and integral to the healthcare process (Birkelien, 2017; Lilleheie et al., 2019). Previous studies have highlighted concerns among elderly patients aged 65 and above regarding their participation in discharge processes (Lilleheie et al., 2019). Patients and caregivers often need more preparation for discharge plans or opportunities to influence critical aspects such as medical treatment, practical arrangements, and discharge timing (Boge et al., 2019). While patient experience and satisfaction are closely related, both are essential indicators of high-quality healthcare (Boge et al., 2018). Demographic and clinical characteristics also influence patient readiness for discharge (Qiu et al., 2022). Therefore, discharge care processes should prioritize patients' ability to self-manage their health post-discharge, and quality assessments should encompass post-hospitalization experiences (Boge et al., 2018).

Numerous studies worldwide investigate patient experiences with discharge care (Boge et al., 2019; Platini, 2018). For instance, Boge et al. (2019) found that patients in Norway often felt unprepared for discharge plans or needed more influence over medical treatments, practical arrangements, or discharge schedules, leading to poor discharge care experiences. Krook et al. (2020) reported that patients perceived insufficient time and high tension among hospital staff, which hindered effective physician-patient communication and contributed to negative patient perceptions. These organizational challenges highlight inefficiencies in the discharge process (Boge et al., 2019). Schwertfeger et al. (2020) emphasized that patients' chances of recovery may diminish without adequate post-discharge coping strategies. Boge et al. (2018) further illustrated that treatment adherence allows patients to engage in self-management and recovery, underscoring the importance of clear discharge instructions.

Studies on socio-demographic factors such as age and education level reveal significant associations with discharge care experiences (Lilleheie et al., 2019; Boge et al., 2019; Sheikh et al., 2018). For instance, Sheikh et al. (2018) found that patients with lower educational attainment often struggle to understand discharge care ($p=0.006$). Andrea Zumbrunn (2022) reported that patients with lower education levels tend to exhibit poorer treatment adherence and participation in discharge planning, which may negatively affect their discharge care experiences. These findings underscore the role of education level in shaping patient perceptions of discharge care. Age has also been linked to discharge care experiences; Lilleheie et al. (2019) noted that elderly patients face challenges in discharge care due to cognitive and physical limitations.

In Malaysia, limited research has focused on patient experiences with discharge care, with most studies concentrating on healthcare provider perspectives. Additionally, there needs to be more investigation into the relationship between discharge care and socio-demographic factors such as age and education level. Previous studies have primarily explored elderly patients' discharge-care experiences (Lilleheie et al., 2019; Boge et al., 2018), with less emphasis on other age groups. Therefore, this study aims to explore patient experiences with discharge care and their associations with hospitalization experiences and socio-demographic factors at a teaching hospital in Malaysia.

2.0 Materials & Methods

This study used a descriptive cross-sectional design. Ethical approval for conducting it was obtained from the UKMMC Research Ethics Committee (FF-2023-090). It was conducted at a teaching hospital in Cheras, Kuala Lumpur, Malaysia. Respondents must be 18 or older, understand English and Malay, and have been readmitted to the hospital within 30 days to 6 months. Exclusions include those with altered mental status or critical illness.

The study population comprised 118 respondents who were readmitted to the hospital. Krejcie and Morgan's (1970) formula was used to determine the sample size for this study. The respondents were gathered from a selected discipline, which was medical. The method used in this study was simple random sampling, which involves selecting a smaller subset from a greater population.

In this study, data were collected using a self-reported questionnaire. This questionnaire comprised Socio-demographic Data, the Discharge Care Experience Survey (DICARES), and the Nordic Patient Experiences Questionnaire (NORPEQ). Questions for DICARES were an 11-item discharge care experience with 3 (three) domains: coping after discharge, adherence to treatment, and participation in

discharge planning ((Boge et al. 2019). NORPEQ has eight items relating to respondents' experience during hospitalization. The original inventory was developed by Skudal et al. (2012). In this study, Cronbach's alpha for DICARES was 0.75, and NORPEQ was 0.95.

Data were analyzed using SPSS version 25. Descriptive statistics summarized socio-demographic data and discharge care experiences. Pearson's correlation and Spearman's rho were used to assess relationships between discharge care experience, hospitalization experience, and socio-demographic factors. Significance was set at $p < 0.05$.

3.0 Results

The details of the study results are as follows.

3.1 Socio-demographic Data

Table 1 shows that the average age of respondents in this study was 55.64, with SD is 55.64 ±17.84. The highest level of education was secondary education, with 57 (48.31%) of respondents. The lowest level of education was no formal education, with 1 (0.84%) of respondents. Details of the respondents' socio-demographic characteristics are presented below in Table 1.

Table 1. Socio-demographic Data

Variables	Mean (SD)	N (%)
Age	55.64 (17.84)	118 (100)
Level of education		
● No formal education		1 (0.84)
● Primary		27 (22.88)
● Secondary		57 (48.31)
● Tertiary (Diploma, Degree, Master, PhD)		33 (27.97)

(Project code: FF-2023-090)

3.2 Respondents' Experience of Discharge Care

Table 2 shows respondents' experience with discharge care, showing that most respondents have a good experience (71%). The results also indicated that the mean score of coping after discharge is 14.71, the mean score of treatment adherence is 11.35, and the mean score of participation in discharge planning is 14.94, which shows a mean DICARES score of 3.91 and above. The high mean DICARES score, excellent discharge care (mean score 41.00), coping after discharge, adherence to treatment, and participation in discharge planning experience received by respondents showcase the satisfaction of patients and their excellent experience.

Table 2. Respondents' Experience of Discharge Care

Variables	N (%)	Mean (SD)
Discharge Care Experience	84 (71.00)	41.00 (5.76)
● Coping after discharge		14.71 (3.27)
● Adherence to treatment		11.35 (1.66)
● Participation in discharge planning		14.94 (2.47)

(Project code: FF-2023-090)

3.3 Relationship between Discharge Care Experience and Experience during Hospitalization

Table 3 discusses the relationship between discharge care experience and experience during hospitalization. The results showed a statistically significant relationship between discharge care experience and experience during hospitalization ($p < 0.001$). The relationship was a positive moderate correlation between two variables, the value $r = 0.542$. This result means that the experience during hospitalization becomes positive as the discharge care experience increases.

Table 3. Relationship between Discharge Care Experience and Experience during Hospitalization

Variables	Experience during hospitalization	
	Rho-value	p-values
Discharge Care Experience	0.542	<0.001

Test Spearman's Correlation Coefficient (p<0.01)
(Project code: FF-2023-090)

3.4 Relationship between Age with Copiing after Discharge, Adherence to Treatment, Participation in Discharge Planning

Table 4 shows the relationship between age and coping after discharge, adherence to treatment and participation in discharge planning. The findings indicated that there is no statistical relationship between age and coping after discharge (p=0.121), adherence to treatment (p=0.07), and participation in discharge planning (p=0.535). This study discovered that age had no significant relationship with coping after discharge, adherence to treatment and participation in discharge planning. This finding means that age was not an influencing factor in the experience of feeling good.

Table 4. Relationship between Age with Coping after Discharge, Adherence to Treatment, Participation in Discharge Planning

Variables	Age	
	Rho-value	p-values
Coping After Discharge	-0.144	0.121
Adherence to Treatment	-0.249	0.07
Participation in Discharge Planning	-0.058	0.535

Spearman's Correlation Coefficient Test (p<0.01)
(Project code: FF-2023-090)

3.5 Relationship between Level of Education with Copiing after Discharge, Adherence to Treatment, Participation in Discharge Planning

Table 5 depicts the relationship between the level of education and coping after discharge, adherence to treatment and participation in discharge planning. The results showed that there is a statistically significant relationship as $p < 0.05$ in coping after discharge ($df = 3$, $p = 0.020$), adherence to treatment ($df = 3$, $p = 0.022$) and participation in discharge planning ($df = 3$, $p = 0.034$) with level of education. Hence, the null hypothesis is rejected. The effect size calculated using eta squared (H) in coping after discharge was 0.06, treatment adherence was 0.058, and participation in the discharge planning was 0.05, which, according to Cohen (1988), was a small effect. This finding indicated that the difference in the means of the four levels of education was minuscule.

Table 5. Relationship between Level of Education with Coping after Discharge, Adherence to Treatment, Participation in Discharge Planning

	Level of Education	Mean (SD)	df	p-value
Coping after discharge	No formal education	-	3	0.020
	Primary	3.32 (0.80)		
	Secondary	3.68 (0.78)		
	Tertiary	3.95 (0.82)		
Adherence to treatment	No formal education	-	3	0.022
	Primary	3.56 (0.49)		
	Secondary	3.81(0.46)		
	Tertiary	3.93 (0.68)		
Participation in Discharge Planning	No formal education	-	3	0.034
	Primary	3.5 (0.57)		
	Secondary	3.72(0.56)		
	Tertiary	3.94 (0.70)		

Kruskal-Wallis Test ($p<0.05$)

(Project code: FF-2023-090)

4.0 Discussion

The study at a teaching hospital assessed patients' discharge care experiences, revealing the highest mean DICARES score and the excellent discharge care experienced by respondents. The research highlighted a direct correlation between discharge care experiences and patients' overall hospitalization satisfaction. This finding supports research by Reig-Garcia et al. (2022), which indicated that inadequate information about nursing discharge diagnoses, social and psychological aspects, and post-hospitalization knowledge adversely affect discharge care experiences.

Prior studies on discharge care experiences utilized the Prescriptions, Ready to re-enter the community, Education, Placement, Assurance of safety, Realistic expectations, Empowerment, Directed to appropriate services (PREPARED) questionnaire across 35 hospitals, involving 200 participants (response rate 46%). Developed by Grimmer and Moss in 1998, this tool evaluates various domains, emphasizing the critical need for effective hospital discharge planning strategies. This discovery supports current findings on improving discharge planning strategies to enhance patient outcomes.

In this study, respondents reported a high mean coping score of post-discharge, indicating that better discharge care experiences lead to improved coping abilities. This finding aligns with previous research showing that inadequate discharge planning and lack of family involvement contribute to post-discharge challenges (Hestevik et al., 2019). Adequate discharge instructions, as indicated by Li et al. (2022), mitigate these difficulties, emphasizing the importance of structured post-discharge support. Boge et al. (2018) used the Post-Discharge Coping Difficulty Scale-New Mother Form (OB-PDCDS) to assess maternal coping post-discharge, revealing a negative correlation between effective discharge education and post-discharge challenges. Their findings, supported by multiple regression analyses, highlight the significant role of quality discharge guidance in improving patient outcomes.

Similarly, adherence to treatment among hospital patients showed a high mean score, with adherence ranking lowest among the three domains. This finding underscores challenges in treatment compliance despite overall positive discharge care experiences. Kosobucka et al. (2022) highlighted that patient readiness for discharge significantly influences treatment adherence and subsequent hospital readmissions. According to Boge et al. (2019), treatment adherence impacts hospital readmission rates, underscoring its role as a quality indicator. Effective discharge care improves patient coping and quality of life post-discharge, promoting treatment adherence (Fernandez-Lazaro et al., 2019; Rahpeima et al., 2022; Aremu et al., 2022). The literature consistently links treatment adherence with discharge care quality and patient outcomes (Boge et al., 2019).

The study also assessed patients' participation in discharge planning, revealing a high mean score. Krook et al. (2020) emphasized that patient understanding and involvement in discharge planning enhance care effectiveness and reduce readmissions. However, studies indicate minimal patient participation in discharge planning (Dyrstad et al., 2015; Boge et al., 2019), highlighting gaps in patient-provider communication during discharge.

Statistical analysis revealed a significant positive moderate correlation between overall discharge care experience and hospitalization satisfaction, affirming that improved discharge care enhances patient experiences during hospital stays. Studies stress that informed

discharge planning reduces hospitalizations and readmissions (Gane et al., 2022), highlighting its impact on healthcare costs and patient well-being.

Age was found not to significantly influence coping after discharge, treatment adherence, or participation in discharge planning in this study. This result contradicts previous findings suggesting age-related disparities in discharge care experiences (Considine et al., 2020; Qiu et al., 2022), with younger patients often better prepared for discharge due to their physical resilience (Qiu et al., 2022). However, other studies indicated that older patients (65 years old and above) are often better concerned about discharge (Lilleheie et al., 2019). Therefore, it is not proven that age was an influencing factor towards the discharge care experience.

Regarding education level, a Kruskal-Wallis test revealed significant differences in coping after discharge, treatment adherence, and participation in discharge planning among four educational groups. Post-hoc tests showed primary education versus tertiary education had significant differences ($p < 0.05$) in all three domains, indicating higher education correlates with better patient outcomes in discharge care (Dwi & Nani, 2019). While previous studies found no significant relationship between education level and discharge plan understanding (Sheikh et al., 2018), our findings align with Dwi and Nani (2019), suggesting higher education enhances patient readiness for hospital discharge. Lower education levels correlate with a poorer understanding of discharge diagnosis ($p=0.06$), treatment plan ($p=0.06$), failure to understand discharge instructions and a higher risk of post-discharge complications (Sheikh et al., 2018). We can highlight that level of education may play a role in patients' experience towards discharge care and prove that discharge care experience increases when the level of education increases, as presented in this study.

Therefore, this study underscores the critical role of effective discharge planning in enhancing patient outcomes and reducing readmission and healthcare costs. It highlights the need for tailored discharge strategies that consider patient education levels and promote active patient involvement in care planning. By improving discharge care experiences, healthcare providers can significantly impact patient well-being and healthcare resource utilization.

5.0 Conclusion & Recommendations

This study found that patients' discharge care experiences were directly related to their hospitalization experiences. Age was not significantly related to discharge care experience, but education level was. These findings highlight the importance of ward management, particularly nurse managers, in improving patient discharge care experiences. Enhancing nursing management is crucial, as patient satisfaction from hospital to home is greatly influenced by discharge care. Future discharge care should integrate advanced technology to facilitate at-home patient referrals. Healthcare provider involvement is vital as doctors should thoroughly explain discharge processes, and nurses should reinforce these explanations to enhance patient understanding and encourage questions. However, the study faced limitations in identifying patients who met the criteria. Some eligible patients could not respond due to language barriers, requiring researchers to frequently check multiple wards to find respondents fitting the inclusion and exclusion criteria.

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Paper Contribution to Related Field of Study

This study significantly contributes to discharge care by linking patients' hospitalization experiences with discharge care. It highlights that higher education levels lead to better discharge experiences and underscores the need for improved nursing management by integrating advanced technology for patient referrals. The research also emphasizes the crucial role of healthcare providers, suggesting that effective communication between doctors and nurses enhances patients' understanding and overall discharge experience.

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