

# Improvement in the Awareness of Palliative Care Nursing Using STAS-J in an Acute Care Hospital

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**Abstract**

The Japanese version of the Support Team Assessment Schedule (STAS-J) in palliative care units is reliable and widely used in Japan. However, there are few reports showing its impact on palliative care in acute care hospitals (ACHs) treating cancer patients. To verify the usefulness of STAS-J in ACHs, we evaluated changes in the awareness of care for patients among 48 nurses in a university hospital using a questionnaire administered before the introduction of STAS-J, after virtual case assessment, and after assessment of the first five inpatients. Statistical examination was performed by the Mann-Whitney U test. Most of the surveyed items, except noticing the anxiety of the patient's family and information exchange with medical staff other than doctors, were significantly improved after the introduction of STAS-J ( $p < 0.05$ ). Approximately 60% of the nurses had affirmative opinions of STAS-J. The results suggested STAS-J is useful in improving the awareness of palliative care nursing in ACHs.

**Keywords:** STAS-J; Acute care hospital; Palliative care; Changing awareness of nurses

## Introduction

In 2009 in Japan, the number of deaths from malignant neoplasms was 344,105, making it the most common cause of death [1]. The number of deaths due to malignant neoplasms has been increasing and this increase is predicted to continue. In the census-of-population report by the Ministry of Health, Labour and Welfare released in 2004, 34% of malignant neoplasm patients died in palliative care units (PCU) [2]. In addition, it was reported in 2007 that 89.9% of cancer patients died in hospitals, and most of them were ACHs [2].

The first PCU in Japan was established in 1981, and after that, the number of institutions providing palliative care has gradually increased. As of February 2014, there were 5,991 beds and 300 PCUs in Japan. Although PCUs have been increasing in response to the understanding of the importance of palliative care [3], the number of PCUs in Japan remains low and ACHs have to take over palliative care.

Kyushu University Hospital is an ACH with 1,275 beds that treats many malignant neoplasm patients. Our department mainly treats advanced and unrespectable malignant neoplasm patients with multidisciplinary

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present study was conducted to verify the usefulness of STAS-J in an ACH for improving palliative care.

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The present study was performed in the acute care ward of Kyushu University Hospital, Fukuoka, Japan, where around 30% of the patients suffer malignant tumors. Weekly joint conferences with doctors and nurses are held to discuss patient treatment. When doctors explain the patient's condition to a patient and their family, nurses are present in about 75% of cases. STAS-J assessment was introduced in the ward in February 2009 and the present study period was from February 2009 to August 2009. Forty-eight nurses (25 in a general ward and 23 in an aseptic ward) agreed to participate in the study.

Nurses answered questions about their years of nursing experience, the number of times they had participated in STAS-J assessment (two or three times), and changes in their awareness after performing STAS-J assessment. The nurses completed a 22-item self-evaluation questionnaire with responses recorded on a four-point scale (1 indicating "I can do it well", 2 indicating "I can do it moderately", 3 indicating "I can seldom do it", and 4 indicating "I cannot do it at all"). Questionnaire items related to awareness of care are listed in Table 1. The survey consisted of anonymous questionnaires, which were sealed and collected. The answers of nurses working in the aseptic ward were compared with those of nurses in the general ward who were in charge of solid tumour care. Nurses were also asked to write free description responses about their impression of STAS-J.

All nurses were required to perform STAS-J assessment of a virtual case before assessing actual patients. The nurses were surveyed with the same 22-item questionnaire regarding the awareness of care three times: before performing STAS-J assessment, after STAS-J assessment of a virtual case, and after assessment of the first five inpatients.

The reliability of the questionnaire was evaluated using the results of the latter two surveys. Responses for questions about years of nursing experience, the number of times participating in STAS-J assessment, and free descriptions of their impression of STAS-J were recorded after assessment of the first five inpatients. Comparison of the nurses' responses by ward was based on the results of their questionnaire responses.

Statistical examination was performed using SPSS ver.13 (IBM Japan, Tokyo, Japan). The results of the third survey were compared with those of the first and the second surveys using the Mann-Whitney U test. P values of <0.05 were considered significant. This study complied with the ethical principles of the Declaration of Helsinki. Freedom of participation and protection of personal information were carefully considered in this study.

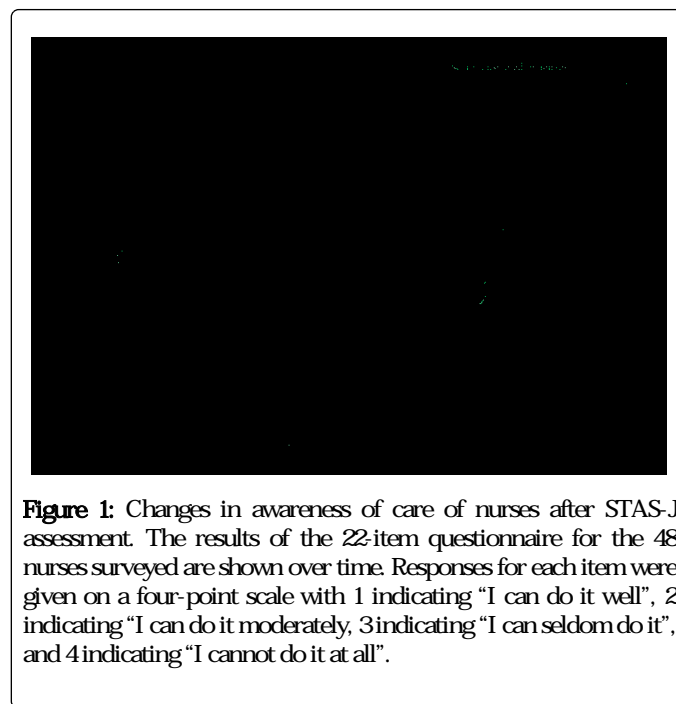
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MUfgcZbi fgb[ `Yi dYf]YbWUbxh Ybi a VfcZha Yg dUfhVdUhb[ `]bGH5G>UgYga Ybh

Among the 48 nurses who participated in this study, the number of years of nursing experience was  $69 \pm 5.4$  years and the number of times participating in STAS-J assessment was  $2.5 \pm 1.4$  times.

7\Ub[ Yg]b Uk UYbYggcZMFYcZbi fgYgUMf'GH5G>

The nurses' responses to the 22 self-evaluation questionnaire items were compared over time (Figure 1). For items other than information exchange with dentists, pharmacists, physical therapists, and dietitians, whenever the number of times of STAS-J assessment increased, the nurses' self-evaluation responses improved. In particular, the items of dealing with pain, dealing with physical symptoms other than pain, or managing problems with the patient not fully recognizing the condition of their disease showed a larger improvement than items related to noticing how a patient or their family was handling the situation. Moreover, large improvements were also observed in the items about information exchange with doctors and nurse aids, and communication with the patient and their family. As shown in Figure 1, the results of the surveys performed after the virtual case assessment and after assessment of the first five inpatients exhibited almost equivalent values, suggesting that the reliability of the questionnaire was acceptable.



**Figure 1:** Changes in awareness of care of nurses after STAS-J assessment. The results of the 22-item questionnaire for the 48 nurses surveyed are shown over time. Responses for each item were given on a four-point scale with 1 indicating "I can do it well", 2 indicating "I can do it moderately", 3 indicating "I can seldom do it", and 4 indicating "I cannot do it at all".

The results of the surveys administered before performing STAS-J assessment and after assessment of the first five inpatients were examined. Significant improvements were observed after the assessment of actual inpatients ( $p < 0.001$ ) in the items of dealing with pain, dealing with physical symptoms other than pain, managing problems with the patient's family's recognition of the condition of the disease, grasp of communication with the patient and their family, information exchange with doctors, and providing information to the patient and their family. Significant improvements were also observed in the items of noticing physical symptoms other than pain, dealing with anxiety, grasp of the patient's family's recognition of the condition of the disease, grasp of communication with doctors, and information exchange with doctors and nurse aids ( $p < 0.05$ ), well as items of noticing pain, noticing anxiety, dealing with anxiety of the patient's family, grasp of the patient's family's recognition of the condition of their disease, managing problems with the patient not fully recognizing the condition of their disease, managing problems with the patient and their family, and grasping of the patient's family's recognition of the condition of their disease.

dentists ( $p < 0.05$ ). Comparison of the first and third surveys showed no significant improvement in the items of noticing anxiety of the patient's family and information exchange with pharmacists, physical therapists, and clerks ( $p > 0.05$ ) (Table 1).

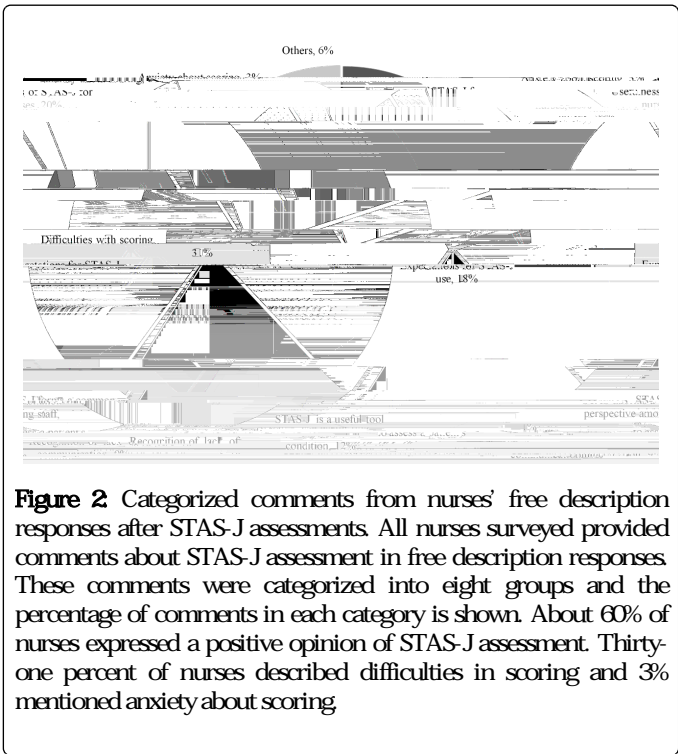
Items	Significance level	p-value
Noticing pain	775	0.011*
Dealing with pain	677.5	0.001***
Noticing physical symptoms other than pain	770	0.006**
Dealing with physical symptoms other than pain	664.5	0.001***
Noticing anxiety	778.5	0.011*
Dealing with anxiety	741.5	0.009**
Noticing anxiety of the patient's family	826	0.068
Dealing with anxiety of the patient's family	809.5	0.040*
Grasp of the patient's recognition of the condition of their disease	816	0.042*
Managing problems with the patient not fully recognizing the condition of their disease	755	0.012*
Grasp of the patient's family's recognition of the condition of the disease	728	0.006**
Managing problems with the patient's family's recognition of the condition of the disease	652	0.001***
Grasp of communication with the patient and their family	604	0.000***
Managing problems with communication with the patient and their family	781	0.025*
Information exchange with doctors	313	

Noticing physical symptoms other than pain	1909	4187	0.0822
Dealing with physical symptoms other than pain	1970	4248	0.1694
Noticing anxiety	1897.5	4108.5	0.0847
Dealing with anxiety	2123.5	4268.5	0.9106
Noticing anxiety of the patient's family	1948.5	4226.5	0.1859
Dealing with anxiety of the patient's family	1728.5	4006.5	0.0136*
Grasp of the patient's recognition of the condition of their disease	1914.5	4192.5	0.0957
Managing problems with the patient not fully recognizing the condition of their disease	1872	4150	0.0752
Grasp of the patient's family's recognition of the condition of the disease	1784.5	3995.5	0.0435*
Managing problems with the patient's family's recognition of the condition of the disease	1625.5	3836.5	0.0046*
Grasp of communication with the patient and their family	2092.5	4370.5	0.5218
Managing problems with communication with the patient and their family	1857	4135	0.0769
Information exchange with doctors	2021.5	4232.5	0.2871
Information exchange with dentists	2004.5	4149.5	0.3314
Information exchange with pharmacists	1887.5	4233.5	0.0854
Information exchange with physical therapists	1322	3668	0.0000*
Information exchange with nurse aids	1446	3792	0.0001*
Information exchange with clerks	1434.5	3780.5	0.0001*
Information exchange with dietitians	357	1438	0.0000*
Providing information to the patient and their family	2059	4270	0.5196

The significance of changes in awareness of care among nurses in the general ward treating patients with solid tumor over that of nurses treating patients with hematological malignancies was verified. For each item, statistical significance was examined before the introduction of STAS-J and after assessment of the first five inpatients. The Mann-Whitney U test was used to determine statistical significance. \*p<0.05.

	Poor communication with doctors
STAS-J forms a common perspective among staff	A common understanding of the patient was deepened
Difficulties with scoring	Scoring the patient's objective symptoms is difficult Scoring the patient's mental condition is difficult
Anxiety about scoring	Anxiety about the appropriateness of the nurses own scoring

**Table 3** Selected free description comments about STAS-J assessment from the nurses surveyed.



7cffYU]cb Vfk Yb mUfgcZM dYf]YbWUbXWUb[ Yg]b Uk UfYbYgg

No correlation in changes in awareness of care by years of nursing experience was observed in any items (data not shown).

### 8]gWgg]cb

In order to provide high quality palliative care, the level of care must be evaluated with high validity. The reliability of STAS-J was already shown in PCUs [10] and in university hospitals [14]. In this study, we verified that STAS-J is useful for improving the quality of palliative care in ACHs by assessing changes in awareness of care among nurses.

