

ASSESSMENT OF PATIENTS' LEVEL OF SATISFACTION WITH NURSING CARE DURING HOSPITALISATION IN THE GENERAL SURGERY WARD

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ABSTRACT

Introduction: Quality of nursing care shows the extent to which nursing care contributes to reach the desired effects of nursing. To measure the quality of medical services one should examine patient satisfaction of the given services.

Aim of the study: The aim of this study was to evaluate the level of patient satisfaction of nursing care during hospitalisation at the Department of General Surgery in the Saint Lucas Provincial Hospital in Tarnow.

Material and methods: The study was conducted among a group of 100 patients hospitalised at the Department of General Surgery in the Saint Lucas Provincial Hospital in Tarnow, who were subject to a planned surgery. This group consisted of 47 women and 53 men. This research was based on a diagnostic opinion poll. The Newcastle Satisfaction with Nursing Scale (NSNS) – an instrument for assessment of quality of nursing care – was used as the research tool. The research tool consisted of three parts containing 48 closed questions, one open-ended question, and the respondents' characteristics.

Results: The nursing care was most commonly (53%) evaluated by patients as very good, by 30% of them as good, and by 15% as fair enough. Only a few individuals considered it bad or very bad. The average level of satisfaction reached 78.67 points (SD = 18.19) on a scale from 0 to 100 points. The results varied from 7.89 up to 100 points. Half the people did not exceed 82.89 points. According to 28% of patients there are means to improve nursing care, but 24% of respondents claim that there is no possibility for improvement. 48% of patients did not have any opinion about that.

Conclusions: The research results' analysis shows that the nursing care at the Department of General Surgery was rated as very good or good by the majority of patients. Additionally, along with the increase of the rate of satisfaction with nursing care, satisfaction with other aspects of care grew as well. Patients who had been hospitalised at the Department of General Surgery for a longer time were more satisfied with nursing care. Few respondents gave examples of improvement of the quality of nursing care.

Key words: quality of nursing care, patient satisfaction, NSNS.

INTRODUCTION

The measure of the quality of health services is, among others, an evaluation of patients' satisfaction with the services received at health care centres. The assessment carried out by a patient in the determination of quality is associated with a subjective sense of his/her satisfaction, and with personal experiences, expectations, and professed values. In connection with the above, there is no single, generally binding definition of the term "satisfaction". However, it can

be defined as a certain psychological state characterised by the patient's satisfaction with the received service resulting from the satisfaction of his/her expectations [1, 2].

We present herein the results of the assessment of patients' experiences and satisfaction with nursing care and the relationship between these assessments and selected variables, including sociodemographic factors. The authors of the work are convinced that high quality in healthcare is determined by many variables. They include the quality of medical services

provided and the quality of nursing care, relations among medical staff, the way health care is managed, organisational and technical conditions, and, consequently, the level of patient satisfaction. The aim of the study was to assess the level of satisfaction of patients with nursing care during hospitalisation in the General Surgery ward at the Saint Lucas Provincial Hospital in Tarnow.

MATERIAL AND METHODS

The study was conducted among 100 patients of the General Surgery Department of the Saint Lucas Provincial Hospital in Tarnow from December 2016 to the end of March 2017. The study group consisted of patients staying in the surgical ward at least three days, they were not influenced by psychotropic drugs, and did not experience any pain. Respondents were informed about the purpose of the examination, anonymity, and the right to refuse or withdraw consent to participate in the study at any time without any consequences, and then they gave their informed consent to the study. The research was based on the diagnostic survey method. The questionnaire technique was used. As a tool, a standardised questionnaire – the Newcastle Satisfaction with Nursing Scale (NSNS) – was used to assess the patients' experiences of nursing care and their satisfaction of nursing care [3]. It was assumed that the satisfaction of nursing care as a multidimensional concept should not be measured by means of individual questions, but rather sets of statements that would reflect the accepted definition of satisfaction with nursing care [4].

The scale (NSNS) consists of three parts. In the first of them there are 26 claims (positive or negative) concerning the patient's experiences related to nursing care, with the possibility of answering in a seven-point Likert scale. An analysis of the received answers allows determination of the overall experience score in the range 0-100, where 100 means the best possible experience, and 0 represents an experience as bad as the patient can imagine. The second part consists of 19 statements that allow determination of the level of satisfaction of respondents with nursing care in a five-point Likert scale. After analysing the answer, it is possible to determine an overall score in the range 0-100 points, where 100 means complete satisfaction from all aspects, while 0 means a total lack of satisfaction with care. The last part of the scale consists of questions about demographic characteristics and hospital stay – among others, time spent on the ward. This part of the scale contains a question regarding the assessment of the overall nursing care received on the ward. The results of patient satisfaction measurement are considered reliable when 100 correctly completed surveys are obtained [4].

The Newcastle Satisfaction with Nursing Scale is a valuable research tool due to the fact that within its structure it contains aspects of nursing care identified in the current studies that are significant from the point of view of the patient [3].

The study analysed such variables as age, sex, education, and marital status.

The obtained data were subjected to statistical analysis. Verification of differences between variables was made using the Mann-Whitney and Kruskal-Wallis test and by calculating the rho Spearman correlation coefficient. The level of significance was $p < 0.05$. The calculations were carried out using SPSS software.

RESULTS

The study group comprised 47% women and 53% men. Table 1 presents sociodemographic variables.

The study showed that only 16% of the subjects knew which nurse was responsible for caring for him/her. Half of the respondents (50%) did not have such a nurse assigned, and 34% of patients were not sure whether they were assigned a specific nurse.

Patients most often (53%) assessed the nursing care received at the ward as very good. In the opinion of 30% of patients, this care was good, and 15% of the respondents stated it was satisfactory.

A few individuals regarded it as bad or very bad.

According to 28% of patients, the nursing care could be improved. Most often, they mentioned an increase in the number of nursing staff and an increase in wages. In the opinion of 24% of respondents, it is not possible to improve nursing care. 48% did not have an opinion on this matter.

Table 1. Characteristics of the studied group

Sociodemographic variables		n	%
female	female	47	47
	male	53	53
18-35 years old	18-35 years old	19	19
	36-50 years old	28	28
	51-66 years old	32	32
	> 66 years old	21	21
married	married	75	75
	single	21	21
	divorced	4	4
primary	primary	4	4
	vocational	47	47
	secondary	31	31
	higher	18	18
7 days and less	7 days and less	76	76
	7-14 days	20	20
	> 15 days	4	4

Experiences of nursing care

The average level of experience related to nursing care assessed according to the NSNS scale amounted to 76.37 points. (SD = 15.71) on a scale of 0-100 points. The results ranged from 32.05 to 100 points, and half of those received no more than 77.88 points.

The patients positively assessed the cooperation between doctors and nurses (5.09; $p = 0.0151$), the knowledge of nurses (5.08; $p = 0.0341$), and the nice atmosphere in the ward created by the nurses (5.07; $p = 0.0421$). They rated negatively the nurse's performance of activities without prior patient preparation (5.11; $p = 0.0283$). The lowest grade was obtained in the area of explaining their ailments to patients (3.90; $p = 0.0051$) and the time devoted to patients by nurses (3.65; $p = 0.0161$).

Patients who had an assigned nurse more often stated that they could talk to nurses (5.25; $p = 0.0173$)

and that the nurses comforted patients who were depressed (5.25; $p = 0.0351$). People who did not have an assigned nurse more rarely stated that before the surgery they received information from nurses about what was wrong with them (3.62; $p = 0.0088$), they assessed the cooperation of the nurses and doctors team higher (4.82; $p = 0.0068$), and they were more satisfied with the knowledge of nurses of what should be done to improve the situation (4.80; $p = 0.0375$) as well as with creating a nice atmosphere in the ward by nurses (4.86; $p = 0.0472$).

An analysis of our current research showed that patients who assessed higher the overall care received at the ward also had a better experience in this care. This relation was not significant in the case of mutual cooperation between nurses on the ward ($p > 0.05$) – Table 2.

People who claimed that there were no ways to improve nursing care in the ward were more likely

Table 2. Experiences of nursing care and assessment of the overall nursing care received on the ward

Assessment of nursing care received on the ward	Good enough		Good		Very good		<i>p</i>
	M	SD	M	SD	M	SD	
It was possible to joke with nurses	4.12	1.27	4.70	1.02	5.11	1.27	0.0018
Nurses favoured some patients	4.00	1.66	4.37	1.77	5.36	1.57	0.0001
Nurses did not give me enough information	3.59	1.46	4.07	1.91	5.11	1.75	0.0003
Nurses did not exert themselves much and were too relaxed	3.82	1.74	4.10	1.92	5.23	1.64	0.0005
It took the nurses a long time to arrive at the call	2.59	2.03	3.60	2.04	4.68	1.98	0.0003
The nurses gave me information exactly when I needed it	3.41	1.91	4.00	1.84	4.85	2.01	0.0003
It seemed to me that the nurses disregarded my suffering	4.29	1.72	4.17	2.09	5.45	1.47	< 0.0001
Nurses turned off the light too late at night	4.06	1.78	5.03	1.45	5.19	1.81	0.0050
The nurses told me to do different things before I was prepared for them	4.35	1.69	5.23	1.50	5.28	1.54	0.0286
Nurses, no matter how busy they were, found time for me	2.53	1.97	3.90	1.86	5.15	1.22	< 0.0001
I considered nurses to be my friends	3.53	1.77	3.77	1.52	4.81	1.62	0.0007
Nurses comforted patients who were depressed	3.24	1.79	4.17	1.51	5.04	1.22	0.0001
The nurses checked regularly to make sure that I was okay	4.18	1.13	4.37	1.33	5.21	1.32	0.0001
Nurses were not able to cope with everything	3.47	1.62	4.20	1.69	4.96	1.69	0.0005
Nurses were not interested in me	3.41	1.87	5.07	1.36	4.85	2.10	0.0007
The nurses explained to me what's wrong with me	3.00	2.03	3.57	1.59	4.38	1.98	0.0064
Before the surgery nurses explained to me what it is about	3.24	2.14	3.63	1.79	4.94	1.71	0.0002
The nurses reported to the next shift information about my condition	3.29	1.79	4.10	1.54	4.75	1.54	0.0030
The nurses knew what to do, they did not wait for doctors' orders	3.53	1.50	3.57	1.76	5.08	1.34	< 0.0001
Nurses used to go away and forget what the patient asked for	3.94	1.39	4.40	1.65	4.91	1.92	0.0078
Nurses looked after the privacy of patients	4.06	1.78	4.47	1.83	5.19	1.74	0.0003
The nurses had time to sit down and talk to me	3.35	1.97	2.97	1.71	4.13	2.00	0.0162
Doctors and nurses worked well as a team of	4.12	1.45	4.97	1.07	5.47	1.22	< 0.0001
Nurses did not seem to know what each other was doing	4.88	1.62	4.97	1.43	4.89	1.89	0.5243
The nurses knew what to do to improve the situation	3.94	1.56	4.83	1.15	5.58	0.66	< 0.0001
Thanks to the nurses, there was a nice atmosphere in the ward	4.00	1.58	4.93	1.11	5.49	1.17	< 0.0001
Experiences of nursing care (Newcastle scale)	61.50	17.59	71.24	11.27	84.03	12.50	< 0.0001

to say that it was possible to joke with nurses (5.38; $p = 0.0329$), they rated the arrival of nurses on call (4.96; $p = 0.0178$), checking by nurses that everything was in order (5.42; $p = 0.0197$), and the ability of the nurses to cope (5.21; $p = 0.0206$). People who had no opinion about the possibility of improving nursing care were less likely to claim (4.54; $p = 0.0494$) that the nurses get along with each other.

People who had been on the ward for more than 15 days more positively evaluated nurses' turning off lights (5.75; $p = 0.0059$), nurses coping with everything (6.00; $p = 0.0371$), nurses' interest (6.00; $p = 0.0247$), and taking care of the privacy of patients (6.00; $p = 0.0333$). Also, patients staying in the ward longer than 15 days assessed their experience in nursing care higher (92.63) than those staying there for seven days (77.27) or 8-14 days (69.68; $p = 0.0165$).

Small differences indicated that men assessed the nurse's ability to find time regardless of how busy they were higher (4.64) than women (3.98; $p = 0.0443$). Also, men had better experiences (5.28) than women (4.83) related to the introduction of a pleasant atmosphere by the nurses on the ward ($p = 0.0441$).

People with primary education (5.00) or vocational education (5.17) more often claimed that they could joke with the nurses. Patients with such education

also felt that the nurses provided them with information exactly when they needed it, they found time, regardless of the number of duties, they checked regularly that everything was in order, they explained before the surgery what it was about, and they knew what to do to improve the situation. Along with the increase in the level of education, the experiences related to nursing care deteriorated ($p < 0.05$).

Satisfaction with nursing care

The average level of satisfaction with nursing care was 78.67 points. (SD = 18.19) on a scale of 0-100 points. The results ranged from 7.89 points. up to 100 points, and half of the people received no more than 82.89 points.

The patients were most satisfied with the provision of privacy by nurses (3.42; $p = 0.0331$) and the treatment (3.40; $p = 0.0051$). They were least satisfied with the way of taking care, that the patient would feel like at home (2.99; $p = 0.0751$), the frequency of checking that everything is in order (2.94; $p = 0.0234$), the way of calming down family and friends by nurses (2.82; $p = 0.0121$), and the amount of information received about health and care (2.79; $p = 0.0671$).

Table 3. Satisfaction with nursing care and having a designated specific nurse responsible for care on the ward

Having a designated specific nurse responsible for care on the wardy	Yes		No		Not sure		p
	M	SD	M	SD	M	SD	
The amount of time the nurses spent with you	3.44	0.63	2.80	0.93	3.24	0.92	0.0136
How efficient were the nurses in doing their job?	3.56	0.51	3.20	0.93	3.56	0.75	0.1260
Presence of a nurse nearby, when needed	3.69	0.60	2.78	1.04	3.18	0.97	0.0031
Nurse's knowledge about your illness and care	3.38	0.81	2.90	1.02	3.26	0.75	0.1259
How quickly did the nurses come to your call?	3.50	0.82	2.90	1.05	3.03	0.83	0.0798
The way nurses made you feel at home	3.25	0.93	2.76	0.96	3.21	0.73	0.0550
The amount of information you have received from nurses about your condition and care	3.13	0.96	2.56	1.13	2.97	0.76	0.1122
How often did the nurses check if you were okay?	3.19	1.05	2.68	1.00	3.21	0.81	0.0256
Nurses' readiness to help	3.50	0.63	3.14	0.88	3.62	0.65	0.0268
The way the nurses explained things to you	3.56	0.51	2.82	1.06	3.15	0.93	0.0267
How nurses calmed down your family and friends?	3.44	0.63	2.52	1.25	2.97	1.06	0.0199
Behaviour of nurses at work	3.69	0.60	3.16	0.87	3.35	0.81	0.0630
Type of information the nurses have given you about your condition and care	3.38	0.62	2.78	1.15	3.35	0.81	0.0280
How you were treated by nurses	3.63	0.62	3.20	0.81	3.59	0.66	0.0223
How did the nurses listen to your fears and worries?	3.56	0.63	2.88	1.04	3.41	0.70	0.0113
The amount of freedom you had in the ward	3.56	0.63	3.14	1.07	3.41	0.74	0.3524
How willingly were the nurses to fulfil your requests?	3.50	0.52	3.10	0.91	3.47	0.66	0.0873
Providing you with privacy by nurses	3.63	0.62	3.26	0.88	3.56	0.66	0.1254
Nurses' awareness of your needs	3.50	0.63	2.96	1.01	3.56	0.61	0.0068
Satisfaction from nursing care	86.92	13.28	73.08	20.26	83.01	14.28	0.0119

People with a specifically designated nurse in the ward rated much higher the amount of time devoted by nurses (3.44; $p = 0.0136$), nurse attendance when needed (3.69; $p = 0.0031$), their ability to explain things (3.56; $p = 0.0256$), calming down family and friends (3.44; $p = 0.0268$), the way nurses approach them (3.63; $p = 0.0223$), and listening to fears and worries (3.56; $p = 0.0113$). Patients who did not have an assigned care nurse were less satisfied with the nurses checking that everything was in order (2.68; $p = 0.0256$) and the type of information provided about health and care (2.78; $p = 0.0280$). The overall level of satisfaction with nursing care was higher in people with an assigned nurse (86.92), lower in subjects who were not sure (83.01), and lowest (73.08) in patients who claimed they did not have such a nurse ($p = 0.0119$; Table 3).

The analysis of our current research showed that along with the increase in the overall assessment of nursing care, the satisfaction with particular aspects of care and the overall satisfaction index also increased (Table 4).

The period of hospitalisation, age, sex, marital status, and education did not significantly differentiate patients' satisfaction with nursing care ($p > 0.05$).

Experience and satisfaction with nursing care

There was a significant positive correlation between nursing care experiences and satisfaction with nursing care ($\rho = 0.720$; $p < 0.0001$). The obtained results indicate that people with more positive experiences related to nursing care are more satisfied with this care during their stay in hospital.

DISCUSSION

Mental and physical health are generally understood to be most important to people, which is why the high quality of medical services is extremely important today. The measure of the quality of health services is, among others, measuring the patients' satisfaction with the services they receive. The assessment of the quality of care from the patient's perspective is associated with a subjective sense of satisfaction with personal experiences, expectations, and values. The changes that have taken place in health care and those that are currently taking place have an impact on the perception of nursing care and patient satisfaction.

Currently, many scientific publications on the quality of nursing care and patient satisfaction can be found in the literature, as well as the results of research [5-11].

Table 4. Satisfaction with nursing care and assessment of the overall nursing care received on the ward

Having a designated specific nurse responsible for care on the ward	Good enough		Good		Very good		<i>p</i>
	M	SD	M	SD	M	SD	
The amount of time the nurses spent with you	2.29	1.16	2.77	0.68	3.45	0.72	< 0.0001
How efficient were the nurses in doing their job?	2.71	1.05	3.20	0.81	3.70	0.57	< 0.0001
Presence of a nurse nearby, when needed	2.29	1.31	2.87	0.94	3.42	0.75	0.0008
Nurse's knowledge about your illness and care	2.29	1.21	2.90	0.66	3.47	0.72	< 0.0001
How quickly did the nurses come to your call?	2.29	1.21	2.67	0.92	3.49	0.61	< 0.0001
The way nurses made you feel at home	2.24	0.90	2.63	0.85	3.43	0.67	< 0.0001
The amount of information you have received from nurses about your condition and care	2.18	1.33	2.43	0.73	3.19	0.86	< 0.0001
How often did the nurses check if you were okay?	2.00	1.06	2.73	0.74	3.36	0.81	< 0.0001
Nurses' readiness to help	2.82	0.95	3.00	0.79	3.74	0.52	< 0.0001
The way the nurses explained things to you	2.24	1.09	2.73	0.87	3.49	0.75	< 0.0001
How nurses calmed down your family and friends?	1.94	1.30	2.47	1.01	3.30	0.93	< 0.0001
Behaviour of nurses at work	2.41	1.00	3.20	0.71	3.66	0.55	< 0.0001
Type of information the nurses have given you about your condition and care	1.88	1.32	2.97	0.72	3.51	0.67	< 0.0001
How you were treated by nurses	2.53	0.94	3.20	0.55	3.79	0.45	< 0.0001
How did the nurses listen to your fears and worries?	2.18	1.13	3.07	0.64	3.55	0.72	< 0.0001
The amount of freedom you had in the ward	2.65	1.22	3.20	0.81	3.57	0.75	0.0011
How willingly were the nurses to fulfil your requests?	2.71	0.99	3.10	0.71	3.58	0.63	< 0.0001
Providing you with privacy by nurses	3.06	1.09	3.20	0.81	3.66	0.55	0.0057
Nurses' awareness of your needs	2.59	1.28	3.00	0.64	3.60	0.66	< 0.0001
Satisfaction from nursing care	59.60	22.36	72.81	12.13	88.11	12.84	< 0.0001

There are also many tools to assess the patient's satisfaction with care. This work is based on the results of the assessment of this issue using the Newcastle Satisfaction with Nursing Scale. Our research enabled the possibility of, among others, specifying the most important elements influencing the identification of those aspects of nursing care that need improvement (corrective actions).

The analysis of the study showed that the average level of satisfaction with nursing care amounted to 78.67 points (SD = 18.19) on a scale of 0-100 points. The results ranged from 7.89 points up to 100 points, and half of the people scored no more than 82.89 points. Slightly different results were obtained by Stanisławska *et al.* [2], who examined the patient's satisfaction in the department of cardiology and urology. Respondents in the urology ward evaluated the satisfaction of nursing care at 96.97%. The number of points scored ranged from 75 to 100. The patients from the cardiology department assessed the satisfaction at the level of 54.63%. The number of points obtained ranged from 25 to 100. Among the first scientists who conducted research using the NSNS scale were Walsh *et al.* [12], who obtained high scores in the assessment of satisfaction of examined care patients. Similarly, Garczyk [13] achieved better results than those obtained in the current research. In turn, Kozimale and Putowski [14] obtained results evaluating satisfaction in general at an average of 87.3 points. A study conducted in Poland by Gutysz-Wojnicka [15] also shows that the majority of patients surveyed rated the quality of care as high (average score of patient satisfaction rating – 74.98% on a 0-100 scale).

There are many variables that contribute to the patients' satisfaction of nursing care. Our research showed that the patients were most satisfied with the provision of privacy and treatment by the nurses. They were least satisfied with the way of taking care, so that the patient would feel at home, the frequency of control of their condition, how nurses calmed down family and friends, and the amount of information received about care. Similar results were obtained by Wierzbicka and Jankowska-Polańska [16], who examined 150 patients. Their research showed that the patients were most satisfied with the provision of privacy by the nurses and the amount of freedom the patient received in the ward. They were least satisfied with the amount of information the nurses gave them about their health status, the amount of time the nurses spent with the patient, the frequency of checking by the nurses whether the patient was well, and the type of information provided.

According to the study, less than one third of the patients surveyed believe that there are ways to improve nursing care. Most often, they mentioned an increase in the number of nursing staff and an increase in wages. In the opinion of 24% of respondents, it is

impossible to improve nursing care. In the current study it was also shown that 16% of people had a specific nurse responsible for care in the ward. In the studies of Wierzbicka and Jankowska-Polańska [16], none of the patients mentioned having a specific nurse responsible for care in the nephrology and angiology department. In the current study it was shown that the overall level of satisfaction with nursing care was higher in people with assigned nurses, lower in subjects who were not sure, and lowest in patients who claimed they did not have such a nurse. It is interesting to note that the study shows that patients who had an assigned nurse more often stated that it was possible to talk to nurses, and that they comforted patients who were depressed.

The study also analysed whether there are dependencies between the influence of sex, age, and level of education on the patient's satisfaction. The study shows that small differences between men and women were found in the time nurses devoted to the patient, regardless of how they were occupied. Men rated this area of care higher than did women. Men also had better experiences than did women, associated with the introduction of a pleasant atmosphere by the nurses on the ward. It was not found that the age of patients significantly differentiated their experience in nursing care at the ward during their stay. People with basic or vocational education more often claimed that the nurses joked, gave them information exactly when they needed it, found time for them, regardless of excess of duties, regularly checked that everything was in order, explained procedures before the surgery, and knew what to do to improve the patient's situation. With the increase in the level of education, experiences related to nursing care were less positive ($p < 0.05$). In the studies carried out by Kozimale and Putowski [14], different results were obtained. Their research showed that the above factors did not have a statistically significant influence and explained the resulting lack of dependence on the fact that the study involved a small number of people with higher education, and a small number of people in the age range 21-30 years. Stanisławska *et al.* [2] also attempted to analyse the relationship between these variables. Difficulty in comparing one's own and other people's results in the scope of age dependencies may result from the different age ranges used in the above works. The above-mentioned studies also analysed the impact of education on the level of patient satisfaction, but no statistically significant differences were found between these variables. In our research it was shown that patients most often received nursing care rated as very good in the General Surgery ward. A study by Garczyk [13], which examined patients treated surgically for cervical discopathy at the Department of Neurosurgery, showed very similar results.

CONCLUSIONS

As a result of the research, the following conclusions can be drawn:

1. Patients with more positive experiences in nursing care were more satisfied with this care.
2. Patients indicate the need to increase the number of nursing staff and increase their salary as a way to improve nursing care.
3. The length of hospitalisation influences the assessment of patient's experiences related to nursing care. The longer the hospitalisation took place, the more positive were the patient's experiences.
4. The level of education affects patients' experiences related to nursing care. Along with the increase in the level of education of respondents, the positive experiences decrease. Patients with a nurse responsible for their care show a higher level of satisfaction with nursing care.

Disclosure

The authors declare no conflict of interest.

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