

Inpatients' satisfaction towards information received about medicines

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Word Count: 2329 words

ABSTRACT

Objectives

Healthcare providers (HCP) often overestimate the quality and quantity of information they provide to patients. This study aimed to find out inpatients' satisfaction towards information about medicines provided during the inpatient stay.

Methods

This cross-sectional study was conducted at Lewisham Hospital and Queen Elizabeth Hospital in June 2017. Patients' satisfaction with information about medicines provided during inpatient stay was assessed using a 17-item Satisfaction with Information about Medicines Scale (SIMS).

Results

71 patients completed the questionnaire. The average percentage of patients being satisfied with the information provided in the 9-items 'action and usage' subscale of SIMS was 74.4%, compared to the 8-items 'potential problems' subscale with an average percentage of 56%. Patients aged 45-64 were more likely to be satisfied with information on 'how the medicines work' than the 65 and above as well as the 18-44 age group ($P=0.045$). Patients who attended secondary school and below were more likely to be satisfied than those attending college and above towards this information ($P=0.002$). Patients of white or mixed white and black ethnicity were less satisfied than other ethnic groups for information regarding the impact of medication on sex life ($P=0.019$). Black or black British were more likely to be satisfied towards information on unwanted medication side effects compared to other ethnic groups ($P=0.025$).

Conclusions

HCP could improve on the provision of information on potential problems that patients might experience with their medicines. Patients' age, education level, ethnicity should be taken into consideration when providing information about medicines.

Keywords

Satisfaction, medicines information, inpatient, SIMS, patients

Key Messages

What is already known on this subject

- Inpatients were more satisfied with the information they received about the action and usage of medicines compared to the potential problems with medicines in Satisfaction with Information about Medicine Scale (SIMS)
- There is lack of adequate information given to inpatients on side effects, drug-drug interaction, and long-term effects of prescribed medicines

What this study adds

- Age group, education level and ethnicity of inpatients influence inpatients' satisfaction with information received about medicines

INTRODUCTION

Patient satisfaction plays an important role in the quality, provision and delivery of healthcare services [1]. A positive relationship has been shown between medication adherence and patients' satisfaction with information received about their medicines [2]. Although healthcare providers (HCP) had been involved in providing medication information, they often overestimate the quality and quantity of information they provide to patients [3].

Patients had reported that they did not have adequate knowledge on the indications, duration, dose and side effects of their medications after discharge from hospital [4-5]. Only a small proportion of patients were educated about medication at discharge, and an even smaller proportion (30%) reported to have received written information [6]. In fact, patients want as much information as possible about their medications [7].

A study conducted at Guy's and St Thomas' NHS Trust reported that patients were significantly more satisfied with the information they received about the action and usage of medicines compared to the potential problems with medicines in Satisfaction with Information about Medicine Scale (SIMS) [2]. A focus group conducted among Type II diabetes mellitus patients also revealed similar findings as the previous studies, which included lack of adequate information on side effects, drug-drug interaction, and long-term effects of their prescribed medicines [8].

Lewisham and Greenwich NHS Trust is responsible for the running of two acute hospitals, namely University Hospital Lewisham and Queen Elizabeth Hospital. Nurses at this institution are the primary source of patient medication education during patients' hospitalisation as well as before discharge unless otherwise being referred to pharmacists. Physicians occasionally also provide some medication education. There is a need to investigate patients' satisfaction towards medication information being received during hospitalization. Patients' perspectives are important for the further development of provision of information and education about medicines to patients. This study aims to find out the percentage of patients satisfied with the information provided in SIMS, as well as to find out the relationship between satisfaction with information about medicines and age group, ethnicity and education level.

METHODS

This descriptive, cross-sectional study was conducted at Lewisham Hospital and Queen Elizabeth Hospital, two district general hospitals in South East London during June 2017. The patients who met the following criteria: adult inpatients aged 18 and above were enrolled within this period. Patients who were confused or unable to read and write in English were excluded.

The researcher obtained a list of patients that were to be discharged home each day from the ward manager in oncology, surgical, cardiology, respiratory, gynaecology, geriatric and general medical wards. These patients were verbally invited by the researcher to participate in this study. The purpose of the study was explained, and informed consent was obtained before handing the questionnaire to the patients. Patients were asked to complete the questionnaire after receiving discharge medications and return it to the ward clerk or the staff in the discharge lounge before they left the hospital. The validated Satisfaction with Information About Medicines Scale (SIMS) was used [2]. The SIMS contains two categories: the first nine questions relate to medicine's action and usage, such as 'what your medicine is called' and 'what your medicine is for'; while questions 10-17 examine potential problems with the medicine, such as 'whether the medicine has any unwanted side effects' and 'what are the risks of you getting side effects'. The options of the information received being 'about right' or 'none needed' are given a score of 1, which indicated that patients were satisfied; and 'too much', 'too little' or 'none received' is given a score 0, which indicated that patients were unsatisfied. The score ranges from 0-17, and higher scores indicate higher satisfaction [2]. General patient demographic information such as gender, age, and education level was collected. Patients were also asked to indicate on the questionnaire which HCP had provided information about medicines to them, whether it was doctor, pharmacist, nurse or others.

Statistical Analysis

The data was computed, encoded and statistical analysis performed using SPSS (Statistical Package for Social Sciences, version 24.0). Descriptive analysis was used to describe patients' demographics, the percentage of patients satisfied with information about medicines, number of patients who rate each SIMS information to be too much, about right, too little, none received or none needed. Chi-square tests were used to find out the association between patients'

satisfaction with information about medicines with gender, age group, ethnicity and education level.

Ethical Approval

This research was approved by the ethics board of School of Pharmacy, University College London as well as Lewisham and Greenwich NHS Trust Clinical Audit Department.

RESULTS

100 questionnaires were distributed, and 85 were returned (85% response) and 75 completed all sections (75% completion). Majority of study participants were white and aged between 65-84. A descriptive profile of participants is shown in Table 1. Doctors, pharmacists, and nurses were reported to provide medicines information to inpatients during the study period (Table 2).

The average percentage of patients being satisfied with the information provided in the ‘action and usage’ subscale of SIMS was 74.4%, which was higher compared to the ‘potential problems’ subscale with an average percentage of 56%. The information ‘what your medicine is for’ received the highest percentage of patients being satisfied (88%). On the other hand, in the ‘potential problems’ subscale of SIMS, ‘What are the risks of you getting side effect’ scored the least percentage of patients being satisfied (46.7%) (Figure 1). Table 3 provided the detailed description of percentage of patients who rated each information in SIMS to be too much, about right, too little, none received or none needed.

Relationship between satisfaction with information about medicines and age group, ethnicity and education level

From the result, it was found that satisfaction towards information on ‘how the medicines work’ was related to age group (χ^2 (df) =6.22 (2), P =0.045). Age group 45-64 were more likely to be satisfied with this information than age group 65 and above (67.9%) and 18-44 (50%). There was also a significant association between satisfaction towards information on ‘how to get a further supply’ and age group. Patients in the age group 45-64 were more likely to be

unsatisfied towards this information (40%) than patients aged 18-44 (22.7%) and 65 and above (10.7%) [χ^2 (df) =6.42 (2), P=0.044] (Table 4).

Satisfaction towards information ‘how long you will need to be on your medicine’ (P =0.024), ‘how to use your medicine’ [χ^2 (df) =3.908 (1), P =0.048], ‘how the medicines work’ (χ^2 (df) =9.30 (1), P =0.002), and ‘whether the medication will make you feel drowsy’ [χ^2 (df) =7.3 (1), P =0.007] was related to education level. Patients who attended secondary school and below were more likely to be satisfied than those attending college and above (Table 4).

A relationship was also found between satisfaction towards the information on ‘whether the medicine has any unwanted side effects’ and ethnicity. Black or black British were more likely to be satisfied compared to white or white British and Asian or Asian British. The mixed white and black British ethnic group were more likely to be unsatisfied about this information compared to other ethnicities (P =0.025).

There was a significant association between satisfaction towards information on ‘whether the medication will affect your sex life’ and ethnicity. Patients who were white or white British were less satisfied than others. Mixed white and black ethnic group were also less satisfied than others in this aspect (P=0.019).

DISCUSSION

From the results obtained from this study, it was shown that patients were more satisfied with the information provided in the ‘action and usage’ subscale of SIMS than the ‘potential problems’ subscale of SIMS. This result was in line with the study by Auyeung et al. which reported that patients were significantly more satisfied with the information they received about the action and usage of medicines compared to the potential problems with medicines [9]. Both the current study and Auyeung et al reported ‘what are the risks of you getting side effects’ and ‘what you should do if you experience unwanted side effects’ achieving the lowest satisfaction among patients (46.7% in current study vs 58% in Auyeung et al.; 53.3% in current study vs 60% in Auyeung et al.) [9]. A lower result was being reported in the setting of community pharmacy, where only 14% were being informed about the actions to take following a major side effect [10]. This dissatisfaction agreed with the findings which reported that patients expressed frustrations about not getting as much information about side effects as they would like [11].

A study has shown that doctors and nurses did not perceive discussing information about potential problems to be their responsibility and pharmacists did not discuss this information with patients even it is perceived to be within their responsibility [9]. Half of the patients who were seen by pharmacists did not recall being told about side effects [12]. Furthermore, studies have shown that HCP was concerned that revealing information about side effects might deter patients from taking their medications [11]. In fact, the information about the risk of side effects plays a role in preventing intentional non-adherence by managing patient's expectations of risks of side effects and efficacy. As there was conflicting evidence that some patients prefer not to be informed about possible side effects [13], HCP should consider the differing attitudes and needs of different patients towards information about side effects.

The highest percentage of information being none received in SIMS subscale is 'Whether your medication will affect your sex life'. Studies proved that HCP was found to have had poor training and were rarely prepared to address and discuss sexual issues with their patients [14]. To address sexual issues of patients and disabled people, further training needs to be available for HCP. The highest percentage of information that patients think none needed was the information on 'whether you can drink alcohol' and 'whether the medication will affect sex life'. This could be due to the fact that majority of our patients were elderly patients who found this information to be less applicable. Patients' social lifestyle should be understood before offering this information. It was also interesting to note that as high as 10.7% of patients thinks the information provided on 'what your medicine is called' is too much. Some of the scientific names of the medicine can be difficult to remember especially for elderly patients.

It was reported that greater than 70% of nurses were confident that the patients under their care could understand and follow medication instructions, and identify the names and purpose of their medications, however nurses lack confidence in their patients' knowledge regarding what to expect from their medications and how to manage their side effects [15]. Some nurses also think that they are not pharmacists nor doctors, therefore provision of limited information is acceptable and patients should consult the 'appropriate' professional if it is required [16].

Our result was consistent with the findings that younger, educated patients are generally less satisfied with medication counselling [17]. Van Geffen and colleagues also reported that patients in older age group tend to be more satisfied with the information received on

medications [18]. Older patients may come from the background when the authority of HCP are less challenged [19]. HCP should consider allowing ample opportunities and time to provide more detailed information to this group of patients and to find out if they have queries about their medicines.

Young et al. had found that race is one of the demographic variables that has an impact on patient satisfaction on hospitalisation [20]. Our findings also suggested that different ethnicities may have different informational needs towards information on 'whether the medication will affect your sex life'. Certain ethnicities might be more open to discussing issues about the effect of medications towards sex life, while in some culture people are more reserved in addressing such issues openly with HCP. Further studies should be conducted to examine the causal relationship between ethnicity and satisfaction on information on unwanted side effects. Different ethnicity may have different medication beliefs shaped by cultural influences.

Patients who attended college and above may desire to know more about the risks of getting side effects. HCP could describe the more common side effects and then mention to patients that there are other rare side effects. If patients wish to know the rare side effects, HCP can either disclose this information verbally or through written information.

Strengths and limitations

High response rate in this study ensured that the survey results were representative of the target population and nonresponse bias was minimised. Recall bias from the patients were minimised as patients were required to fill the SIMS questionnaire right after they received their discharge medications. Our study was also the first to examine the relationship between the information in SIMS and the general inpatients' preferred method of receiving information with ethnicity, age group and educational level.

There was potential bias with the convenience sampling method which may reduce the generalisability of this study. Young patients aged 18-44 were underrepresented in this study. Due to the limited study duration, only 100 patients were approached in data collection.

There may be potential bias of patients who responded by socially desirable answers, although they had been informed that the questionnaire response is confidential. This study took into accounts of a general experience and did not distinguish between new medications and refilled medications. We did not study the effect of different medical conditions or medications on patient's satisfaction towards information. However, we had included patients from different ward discipline to minimise the influence of certain medical condition or medications to patients' satisfaction towards information about medicines. Future study could look at the effect of different medical conditions or type of medications on satisfaction towards medication information provided. The perceptions of younger generation towards information provided in inpatient setting can be explored in future studies.

CONCLUSIONS

HCP could improve on the provision of information on potential problems that patients might experience with their medicines. Patients' age, education level, and ethnicity should be taken into consideration when providing information about medicines.

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Characteristics	Frequencies
Gender , Male	29 (38.7)
Female	46 (61.3)
Age group	
25 and below	1 (1.3)
26-44	21 (28.0)
45-64	25 (33.3)
65-84	27 (36.0)
85 and above	1 (1.3)
Ethnicity	
White or White British	51 (68.0)
Asian or Asian British	3 (5.3)
Black or Black British	17 (22.7)
Mixed White and Black British	4 (5.3)
Education levels	
Below secondary school	6 (8.0)
Secondary school	42 (56.0)
College	14 (18.6)
University	13 (17.3)

Table 1: Patient demographic characteristics (n=75)

Medication information received from	Number of patients, n (%)
Doctors only	8 (10.7)
Pharmacist only	2 (2.7)
Nurse only	21 (28.0)
Doctors and pharmacists	2 (2.7)
Doctors, pharmacists and nurses	14 (18.7)

Table 2: Number of different healthcare professionals who provided information to patients

SIMS TOPICS	Number of patients, n (%)				
	Too much	About right	Too little	None received	None needed
1.What your medicine is called	8 (10.7)	54 (72)	8 (10.7)	4 (5.3)	1 (1.3)
2.What your medicine is for	4 (5.3)	64 (85.3)	2 (2.7)	4 (5.3)	1 (1.3)
3.What it does	3 (4.0)	59 (78.7)	7 (9.3)	5 (6.7)	1 (1.3)
4.How it works	4 (5.3)	50 (66.7)	5 (6.7)	15 (20.0)	1 (1.3)
5.How long it will take to act	5 (6.7)	43 (57.3)	6 (8.0)	18 (24.0)	3 (4.0)

6.How you tell if it is working	2 (2.7)	34 (45.3)	6 (8.0)	25 (33.3)	8 (10.7)
7.How long you will need to be on your medicine	3 (4.0)	58 (77.3)	4 (5.3)	6 (8.0)	4 (5.3)
8.How to use your medicine	5 (6.7)	58 (77.3)	3 (4.0)	6 (8.0)	3 (4.0)
9.How to get a further supply	1 (1.3)	42 (56.0)	4 (5.3)	13 (17.3)	15 (20.0)
10.Whether the medicine has any unwanted side effects	0 (0)	36 (48.0)	12 (16.0)	20 (26.7)	7 (9.3)
11.What are the risks of you getting side effects	2 (2.7)	29 (38.7)	16 (21.3)	22 (29.3)	6 (8.0)
12.What you should do if you experience unwanted side effects	0 (0)	35 (46.7)	10 (13.3)	25 (33.3)	5 (6.7)
13.Whether you can drink alcohol whilst taking this medicine	0 (0)	31 (41.3)	6 (8.0)	18 (24.0)	20 (26.7)
14.Whether the medicine interferes with other medicines	0 (0)	31 (41.3)	6 (8.0)	29 (38.7)	9 (12.0)
15.Whether the medication will make you feel drowsy	2 (2.7)	37 (49.3)	4 (5.3)	26 (34.7)	6 (8.0)
16.Whether the medication will affect your sex life	0 (0)	23 (30.7)	5 (6.7)	29 (38.7)	18 (24.0)
17.What you should do if you forget to take a dose	0 (0)	29 (38.7)	4 (5.3)	28 (37.3)	14 (18.7)

Table 3: Number of patients who rate each SIMS information to be too much, about right, too little, none received or none needed.

SIMS questions	Variable		Not satisfied n (%)	Satisfied n (%)	P value
How it works	Age	18-44	11 (50.0)	11 (50.0)	0.045
		45-64	4 (16.0)	21 (84.0)	
		65 and above	9 (32.1)	19 (67.9)	
	Ethnicity	White or white British	18 (35.3)	33 (64.7)	0.769 ^a
		Asian or Asian British	0 (0)	3 (100)	
		Black or Black British	5 (29.4)	12 (70.6)	
		Others	1 (25)	3 (75)	
	Education level	Secondary school and below	3 (10.7)	25 (89.3)	0.002
		College and above	21 (44.7)	26 (55.3)	
Male		6 (20.7)	23 (79.3)		
How long you will need to be on your medicine	Age	18-44	6 (27.3)	16 (72.7)	0.217 ^a
		45-64	2 (8.0)	23 (92.0)	
		65 and above	5 (17.9)	23 (82.1)	
	Ethnicity	White or white British	8 (15.7)	43 (84.3)	0.654 ^a
		Asian or Asian British	0 (0)	3 (100.0)	

		Black or Black British	4 (23.5)	13 (76.5)	0.024 ^a
		Others	1 (25.0)	3 (75.0)	
	Education level	Secondary school and below	1 (3.6)	27 (96.4)	
		College and above	12 (25.5)	35 (74.5)	
	Male	6 (20.7)	23 (79.3)		
How to use your medicine	Age	18-44	6 (27.3)	16 (72.7)	0.493 ^a
		45-64	4 (16.0)	21 (84.0)	
		65 and above	4 (14.3)	24 (85.7)	
	Ethnicity	White or white British	9 (17.6)	42 (82.4)	0.826 ^a
		Asian or Asian British	0(0)	3 (100)	
		Black or Black British	4 (23.5)	13 (76.5)	
		Others	1 (25.0)	3 (75)	
	Education level	Secondary school and below	2 (7.1)	26 (92.9)	0.048
		College and above	12 (25.5)	35 (74.5)	
	How to get a further supply	Age	18-44	5 (22.7)	17 (77.3)
45-64			10 (40.0)	15 (60.0)	
65 and above			3(10.7)	25 (89.3)	
Ethnicity		White or white British	16 (31.4)	35 (68.6)	0.127 ^a
		Asian or Asian British	0 (0)	3 (100.0)	
		Black or Black British	1 (5.9)	16 (94.1)	
		Others	1 (25)	3 (75.0)	
Education level		Secondary school and below	7 (25.0)	21 (75.0)	0.876 ^a
		College and above	11 (23.4)	36 (76.6)	
Whether the medicine has any unwanted side effects		Age	18-44	13 (59.1)	9 (40.9)
	45-64		10 (40.0)	15 (60.0)	
	65 and above		9 (32.1)	19 (67.9)	
	Ethnicity	White or white British	23 (45.1)	28 (54.9)	0.025 ^a
		Asian or Asian British	1 (33.3)	2 (66.7)	
		Black or Black British	4 (23.5)	13 (76.5)	
		Others	4 (100)	0 (0)	
	Education level	Secondary school and below	10 (35.7)	18 (64.3)	0.347
		College and above	22 (46.8)	25 (53.2)	

Whether the medication will make you feel drowsy	Age	18-44	9 (40.9)	13 (59.1)	0.662
		45-64	12 (48.0)	13 (52.0)	
		65 and above	10 (35.7)	18 (64.3)	
	Ethnicity	White or white British	20 (39.2)	31 (60.8)	0.261 ^a
		Asian or Asian British	0 (0)	3 (100)	
		Black or Black British	8 (47.1)	9 (52.9)	
Others		3 (75)	1 (25)		
Education level	Secondary school and below	6 (21.4)	22 (78.6)	0.007	
	College and above	25 (53.2)	22 (46.8)		
Whether the medication will affect your sex life	Age	18-44	13 (59.1)	9 (40.9)	0.163
		45-64	11 (44.0)	14 (56.0)	
		65 and above	9 (32.1)	19 (67.9)	
	Ethnicity	White or white British	24 (47.1)	27 (52.9)	0.019 ^a
		Asian or Asian British	0 (0)	3 (100)	
		Black or Black British	5 (29.4)	12 (70.6)	
Others		4 (100)	0 (0)		
Education level	Secondary school and below	9 (32.1)	19 (67.9)	0.11	
	College and above	24 (51.1)	23 (48.9)		

* Chi-square test for independence ^a Fisher's exact test

Table 4: Association between age groups, ethnicity and education levels with satisfaction towards information about medicines