

Assessment of pharmacist-patient medication counselling services at the National Orthopaedic Hospital Lagos, Nigeria

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ABSTRACT

Background: Patient medication counselling is a core element of the pharmaceutical care process. All the activities of clinically oriented pharmacists are aimed at promoting the right use of medicines by the patient.

Objectives: The general objective was to determine patients' perception of the benefits of pharmacist -patient medication counselling interactions. The specific objectives were to determine if there was an association between pharmacist-patient medication counseling interactions and patients' motivation to take medicine, patients' adherence to therapy and prevention of irrational drug use respectively.

Methods: A 10-item pre-tested questionnaire was administered to 100 patients over a period of two weeks (14 days). The inclusion criterion was exposure to at least one previous pharmacist-patient counselling session i.e. one counselling session.

Results: Patient benefit from pharmacist-patient medication counselling as shown by a mean score of 42.27 ± 3.89 in 98% of respondents out of a possible mean score of 45. Pharmacist-patient medication counselling motivate patients to take their medications ($\chi^2 = 39.13$, $P < 0.05$, $CI = 95\%$). Pharmacist-patient medication counselling was associated with an improvement in patient medication adherence to drug therapy ($\chi^2 = 24.29$, $P < 0.05$, $CI = 95\%$) as well as prevention of irrational drug use ($\chi^2 = 24.36$, $P < 0.05$, $CI = 95\%$).

Conclusion: Patients benefited from medication counseling by pharmacist. Medication counseling was associated with an increase in patients' motivation to take their medicines, as well as an improvement in medication therapy adherence and prevention of irrational drug use.

Key Words: Medication, counseling, pharmacist, patients, medicines

Évaluation des services de conseil en médication entre pharmaciens et patients à l'hôpital orthopédique national de Lagos, Nigeria

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RÉSUMÉ

Contexte: Le conseil aux patients en matière de médication est un élément essentiel du processus de soins pharmaceutiques. Toutes les activités des pharmaciens à vocation clinique visent à promouvoir le bon usage des médicaments par le patient.

Objectifs: L'objectif général était de déterminer la perception des patients quant aux avantages des interactions entre le pharmacien et le patient en matière de conseils sur les médicaments. Les objectifs spécifiques étaient de déterminer s'il existait un lien entre les interactions de conseil en matière de médicaments entre le pharmacien et le patient et la motivation des patients à prendre des médicaments, l'adhésion des patients au traitement et la prévention de la consommation irrationnelle de médicaments, respectivement.

Méthodes: Un questionnaire pré-testé de 10 questions a été administré à 100 patients sur une période de deux semaines (14 jours). Le critère d'inclusion était l'exposition à au moins une séance de conseil pharmacien-patient antérieure, c'est-à-dire une séance de conseil.

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Résultats: Les patients bénéficient des conseils de médication du pharmacien-patient, comme le montre un score moyen de 42,27± 3,89 chez 98 % des personnes interrogées sur un score moyen possible de 45. Les conseils de médication pharmacien-patient motivent les patients à prendre leurs médicaments ($\chi^2=39,13$, $P<0,05$, $CI=95\%$). Le conseil en médication pharmacien-patient a été associé à une amélioration de l'adhésion du patient à la thérapie médicamenteuse ($\chi^2=24,29$, $P<0,05$, $CI=95\%$) ainsi qu'à la prévention de la consommation irrationnelle de médicaments ($\chi^2=24,36$, $P<0,05$, $CI=95\%$).

Conclusion: Les patients ont bénéficié de conseils en matière de médication de la part du pharmacien. Le conseil en médication a été associé à une augmentation de la motivation des patients à prendre leurs médicaments, ainsi qu'à une amélioration de l'adhésion à la thérapie médicamenteuse et à la prévention de la consommation irrationnelle de médicaments.

Mots clés: médication, conseils, pharmacien, patients, médicaments

INTRODUCTION

Patient medication counselling is a core element of the pharmaceutical care process. All the activities of the hospital pharmacists are aimed at promoting the right use of medicines by the patients. Patient medication counselling is defined as providing medication related information in oral and written forms to the patients or their representatives in order to help the patient have utmost benefits from their medications.¹ The essence of all the medication counselling process is to help patients cope effectively with immediate problems or concerns. In addition to dealing with immediate problems, counselling involves interventions to prevent occurrence of later problems and to develop the individual capacity to deal with such situations if they should arise.

Little is known about outpatients' perception of the benefits of their medication counselling session with pharmacists at this facility. In addition, having satisfactory knowledge about medications and their use have been linked to optimal medication use. This made this research necessary. The general objective was to determine patients' perception of the benefits of pharmacist -patient medication counselling interactions. The specific objectives are to determine if there is a significant association between pharmacist-patient medication counselling interactions and patients' motivation to take medicine, patients' adherence to therapy, prevention of irrational drug use respectively.

METHODS

Study setting

The study was carried out at the outpatient pharmacy unit of the pharmacy department of the National Orthopaedic Hospital, Igbobi, Lagos State, Nigeria. The National Orthopaedic Hospital is a 450-bed specialist tertiary healthcare institution with focus on orthopaedic cases as well as plastic and reconstructive surgeries.

Sampling

Patients who filled their prescriptions at the outpatient pharmacy unit of the hospital were used for the study. The inclusion criterion was exposure to at least one previous pharmacist-patient medication counselling session i.e. one medication counselling session at the hospital.

Data collection

A 10-item pretested questionnaire was administered to 100 outpatients over a period of two weeks at the outpatient pharmacy unit of the pharmacy department. The questionnaire was pretested at the outpatient pharmacy unit for validity and reliability. Patients who took part in the pretesting of the questionnaires were subsequently excluded from the main research.

Data analysis

The retrieved questionnaires were analysed using descriptive statistics with the aid of Epi-info version 3.5.1 statistical package. Test for statistical significance was determined through the use of the chi-square at 5% significance level and 95% confidence level. There were 9 questions in all with 5 possible answers per question under the patients' assessment of the benefits of pharmacist -patient medication counselling and correlating to a maximum possible score of 45 and minimum score of 5. A logical neutral point of was assumed to be 25. Since the summated score correlated with the patients' assessment of the benefits of pharmacists-patients medication counselling, scores above 25 were taken as positive indicators of positive benefits from the pharmacists-patients' medication counselling. The standard deviation was calculated as a measure of item variability from the mean. Any low standard deviation indicated a cluster of responses to the mean while high standard deviation reflected a high variability of opinion from the mean. The percentage performance was the number of respondents who scored above the critical or neutral point on the rating scale (4 or 5). Association between pharmacist-patient medication counselling and patients' motivation, patients' adherence to drug therapy and prevention of irrational drug use respectively were determined using the chi-square test statistic at 5% significance level and 95% confidence level.

RESULTS

Table 1 shows the patients' response to the benefits of Pharmacist-Patients medication counselling. Question asked ranged from medication counselling being beneficial in helping patients take their medications as advised by the pharmacist, improved interpersonal relationship between pharmacists and patients, as well as increased patients' knowledge of their medicines, prevention of medication duplication.

Table1: Item analysis of the benefits of pharmacists-patient medication counselling

Item	Mean Value	Standard Deviation	% Performance
Counselling helps patients to take their medications as advised by the pharmacist	4.68	0.45	99
Patient medication counselling makes patients interested in taking their medicines	4.64	0.45	98
Patient counselling helps patients to know what to expect while taking their medicines	4.88	0.26	99
Patient counselling helps to build confidence and interpersonal relationship	4.56	0.47	97
Patients counselling improves patients' knowledge of their medicines	4.78	0.38	99
Patient counselling helps to prevent inappropriate use of medicines	4.71	0.43	99
Patient counselling helps to prevent duplication of therapy	4.68	0.57	97
Patient would want to be counselled by a pharmacist	4.69	0.44	99
Every patient should be counseled by a Pharmacist	4.65	0.44	98
Total	42.27	3.89	98(Approx)

Table 2 shows the result of the test for any statistically significant association between motivation to take prescribed medications and patient medication counselling. Patients' motivation improves with the medication counselling session (df=2, $\chi^2=39.13$, $P<0.05$).

Table 2: Statistical analysis of the association between motivation to take prescribed medication and patient medication counselling

Motivation to take prescribed medication	Patient Medication Counselling		
	Beneficial	Non - Beneficial	Total
Strongly agree	68	4	72
Agree	25	1	26
Non-Response	0	2	2
Total	93	7	100

(df=2, $\chi^2=39.13$, $p<0.05$)

Table 3 shows the result of the test for any statistically significant association between adherence to drug therapy and patient medication counselling. Medication counselling session improves patient adherence to drug therapy (df=2, $\chi^2=24.29$, $P<0.05$).

Table 3: Association between adherence to drug therapy and patient medication counselling.

Adherence to drug therapy	Patient Medication Counselling		
	Beneficial	Non-Beneficial	Total
Strongly agree	70	2	72
Agree	26	1	27
Non -Response	0	1	1
Total	96	4	100

(df=2, $\chi^2=24.29$, $p < 0.05$)

Table 4 shows the result of the test for any statistically significant association between prevention of irrational drug use and patient medication counselling. Many of the patients believed that irrational drug use is reduced with medication counselling (df=3, 24.36, $P<0.05$).

Table 4: Association between prevention of irrational drug use and patient medication counselling.

Prevention of irrational drug use	Patient Medication Counselling		
	Beneficial	Non-Beneficial	Total
Strongly agree	68	4	72
Agree	24	1	25
Disagree	0	2	2
Strongly Disagree	0	1	1
Total	92	8	100

(df=3, $\chi^2=24.36$, $p < 0.05$)

DISCUSSION

Patient benefit from medication counselling by pharmacists as shown by a mean score value of 42.27+ 3.89 in 98% of patients. A similar study showed that patients were satisfied with their medication counselling as shown by a mean score of 8.6+ 1.6 in 90% of respondents.²

If the counselling process is properly implemented and consistently maintained, it will improve patients understanding of their medicines and motivate the patients to take their medicines. This will enhance

adherence to therapy sequel to the counselling process and patient is able to cope with drug related issues that will prevent irrational use of medicines. This study is in agreement with a similar study by Shobande et al where the pharmacist medication counselling session was found to be satisfactory from the Pharmacists perspective though not quiet so from the pharmacists' customers perspective.³ A systematic review of studies on patient medication counselling revealed that pharmacist -led medication counselling plays an important part as an intervention directed towards improving patient health related needs.⁴ This is in

agreement with our study which found that patient benefit from pharmacist led medication counselling.

Medication adherence has been defined as the degree to which the persons behaviour corresponds with the agreed recommendations from a health care provider.⁵ Adherence is a primary determinant of treatment success and it is an integral part of the rational drug use process.⁵ In a study by Pathickal *et al* it was found that patients who received medication counselling session after their prescriptions was filled were more likely to adhere to the use of their medications when compared to the control group that had no medication counselling session.⁶ This finding is consistent with this study where patient medication counselling was found to play an importance role in patients' interest in medication adherence and the association between medication counselling and adherence to therapy was also found to be significant ($\chi^2=24.29$, $p<0.05$) and many of the study respondents are in agreement with this(98%).

The rational use of medicines requires that patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community.⁷ Irrational use of medicines is a major problem worldwide. The World Health Organisation (WHO) estimates that more than half of all medicines are prescribed, dispensed or sold inappropriately, and that half of all patients fail to take them correctly. The overuse, underuse or misuse of medicines results in wastage of scarce resources and widespread health hazards.⁷

Provision of the right information to patient during counselling session ensures that patient not only take their medications but take the medications appropriately in terms of dose, duration. This study reveals a statistically significant association between patient medication counselling and prevention of the irrational use of medicines ($\chi^2=24.29$, $p<0.05$), a large number of the respondents were in agreement with the beneficial effect of medication counselling in preventing the irrational use of medicine (99%). In a study conducted in Northern Nigeria, it was found that with the exception of route and frequency of administration, patient knowledge about how to take their medications was found to be inaccurate which could contribute to poor treatment outcomes, increasing treatment failure rates and rising antimicrobial resistance.²

Patients' motivation has been defined as patient's willingness to make various efforts to engage in their treatment including the use of medicines. In a qualitative study that explored the motivation and confidence in taking prescribed medicines, it was found out that complex medications and medicines thwarts patients' motivation to take prescribed medicines most especially due to the presence of pre-existing comorbid conditions, provision of individualized psychosocial support was recommended.⁸ This study revealed that patient medication counselling improves patients' motivation to take prescribed medicines ($\chi^2=39.13$, $p<0.05$). A large number of the respondents were in agreement of the relationship between patient medication counselling and motivation to take prescribed medicines (93%).

CONCLUSION

Patient benefit from medication counselling by pharmacists. The beneficial effects of patient-pharmacist medication counselling session can be utilised in ensuring that patients are motivated to use/take their medications as appropriate thereby preventing irrational drug use and ensuring adherence to medication therapy.

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