

Medication Counseling Practice in Ethiopia: A Systematic Review

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ABSTRACT

Background: Patient counselling is one of the most important services conducted by drug dispensers. The aim of this review was to derive results from various studies conducted on medication counselling in Ethiopia and make an overall view about medication counselling activities, types of information provided during counselling, conditions given special attention during counselling and barriers to counselling in Ethiopia. **Methods:** Relevant literatures related to medication counselling practice in Ethiopia were obtained from Pub Med and Google Scholar databases and manual Google search. Some articles were also obtained by searching the reference lists of retrieved articles. Systemic analysis was made on 6 articles and the results were summarized. **Results:** Five of the articles reviewed were conducted by using self-administered questionnaire while one was done through face to face interview and observation. Dose, frequency and route of administration of the drug were very frequently (>90%) delivered to the patient while the name and the purpose of the medication was less frequently told. special attention was given by majority of the dispensers to pregnant women (86.8%) and patients with hypertension (78.2%). Lack of knowledge and updated drug information (61.3%) and presence of high patient load (45.3%) were the most frequently mentioned barriers for counselling. **Conclusion:** Even

though there are many things to be told to the patient/client while dispensing a medication the counselling activities conducted in Ethiopia were not far more than telling when and how much to take. Lack of knowledge and presence of high patient load were the commonly mentioned obstacles for providing appropriate counselling.

Key words: Medication counseling, drug dispensing, counseling practice, pharmacy, Ethiopia

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INTRODUCTION

Patient counselling is one of the most important services provided by drug dispensers. counselling is defined by some authors as advice-giving or provision of information on medications.^[1-3] Nevertheless, Rees argues that what pharmacists give is much more than just advice because this process involves empathic understanding, acceptance, and genuine feelings from pharmacists.^[4] Other researchers have focused more on the goal of counselling, that is ensuring patients understanding of the optimal use of medications to improve their quality of life.^[2,5,6] The Ethiopian manual for medicines good dispensing practice also states that in supplying medicines, pharmacists must ensure that “the patient receives sufficient information and advice to enable the safe and effective use of medicines.”^[7]

In achieving optimal use of medications, patients should be informed about how to use their medications properly. Therefore, counselling should include information such as name and purpose of the medication, directions for use, side effects, precautions, contraindications, and storage as well as monitoring for drug interactions and adverse drug reactions.^[6,8] several guidelines that have been published by professional organizations in the USA and Australia also emphasize that the pharmacist’s professional judgment is needed to meet the specific needs of each patient and/or caregiver.^[9-13]

Through patient counselling, pharmacists may identify and resolve drug-related problems, empower patients to adopt positive self-management behaviour, increase patient satisfaction with pharmacy care and optimize patient quality of care.^[14-18] It is the pharmacists’ role to significantly improve medication safety and patient compliance by the way of counselling at the point of delivery. Counselling not only enhances compliance but also reduces complications due to non-compliance to treatment.^[19] Assessment should also be handled whether or not the information was received as intended and that the patient understands how to use the information to improve the probability of therapeutic out comes.^[20]

Dispensing with appropriate counselling is a critical part of drug use process. Worldwide more than 50% of all medicines are prescribed, dispensed or sold inappropriately.^[21,22] Inappropriate use of drugs can lead to wastage of resources and also causes significant patient harm in terms of poor patient outcomes and adverse drug reactions.^[21-23]

Although providing patients with adequate and clear information

on drugs is one of the basic services expected to be rendered by the pharmacist, it seems that it has received little attention in Ethiopia. It is presumed that shortage of qualified personnel, lack of preparedness of the practicing pharmacist, and community perception towards practicing pharmacist have significantly contributed to the existing several problems in the practice of pharmacy in general and patient counselling in particular.^[24,25] Previous reviews of research regarding drug dispensers’ counselling practice have primarily focused on an international perspective or at developed nation and there is no review article done on the topic in Ethiopia. So the aim of this review was to derive results from various studies conducted on medication counselling in Ethiopia and make an overall view about medication counselling practice in Ethiopia.

METHODOLOGY

Relevant articles related to medication counselling practice in Ethiopia were searched from Pub-med and Google Scholar databases. Manual Google search was also used to get articles published in journals which were not indexed in these databases. The search was done using the keywords ‘medication counselling in Ethiopia’, ‘practice of medication counseling among drug dispensers in Ethiopia’, ‘drug dispensing in Ethiopia’. The reference lists of all retrieved articles were also checked for presence of relevant article to this review and manually searched on the internet. The review was restricted to Ethiopia and articles that were published in English language in the last 10 years were collected. All of the articles found in the search results were considered for this review irrespective of the study method, the type of medications assessed (prescription or non-prescription medication) and pharmacy type (community pharmacy or hospital pharmacy). A total of 187 articles were obtained, out of which only 13 articles were identified to be showing relevance to the study. Abstract-only articles were filtered

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from 13 articles. Articles were reviewed if they were original research. Studies exploring consumer satisfaction with pharmacist counselling and those focusing on practice of written communication (labelling) were excluded. Finally 6 articles were included for this study. Study year, area, research methods, sample size, participant's characteristics, counselling activities, information given for the patient/client, conditions given special attention and barriers to counselling were extracted. Analysis was made on these articles and the results were summarized.

RESULTS

Study characteristics

All of the studies reviewed were cross-sectional studies that assessed the practice of medication counseling as one component of knowledge, attitude and practice of medication counseling among drug dispensers or as an exclusive assessment for practice of medication counseling in governmental and private drug retail outlets. Five of these studies were conducted by giving self-administered questionnaire to 48-64 drug dispensers while one of the studies was conducted through interviewer administered questionnaire to 30 dispensers and observation check list for 400 dispensing encounters. As shown in Table 1, in all of the studies male study subjects were predominant (more than one third of study subjects). Majority of the dispensers were druggists (diploma holders). Pharmacists were only 22.7% (range=6.25%-40%) of all the dispensers. In some areas non pharmacy professionals like nurses and health assistants were involved in drug dispensing.

Practice of counselling

Counselling activities

Results obtained about counselling activities were inconsistent throughout the studies. Overall the counselling activities performed were not satisfactory. As shown in Table 2, the study conducted in south west Ethiopia (Agaro, Limmu Genet and Sokuru towns) reported better counselling activities than studies conducted in the other part of the country. Lesser medication counselling was given regarding what to do if a patient misses a dose (43.1%) and about major side effects of a drug (48.0%).

Type of information given to the patient

Assessment regarding the information given for the patient was done in some of the studies through how often (always, often, sometimes, rarely or never) the dispensers practice each of the parameters or by ticking whether they practice each of the parameters as yes or no option in some other studies. As indicated in Table 3, frequency of administration of a drug (97.5%), its route of administration (97%) and its dose (90.3%) were almost always told to the patient during drug dispensing. Telling the name and the purpose of the medication is the very less frequently delivered information to the patient while dispensing the drug.

Conditions given special attention

As shown in Table 4, majority of dispensers give special attention to pregnant women (86.8%) and patients with hypertension (78.2%). From conditions that need special attention during counselling relatively lesser emphasis was given for special drug conditions (40.7%-64.8%) than special patient and disease conditions (54.7%-86.8%).

Barriers to counselling

Table 5 indicates that lack of knowledge and updated drug information (61.3%) and presence of high patient load (45.3%) were the most frequently mentioned barriers for counselling.

DISCUSSION

Greater emphasis must be placed on medication counselling in order to improve the patient outcome after treatment and reduce the occurrence of medication related errors. The link between the medication and the patient is through the pharmacist. So any relevant information about the drug to the patient is expected to be delivered from the pharmacist during counselling. A number of studies also reported that pharmacists should provide relevant, understandable and appropriate information to patients about their medication.^[25-27] even though providing patients with clear and adequate information on their medication is the basic services expected to be given by the pharmacist; it seems that it has given less attention in Ethiopia.

Drug consumers expressed that their awareness of the importance of taking their medications increased if they receive information about their medications.^[28] According to Berhane *et al.* patients rated all aspects of drug information about their treatment were relevant.^[29]

Table 1: Characteristics of studies conducted to address medication counseling practice in Ethiopia

Author, year of publication	Nasir <i>et al.</i> 2011 ^[25]	Mohammed <i>et al.</i> 2015 ^[26]	Wubante, 2014 ^[27]	Abebaw <i>et al.</i> 2014 ^[28]	Alefe <i>et al.</i> 2014 ^[29]	Desalegn <i>et al.</i> 2015 ^[30]	Total	
Study area	North West Ethiopia	South West Ethiopia	Bahir Dar	Awi Zone,	Jimma	Gondar	-	
Study method	Crossectional	Crossectional	cross sectional observational	cross sectional	cross sectional	cross sectional	-	
Sample population	Total sample size	64	50	30 (400 dispensing encounters)	48	49	63	304
Working sector	Male	35 (54.7%)	42 (84%)	20 (66.7%)	37 (77.1%)	34 (69.4%)	42 (66.7%)	210 (69.1%)
	Female	29 (45.3%)	8 (16%)	10 (33.3%)	11 (22.9%)	15 (30.6%)	21 (33.3%)	94 (30.9%)
	Private	56 (87.5%)	31 (62%)	12 (40%)	37 (77.1%)	37 (75.5%)	NR	173 (71.8%)
qualification	governmental	8 (12.5%)	19 (38%)	18 (60%)	11 (22.9%)	12 (24.5%)	NR	68 (28.2%)
	Pharmacist	12 (18.8%)	10 (20%)	12 (40%)	3 (6.25%)	10 (20.4%)	22 (34.9)	69 (22.7%)
	Druggist	43 (67.2%)	32 (64%)	18 (60%)	25 (52.1%)	35 (71.4%)	41 (65.1%)	194 (63.8%)
Others*	Pharmacy technician	3 (4.7%)	4 (8%)	0 (0%)	16 (33.33%)	4 (8.2%)	0(0%)	27 (8.9%)
	Others*	6 (9.4%)	4 (8%)	0 (0%)	4 (8.3%)	0 (0%)	0 (0%)	14 (4.6%)

NR Not Reported; *health assistant and nurses

Table 2: Counselling activities conducting during drug dispensing in Ethiopia

Study area	North West Ethiopia	South West Ethiopia	Bahir Dar	Awi Zone,	Jimma	Gondar	Average
Author, year of publication	Nasir et al. 2011^[25]	Mohammed et al. 2015^[26]	Wubante, 2014^[27]	Abebaw et al. 2014^[28]	Alefe et al. 2014^[29]	Desalegn et al. 2015^[30]	
Tell purpose of each counselling	9 (14.1%)	43 (86%)			39 (79.6%)		59.9%
Ask patients what prescriber has told	11 (17.2%)	45 (90%)			36 (73.5%)		60.2%
Ask patients if they have problems in taking the drug(s) as prescribed	15 (23.4%)	47 (94%)			34 (69.4%)		62.3%
Discuss major side effects	12 (18.8%)	48 (96%)	29 (15.1%)		26 (53.1%)	36 (57.1)	48.0%
Discuss life-style modifications	49 (76.6%)	45 (90)			32 (65.3%)	34 (53.9)	71.5%
Tell what to do if a patient misses a dose	5 (7.8%)	33 (66%)		15(31.3%)	33 (67.4%)		43.1%
Open the container and show what the drug look like	33 (51.6%)	47 (94%)			28 (57.1%)		67.6%
Check patient understanding by asking to repeat back key information	46 (71.8%)	47 (94%)	202 (50.5%)		32 (77.6%)	22 (34.9%)	65.8%

Table 3: Types of Information given to the patient during medication counselling in Ethiopia

Author, year of publication	Nasir et al. 2011 ^[25]	Mohammed et al. 2015 ^[26]	Wubante, 2014 ^[27]	Abebaw et al. 2014 ^[28]	Alefe et al. 2014 ^[29]	Average*	
Percentage of respondents	%	%	%	%	%	%	
Always	0	44			44.9	29.6	
	0	6			20.4	8.8	
Tell name of the drug	Sometimes	15.6	20	NA	12.5	30.6	22.1
	Rarely	35.9	24			4.1	21.3
	Never	48.4	6			0	18.1
Always	96.9	94			100	97	
	Often	3.1	6			0	3
Tell route of administration	Sometimes	0	0	NA	75.0	0	0
	Rarely	0	0			0	0
	Never	0	0			0	0
Always	100	77			93.8	90.3	
	Often	0	6			6.1	5
Tell dose of drug	Sometimes	0	17	99.2	100	0	5.7
	Rarely	0	0			0	0
	Never	0	0			0	0
Always	98.4	94			100	97.5	
	Often	1.6	3			0	1.5
Tell frequency of administration	Sometimes	0	3	96	100	0	1
	Rarely	0	0			0	0
	Never	0	0			0	0
Always	4.7	36			46.9	29.2	
	Often	12.5	6			24.5	14.3
Tell why the drug is prescribed	Sometimes	28.1	44	NA	NA	20.4	30.8
	Rarely	40.6	4			6.1	16.9
	Never	14.1	10			2.0	8.7
Always	9.4	86			89.8	61.7	
	Often	18.8	7			6.1	10.6
Tell duration of therapy	Sometimes	59.4	7	74	NA	2.0	22.8
	Rarely	12.5	0			2.0	4.8
	Never	0	0			0	0
Always	28.1	60	DDI=35.5		73.5	53.9	
	Often	37.5	14			12.3	21.3
Tell interactions	Sometimes	23.4	20		13 27.1	12.2	18.5
	Rarely	10.9	3	DFI=60.3		2.0	5.3
	Never	0	3			0	1
Always	0	50			71.4	40.5	
	Often	1.6	10			14.3	8.6
Tell storage condition	Sometimes	26.6	20	4.5%	56.3	12.3	19.6
	Rarely	62.5	16			2.0	26.8
	Never	9.4	4			0	4.5

Table 4: Conditions given special attention during medication counselling in Ethiopia

Author, Year of publication		Nasir <i>et al.</i> 2011 ^[25]	Mohammed <i>et al.</i> 2015 ^[26]	Abebaw <i>et al.</i> 2014 ^[28]	Alefe <i>et al.</i> 2014 ^[29]	Average
Percentage of respondents		%	%	%	%	%
special patient conditions	Pregnancy	82.8%	96%	68.8%	100%	86.8
	Visual/hearing problem	75.0%	74%	20.8%	79.6%	62.4
	Functionally illiterate	51.6%	50%	NA	73.5%	58.4
	Child/elder patient	73.4%	74%	50.0%	91.8%	72.3
Special disease conditions	Taking multiple medicine	56.2%	70%	45.8%	75.5%	61.9
	Asthma	43.8%	60%	39.6%	75.5%	54.7
	Diabetic mellitus	81.2%	74%	58.3%	77.6%	72.8
	Epilepsy	84.4%	80%	16.7%	89.8%	67.7
	Hypertension	85.9%	74%	85.4%	67.4%	78.2
special drug conditions	Tuberculosis	76.6%	54%	64.6%	85.7%	70.2
	Under active surveillance by FMHACA	34.4%			46.9%	40.7
	With significant side effect	59.0%			57.1%	58.1
	With additional warning	43.8%	NA	NA	69.3%	56.6
	With complicated direction	62.5%			65.3%	63.7
	With special storage condition	50%			79.6%	64.8

NA Not Assessed

Table 5: Barriers for medication counselling in Ethiopia

Author, year of publication		Nasir <i>et al.</i> 2011 ^[25]	Mohammed <i>et al.</i> 2015 ^[26]	Abebaw <i>et al.</i> 2014 ^[28]	Alefe <i>et al.</i> 2014 ^[29]	Desalegn <i>et al.</i> 2015 ^[30]	Average
Barriers to counselling	Lack of knowledge and updated drug information	28 (43.8%)	28 (56%)	29 (60.4%)	32 (65.3%)	51(80.9%)	61.3%
	High patient load	19 (29.7%)	37 (74%)	17 (35.4%)	39 (79.6%)	5 (7.9%)	45.3%
	Non legalization of counselling	16 (25%)	6 (12%)	NA	4 (8.2%)	NA	15.1%
	Patient factors	12 (18.8%)	20 (40%)	5 (10.4%)	31(63.3%)	NA	33.1%
	No factor	3 (4.7%)	NA	0 (0%)	0 (0%)	0 (0%)	1.2%

NA Not Assessed

Dickinson *et al.* also stated that patients may want to know more than we think of them.^[30] However according to this review some aspects of counselling activities performed were not adequate. For example telling the name and the purpose of the drug is the information which is less frequently delivered to the patient during dispensing of the drug. However the need for the indication of a drug was cited as most patients want to know.^[29]

Even though all the necessary information expected to be delivered during drug dispensing were not delivered the dose of the drug, frequency and route of administration were almost always told to the patient during drug dispensing. Similarly the study done in Saudi Arabia reported that information regarding dose was the most common type of information provided by pharmacists.^[31] An observational study done in Pakistan also mentioned that dose and frequency of the medicines were more commonly communicated to patients than any other information during drug dispensing.^[32] A review article done by Hanni *et al.* states that information on dose and directions for use was more frequently given than information on side effects, precautions, interactions, contraindications, and storage.^[33]

Studies have shown that people want to be told about the possibility of any adverse effects they might suffer as a result of taking medicines.^[34-36] Berry *et al.* described between 50 and 90% of patients express a desire for more information about adverse effects.^[37] However discussing on major side effects was a very less frequently performed counselling activity reported in this review. Some pharmacists believed that information on side effects may frighten some consumers so that they may stop taking their medications.^[38]

In all of the studies reviewed the most frequently mentioned barriers for counselling were lack of knowledge and updated drug information and presence of high patient load. Similarly the study conducted in Lagos State South West Nigeria reported that workload in the pharmacy followed by lack of appropriate drug information sources were rated high as barriers to medication counselling.^[39] Workload is also reported as a frequently mentioned factor influencing practitioner-patient relationship in many other studies.^[40-44] There are also many studies that indicate lack of knowledge is the major barrier to counselling.^[45,46] The need for practical training on medication counselling is an important issue that should be considered by authorities who are concerned for the basic and continuing education of pharmacists. Concerned officials should also increase the human power involved in drug dispensing in order to make pharmacy professionals get time for counselling.

Even though the maximum possible published studies that address medication counseling practice in Ethiopia were found through Google scholar and Pub-med databases as well as manual Google search, the total number of studies obtained may not be sufficient to get the overall image of the country regarding medication counseling practice. Publication bias could also be a limitation since I did not get unpublished papers to include in this review. The quality of individual studies is also a concern because almost all of the studies were cross-sectional studies whose data were obtained through the report of the professionals not a simulated visit or an observation. This is because studies have reported inconsistencies between self-reported behaviour of pharmacists in interviews and their actual dispensing practice measured using Simulated Patients.^[47]

CONCLUSION

This review highlights the current deficiencies of medication counselling practice in Ethiopia. Even though there are many things to be told to the patient while dispensing a medication the counselling activities done in Ethiopia were not far more than telling the dose and frequency of administration. The most frequently mentioned barriers for medication counselling were lack of knowledge and presence of high patient load. Policy makers, stakeholders, researchers and other concerned bodies should collaborate to design interventions in order to improve the current medication counselling practices at drug retail outlets throughout the country.

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