



## ESTIMATE THE KNOWLEDGE OF PHARMACY SPECIALISTS ON GENERIC DRUGS IN JORDAN

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### ABSTRACT

**Introduction:** Generic medications have the same chemical formula as branded medications and are compatible with natural products. Lack of knowledge of healthcare professionals about these products leads to less use of these medications. Therefore, this study narrows the knowledge gap and the findings help authorities in prescribing those drugs. **Aim:** Evaluate the knowledge, attitudes and performance of pharmacists on generic products. **Method:** This survey was conducted from July 1, 2021 to August 1, 2021, in 100 pharmacists in King Hussein Hospital in Jordan. A cross-pilot study was used and the data collected tool was a self-examination questionnaire. A binary logistic regression test was performed to determine the prediction of knowledge and attitude to those drugs. **Results:** From this survey more 52.9% of the respondents (agree = 32.2%, completely agree 20.7%) stated that they are aware of the concept of generic medicine. Pharmacists with 2 to 5 years of experience and over 5 years have a more positive attitude toward those products than those with up to two years. **Conclusion:** More than half of respondents were aware of the concept of generic medicine and their right to public replacement. Experts with more experience in this field can better understand the overall product.

### INTRODUCTION

The same trademark chemical formula for conventional medicine.<sup>[1]</sup> contains ingredients similar to the reference drug, and in similar doses used to treat the same disease.<sup>[2]</sup> A generic drug is a multisource drug that is considered,<sup>[3,4]</sup> a comparative product that is also described as a novelty, its own product or a branded product. Transferable pharmaceutical products are considered to be the pharmacological equivalent of an innovator product.<sup>[5]</sup>

To confirm it, a generic drug must be bioequivalent with the original product and equal in strength, safety and quality.<sup>[3,4,6]</sup> However, the name of the medicinal product, its appearance (such as its color and shape), its packaging,<sup>[2,7,8]</sup> its size and the perceptions,<sup>[7]</sup> may differ from reference product.

There is no need to repeat preclinical and clinical trials of generic drugs. The deliberate result of the law was to ensure that generic drugs would be cheaper than equivalent drugs, as generic drug manufacturers were not expected to repeat innovations, preclinical and clinical trials.<sup>[2]</sup>

Worldwide, the use of generic drugs is gradually increasing due to financial pressure on medical budgets. In many parts of the world, public transportation (GS)

services are widely supported by health authorities.<sup>[9-14]</sup> Public and private third-party lenders and health care providers encourage or prescribe generic medications through measures such as generic prescription.<sup>[15-19]</sup>

This difference increases the quality, safety and efficacy of generic drugs.<sup>[20,21,22,23]</sup> There is an ineffectiveness, safety and quality of general medicines among healthcare professionals.<sup>[24]</sup>

The perception and position of the participating regarding generic medicine as a condition for the development of the use of generic drugs.<sup>[5,23]</sup>

Inaccurate or insufficient knowledge of healthcare professionals regarding common drugs leads to doubts about the use of these drugs and especially about their effectiveness, and this can be a major obstacle to the widespread use of these products.<sup>[4,25]</sup>

### METHODS

#### Study area and period

This study was conducted at King Hussein Hospital in Jordan, capital of Jordan. This survey was conducted between July 1, 2021 and August 1, 2021.

**Study design**

A cross-sectional survey was used to evaluate pharmacists' knowledge, approach and practice against generic medicine in Amman.

**Data collection and management**

A self-awareness questionnaire was prepared with extensive literature on the knowledge, attitude and practice of pharmacists on the subject of generic medicine. This questionnaire was conducted in English and includes parts of the socio-demographic

characteristics of the participants, followed by a questionnaire to evaluate their knowledge, attitude and practice towards general medicine. Data collected in version SPSS 23 were entered, purified and analyzed.

**RESULTS****Socio-demographic and work profile**

The survey responses were 89%. Out of the 100 participants, 52% were male and 58% were in the age group of 20 to 29 as shown in table 1.

**Table 1: Socio-demographic and work profile of respondents.**

Variable	N	Category of hospital Intervention (%)
Gender	Male	52(52)
	Female	47 (47)
Age group (years)	20-29	58(58)
	30-39	22 (22)
	40+	19 (19.0)
Qualification	Diploma	38 (38)
	Degree	21 (21)
	MSc	40 (40)
Employment position	Full/part owner	45 (45)
	Employee	53 (53)
	Others*	1 (1)
Education institution	Private institution	63 (63)
	Government/public institution	36 (36)
Work experience (years)	Up to 2	34 (34)
	From 2.1 to 5	42 (42)
	More than 5	20 (20)

Of the participants in this study, 52% (accept 32%, strongly agree 20%) are aware of the concept of general medicine as a doctor and 38% of the participants completely agree that a general medicine should be the

same amount. There is a brand. 44% of participants do not support the idea that it is not appropriate to replace a drug with a narrow drug index [Table 2].

**Table 2: Knowledge of pharmacist's on generic medicine in Jordan.**

Variable	N	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
A generic drugs is bioequivalent to brand drugs		10(10)	19 (19)	(17)	32 (32)	20 (20)
A generic drugs should contain the equal amount of active ingredients as the brand drugs		5(5)	10 (10)	6 (6)	33 (33)	38 (38)
A generic drugs should be in the equal dosage form as the brand drugs		10(10.4)	15 (15)	8 (8)	40 (40)	24 (24)
Generic drugs are cheaper than brand products		10 (10)	10 (10)	5 (5)	32 (32)	33 (33)
Widespread of generic products in Jordan helps in decreasing the health care expenditure of government		11 (11)	27 (27)	9 (9)	26 (26)	21 (21)
pharmacists in KHH have the right to dispense generic products		8 (8)	13 (13)	19 (19)	36 (36)	23 (23)
Should not dispense narrow therapeutic index without prescription.		23 (23)	20 (20)	15 (15)	29 (29)	11 (11)

Of the respondents, 34% believe that the effect of drugs is less than brand name drugs. However, 40.2% do not believe that the drugs were better than conventional

drugs. Among the participants, 68.8% of them believed that the reasons for choosing the generic medication should be adequately explained [Table 3].

**Table 3: Attitude of pharmacist toward generic medicine Jordan.**

Variable	N	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Generic drugs are less effective compared to brand products		26 (26)	23 (23)	15 (15)	30(30)	4 (4)
Brand products are of higher quality compared to generic medicine		20 (20)	20 (20)	7 (7)	37(37)	14 (14)
Generic medicine produce toxic effect than brand drugs		30 (30)	23 (23)	10 (10)	29(29)	6 (6)
Generic drugs take longer time to give effect		18 (18)	28 (28)	14 (14)	28(28)	10 (10)
generic is cheaper than brand medicine		6 (6)	11 (11)	22 (22)	33(33)	7 (7)
pharmacists could allowed to dispense generic substitutions without change perscription		12 (12)	21 (21)	14 (14)	28(28)	21 (21)

## DISCUSSION

This study attempted to evaluate the pharmacist's knowledge, attitude and practice about generic drugs .From the current study more than 50% of the respondents (agree = 32.%, 20.% strongly agree) reported that they are familiar with the concept of generic drugs equivalent to brand drugs which is much lower than what the new study reported. Zealand which described 60% of the participants knew about the biological equality of generic medicine to the brand product; This difference may be the cause of a difference in the educational status of the respondents.<sup>[26]</sup>

On the other hand, the findings of this study are larger than the Malaysian report showing that 50% of pharmacists claim that generic drugs are preferable to treatments compared to a innovator product.<sup>[27]</sup> Of the respondents 64% reported that the generic drug should be the same dose as brand drug lower reported than the Australian report, which shows that 84% of respondents claim this fact. In the current survey 73% of them reported that generic drugs are cheaper than prescription drugs, which is less than the Australian report because 91% of respondents consider generic drugs cheaper than those products.<sup>[28]</sup>

A study from Malaysia reported that 58% of pharmacists are as safe and effective as imported products.<sup>[29]</sup> More than half (51%) support the idea that branded drugs are of better quality than generic drugs, a better result than 89% of the participants' Australians who claim that generic drugs are not a brand of poor quality, better. Medicines.<sup>[27]</sup>

In the current study, 39 % of respondents indicated that they support alternative medicine in all cases where general medicine exists, but a study from India reported that 80% of respondents, even in the case of prescribed medicines, did not support alternative medicine.<sup>[30]</sup>

Our research shows that our pharmacists has a good knowledge instead of a generic drugs. The current survey found that 50% of respondents said that pharmacists should be allowed generic drugs without consulting

doctors, which is less than the Turkish report, which shows that 55% of respondents said that a pharmacist can make self-medication.<sup>[31]</sup>

Pharmacists with 2 to 5 years of experience and people over the age of 5 may have more positive attitude towards generic drugs. Up to 5 years of experience: This two years can be the result of experience, if pharmacists have more experience in their professional field, they better understand the overall product.

Of the results of the current study 48% of respondents claimed that mistrust of generic medicines is one of the distribution factors, compared to descriptions from Ireland, where 98% of pharmacists believe that general medicines are different from each other. Quality as founders, and 96% indicated that they are effective only as founders.<sup>[38]</sup>

From the current study, 60% of participants were produced from an understanding of local drugs, compared to generic drugs in terms of safety and efficacy, this finding is higher than the report published from Malaysia, according to which 58% of respondents believe that genetics is locally produced. Similar in safety and efficacy to imported generic drugs.<sup>[29]</sup>

About 63% of our study participants claimed that generic drugs produced in the region are cheaper than imported generic drugs, and 47% of them think that imported generic products go through a more difficult approval process than products manufactured by local manufacturers. Compared to the Malaysian perspective, which shows that 47% of respondents who are satisfied with their understanding of imported generic drugs need to undergo a more rigorous verification process in terms of local productivity.<sup>[29]</sup>

## CONCLUSION

From this study it can be concluded that more than half of the respondents were aware of the concept of generic drugs. If pharmacists have more experience in their professional field, they will better understand the generic medicine. Nearly 50% of the study respondents claimed

that mistrust of generic drugs was a factor at the time of publication.

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