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Exploring medicines use patterns and practices among the public in the Gaza strip, Palestine: A qualitative study

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ABSTRACT: Objectives: To examine patterns and practices of medication adherence and associated factors in the Palestinian population. Methods: qualitative methodology through focus group discussions using a semi-structured interview guide. We identified 26 adult participants through purposive sampling who reported taking medication during or three months prior to the study. Discussions were videotaped, transcribed verbatim, and translated. A manual thematic content analysis of the data was conducted to identify themes and subthemes. Results: The study revealed that participants obtained their medications primarily from public pharmacies. Some participants were unable to obtain their medications, or only partially, due to financial difficulties. The majority of participants used herbal medicines, and self-medication to treat illness was a common practice among participants, depending on their past experience with medicines. Participants adhered satisfactorily to the doctor's prescription, while adherence was low in terms of skipping scheduled doses and stopping the medication when they felt better. The expiration date of medications was not a major problem for half of the participants. Participants were poorly informed about the side effects of their medications. Information about medicines could be obtained from doctors and pharmacists, but most participants had concerns about whether this information was adequate, especially when it came from government doctors and pharmacists. CONCLUSION: Participants used medicines inappropriately. Some participants misunderstood the safety of medicines. Rational use of medicines could be improved by providing participants with the necessary drug information.

KEYWORDS: Medicine Irrational use; Quality use of medicines; Patterns of medicines use.

1. INTRODUCTION

Since the existence of humanity, medications have become crucial for reducing mortality and morbidity from various diseases and contributed to improving the quality of life (1, 2). United Nations & World Health Organization reported that one-third of the world's population does not have appropriate access to essential medicines (3); however, it could be addressed by employing strategic approaches that enhance affordability, availability, and rationality in using medicines (4). Any country's rational use of medicines represents a strategic part of its national medicine policies (5). Unfortunately, the need for rational use of medicines is greatest in poorer economies where financial resources are very limited, and pressing needs are multiple (6). Usually, developing countries' communities have limited knowledge about medicines use (7), which is associated with inappropriate practices of using medicines (8). Lack of access to medicines and lack of knowledge about their use increase patients' tendency to take action with or without direct health care professional's guidance, seek other facilities to obtain medicines, or tend to self-care (9). Palestine has a weak, fragmented and complex health system and, like most developing countries, has underdeveloped mechanisms for routine monitoring of medicines, which might result in poor community understanding and inadequate knowledge about prescribed and non-prescribed medicines. As a result, there is little information about drug use patterns and practices and their safety concerns among the Palestinian population in the Gaza strip. Additionally, no comprehensive study has been conducted to assess the adequacy of knowledge about the rational use of medicines. Therefore, this research aims to get a concrete understanding of how locals in the Gaza Strip use medicines. Particularly, this study investigates in depth the patterns and practices of medicines usage, as well as explores the factors influencing it. This study will

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lead to better insight on medicines use that might encourages researchers to evaluate the impact of developed policies and strategies to enhance the rational use of medicines among people in the Gaza Strip.

2. RESULTS

2.1. The Demographic information

In total, 26 people (P1-P26) participated in the study aged between 24 and 78, with an average age of (47.9 ± 15.4). The gender distribution of the participants was 57.7% (n=15) males versus 42.3% (n=11) females. The participants' levels of education, varied from a primary school level to university degree, while one participant had no formal education. Nineteen participants were refugees living in refugees'camps. 84.6% of the participants either had low-or middle-income rates, while four refused to declare their monthly income. The summary of the demographic information is displayed in Table 1.

Table 1: Participants' sociodemographic information.

Socio-demographic information		**FGD1**** **n=9 (%)**	**FGD2** **n=10 (%)**	**FGD3** **n=7 (%)**	**Total** **n=26 (%)**
Gender					
	Male	6 (66.7)	5 (50.0)	4 (57.1)	15 (57.7)
	Female	3 (33.3)	5 (50.0)	3 (42.9)	11 (42.3)
Age					
	18-30	2 (22.2)	2 (20.0)	1 (14.2)	5 (19.2)
	31-40	0 (0.0)	1 (10.0)	3 (42.9)	4 (15.4)
	41-50	1 (11.1)	1 (10.0)	0 (0.0)	2 (7.7)
	51-60	5 (55.6)	4 (40.0)	3 (42.9)	12 (46.1)
	≥ 61	1 (11.1)	2 (20.0)	0 (0.0)	3 (11.6)
Civil Status					
	Citizen	2 (22.2)	3 (30.0)	2 (28.7)	7 (26.9)
	Refugee	7 (77.8)	7 (70.0)	5 (67.3)	19 (73.1)
Education level					
	No formal education	0 (0.0)	1 (10.0)	0 (0.0)	1 (3.9)
	Primary	2 (22.2)	2 (20.0)	1 (14.2)	5 (19.2)
	Secondary	3 (33.3)	6 (60.0)	2 (28.7)	11 (42.3)
	University	4 (44.5)	1 (10.0)	4 (57.1)	9 (34.6)
Monthly income* (n=22)					
	Less than 1000	7 (77.8)	5 (50.0)	2 (28.7)	14 (53.8)
	1000-2000	0 (0.0)	2 (20.0)	4 (57.1)	6 (23.1)
	2000-3000	1 (11.1)	0 (0.0)	1 (14.2)	2 (7.7)
Chronic Disease					
	Yes	6 (66.7)	4(40.0)	3 (42.9)	13 (50.0)
	No	3 (33.3)	6 (60.0)	4 (57.1)	13 (50.0)

*: Monthly income in NIS (1 NIS=USD 0.29)

**: FGD; focus group discussion

2.2. The pattern of medicines uses

Thirteen participants mentioned that they had chronic diseases; one had Familial Mediterranean fever (FMF), one participant was reported with thyroid disease, while other participants with chronic diseases suffered either from hypertension, diabetes mellitus, or both. The medicines used by participants with chronic diseases were metformin, atorvastatin, amlodipine besylate, insulin, aspirin, and enalapril. For non-chronic participants, the most frequently used drugs were analgesics (paracetamol, ibuprofen) and antibiotics.

The thematic content analysis of the data revealed five major themes that are key factors defining patterns and practices of medicines use. The factors include access to medicines, consumption of medicines, practice of medicines use, safety of medicines, and information resources about medicines. Table 2 represents the themes and subthemes of this study.

Table 2: Summary of themes and subthemes.

Theme	Subtheme
Access to medicines	Feeling of illness
	Availability of medicines
	Cost of medicines
Consumption of medicines	Medicines seeking behavior
	Medication adherence
	Family's or friends' advice
Practice of medicines use	Self-medication
	Experience of medicines use
	Sharing medicines with others
	Use of herbs as medicines
	Combining herbs with medicines
Safety of medicines	Side effects
	Expiry date
	Drug-drug and drug-food interactions
Medicines information resources	Source of information
	Adequacy of information

2.3. Theme 1: Access to medicines

Three subthemes were further identified that influenced access to medicines, i.e., feeling of illness, availability, and cost of medicines.

2.3.1. Feeling of illness

When the participants felt sick and faced a health problem, most preferred to go to a doctor. All chronically ill participants went directly to doctors seeking medical consultation regarding their chronic diseases and stated:

> *"I prefer to go to a doctor directly or to go to the hospital because I suffer from chronic diseases." (all participants with chronic diseases)*

A little bit different situation was observed with non-chronic patients, where some of them expressed their preference to go to the pharmacy to receive diagnosis and treatment services if they suffer from mild to moderate symptoms instead of going to the doctor directly. One of them stated:

"I go to the private pharmacy to obtain medicines and to be diagnosed instead of waiting in government clinics." (P5)

On the contrary, they go to the doctor directly if they feel severely ill. For example, one of the participants said:

"If the disease is mild, I do not go to a doctor, but if the disease is serious, I go to a doctor." (P11)

2.3.2. Availability of medicines

In a poor community like the one in the Gaza Strip, the availability of medicines in most governmental clinics is questionable. This is what was stated by a participant (P23):

"Often the medicine in the governmental clinics is not available." (P 23)

Participants expressed different scenarios to cope with medications shortages and to ensure their availability; thus, clinics run by the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) represented an alternative for some participants to find their medicines:

"If I did not find medicines in the government clinic, I would find them in the UNRWA clinic." (P13)

In general, the lack of medications in both governmental and UNRWA clinics forced the participants to buy their medicines from community pharmacies:

"My treatment is not available either in government or UNRWA clinics, so I buy it from community pharmacies." (P6)

2.3.3. Cost of medicines

Taking medicines is a must for most participants, however, the cost of these medicines has a crucial impact on obtaining them. Most participants expressed that:

"The costs of our medicines are a financial burden for us." (P11, P13, P14, P15, P17and P19)

According to the participants, they adopted various coping mechanisms to overcome the effect of medicines costs. Some participants used low price alternatives. They stated:

"If the drug is expensive, I buy the alternative." (P21 and P25)

On the other hand, some participants chose to take half of the medication dosage.

"If the medicine is expensive, I buy half of the dosage prescribed, and when there is money, I buy the rest." (P23 and P24)

At the same time, the worst option followed by a participant who could not address the problem of the medicines' high cost was not to take the prescribed medicine due to lack of the needed money.

"The medicine that the doctor prescribed to me is a bit expensive, so I decided not to buy it because I could not afford it." (P22)

2.4. Theme 2: Consumption of medicines

This theme was discussed rigorously and was affected by three subthemes; medicine seeking behavior, medication adherence, and Family's or friends' advice.

2.4.1. Medicines seeking behavior

The main source of getting medicines for most participants was the community pharmacies, as most of them stated

"I bought a medicine called Paraflo® from the pharmacy without a prescription." (P5)

2.4.2. Medication adherence

Nearly all participants showed a high level of medication adherence according to the doctor's prescription and instructions. (P6 and P8) stated that:

"I use my medication regularly without interruption according to the doctor's."(P6 and P8)

Some participants forget doses unintentionally and many actions were taken by the participants when they missed their doses; either wait for the next dose without any action, some of them said:

"When I forget to take the medicine at the prescribed time, I wait for the next dose." (P1, P2, P7, and P8)

Re-scheduling or duplicating the doses were other approaches followed by some participants to compensate for missed doses:

"If I forget the medicine, I reschedule the doses according to the last time that I took the medicine." (P6)

"If I forget the dose, I take two tablets in the next dose." (P19)

Most participants with no chronic diseases discontinued taking their medicines due to the absence of symptoms or feeling improvement in their health

"If I feel better, I stop taking the medicine without consulting a doctor." (P15)

2.4.3. Family's or friends' advice

The majority of the participants stated that they consulted health care professionals when they had to take medicines:

"Medicines can be used only after consulting a health specialist." (P7, P10, P12, P13, P14, P15, P16, P18 and P19)

Two participants reported that they could accept their friend's or relative's advice about medicines used for minor health issues

"If a friend or a relative advises me about a specific medication, such as a stomach or headache medicine, I use it." (P11 and P17)

2.5. Theme 3: Practice of medicines use

This theme describes participants' ways of practicing medicines use, under which five subthemes were developed and identified: Self-medication, the experience of medicines uses, sharing medicines with others, use of herbs as medicines, and combining herbs with medicines.

2.5.1. Self-medication

It is a common trend among some participants to take medicines to treat themselves, either for minor illnesses or for long term medicines use, (P22) stated:

"When I get sick with a mild illness like flu, I treat myself." (P22)

Some participants also practice antibiotic self-medication behaviour.

"When I suffer from infections, I take an antibiotic, and when I suffer from a headache, I take Acamol®. "(P2)

Contrary to that, one participant considered other participants behaving wrong when using antibiotics without prescription, and he rejected the idea of antibiotic self-medication

"I am afraid to use antibiotics without consulting a doctor because it affects the body's immunity." (P23)

2.5.2. Experience of medicines use

With regard to thier experience of medicines uses, most of the participants mentioned that they treated themselves effectively based on their experience:

"I was previously treated for my back pain, and the doctor prescribed injections for me, and I got better, so whenever I feel pain in my back, I use the same injections." (P17)

2.5.3. Sharing medicines with others

The participants did share neither the same idea nor the same practice regarding sharing medicines with relatives and neighbors; some of them refused the whole idea of sharing medicines with others as stated by (P23):

"You cannot give medicines to other people, and doctors advise us not to share medications with others, even if the symptoms are similar." (P23)

On the contrary, other participants practiced sharing medicines with family members and friends:

"I gave a relative an antibiotic AUGMEN® when he suffered from an infection." (P2)

"I asked one of my friends to give me a medicine that had an excessive amount of." (P8)

2.5.4. Use of herbs as medicines

Many participants used herbs to treat either minor or moderate diseases. Furthermore, they strongly believed in its effectiveness in curing their diseases, where they stated:

"I was suffering from urinary infections. I boiled the parsley herb, then I drank it, and I got better." (P19)

"I used boiled guava leaves for cough, and I felt better after using them. "(P18)

Nevertheless, some participants had a bad experience when they were treated with herbs; whereone of them said:

"I was taking herbal mixtures to get pregnant, but none of them worked." (P21)

Furthermore, one participant cautioned about the use of large quantities of herbs:

"The use of a habit al barakah "black caraway" in large quantities with honey harms the body, and may lead to an increase in blood pressure and shortness of breath." (P12)

2.5.5. Combining herbs with medicines

Almost all participants reported that herbs might negatively affect the effectiveness of the chemical medicines, and they did not use medicines with herbs. Participant P16 stated:

"This is the biggest mistake we can do, because it may affect the effectiveness of the medication for treatment." (P16)

2.6. Theme 4: Safety of medicines

This theme was discussed in terms of three aspects; side effects, expiry date, and drug-drug and drug–food interactions

2.6.1. Side effects

Despite all participants' acknowledging the existence of drug side effects, some of them stated that they experienced some side effects. One of the participants said:

"I took an antibiotic, and it caused a rash on my skin." (P17)

Unfortunately, nearly none of them had sufficient information about the side effects of the medicines they used; and upon asking them about the side effects of their medicines, general answers or even questions were given:

"Do all medicines cause nausea?" (P21)

Several participants would discontinue their medication when they experienced any side effects, and they referred to doctors for consultation.

"I stop the medicine immediately, and I refer to the doctor." (P7)

2.6.2. Expiry date

Almost all participants acknowledged that they used to check the expiry date of medicines, where they stated:

"Yes, I check the expiration date (all participants except P10 and" P16)

Nevertheless, there was a debate between participants about the use of expired medicines, where some of them were using such medicines, while the others said that would have no effect:

"Yes, I used expired medicines, especially tablets." (P26)

"Some medicines may last for 6 months after the expiration date. I used the expired Acamol® for 3 months, and it worked even better than before the expiration date. " (P7)

2.6.3. Drug-drug and drug-food interactions

Most of the participants were aware of the fact that their medicines might interact with other medicines, and upon asking them to give examples of such interactions, one participant stated:

"Vermox® and Flagen®, it is strictly forbidden for the patient to take them together." (P 16)

Regarding food-drug interaction, other participants said:

"When taking the librax® medicine, it is forbidden to drink milk and consume dairy products, as it causes allergies. (P24)

2.7. Theme 5: Medicines information resources

This theme describes resources of medicines information. It is presented in two subthemes identified by the participants: source of information and adequacy of the information.

2.7.1. Source of information

The information resources were very important for almost all participants; the participants used various sources simultaneously. The majority of participants obtained medicines information from their doctors:

> *"I ask the doctor for my medicine info"rmation. " (P1, P2, P3, P7, P10, P13, P14, P15, P16, P18, P19, P10, P15, P16, P18 and P19)*

While other participants found pharmacist's information more reliable and more trustworthy:

> *"A Pharmacist's information is more up-to-date, and he knows about medicinal formulations more than a doctor."(P20 and P26)*

Some patients sought information about their medicines from other sources; for example, for some participants, the use of the internet gained more attention than before as a source of information about medicines:

> *"I get information from Google." (P6)*
> *"I search the internet for medicines information. " (P11, P17, P20 and P23)*

At the same time, some other participants also read the patient information leaflet carefully:

> *"I read the internal leaflet of the medicine." (P7, P21and P5)*

2.7.2. Adequacy of information

Nearly all participants explained that they were not given adequate information about their medicines, especially when they visited doctors and pharmacists in governmental and UNRWA clinics:

> *"The doctor in governmental clinics does not give enough information and does not have enough time to do that." (P15)*

There was more satisfaction with the adequacy of information given by private doctors:

> *"Sometimes the doctor gives me information about the medicine, and sometimes he does not, but in private clinics, the doctor usually explains the information about the medicine." (P1)*

On the other hand, some participants were fully satisfied with the information about their medicines, which was received from private pharmacies:

> *"The pharmacist cares about the patient and gives him full information because he tends to have a commercial interest." (P18)*

Due to this inadequacy of information, most participants were eager to know more about their medicines by getting either oral or written information:

> *"We need more information about the medicine, and want to know what we are taking." (p23)*

3. DISCUSSION

The final results showed that the presented study had successfully investigated and evaluated various perspectives of medications usage practices and patterns among chronic and non-chronic disease participants.

The findings indicated that most participants preferred to go to doctors to treat their minor and severe diseases. However, some participants would rather go to a community pharmacist when they encounter minor health problems which wasgood enough for diagnosing and treating minor illnesses. Similar outcomes were reported by Dawood et al., where most of the public were more willing to consult a doctor when facing any health problems, while a few of them chose to consult a pharmacist (10), although looking for a physician was found to be influenced by perceived severity of the disease (11).

The participants tended to use medicines to relieve their sufferings, (e.g., flu, headache), and they went mainly to community pharmacies to obtain their medicines, which were almost unavailable in governmental facilities.

For most participants, access to free essential medicines was an essential issue, as most of them have had low-income rates. In addition, the study participants mentioned the low availability of essential medicines in the public sector, a common problem in low- and lower-middle-income countries (12). The absence of medications pushes people to buy medicines from community pharmacies, where the cost of

medicines plays a major role in purchasing them. In our study, some participants failed to obtain their medicines or part of them due to financial difficulties that go in agreement with previous studies where the socioeconomic status of the family usually had a significant effect on the affordability of medicines (13), and the participants were cost-conscious when they had to pay for their medicines which might have a negative impact on their health(14). The chronic shortages of medicines in public sector were clearly stated in the Palestinian Ministry of Health reports, where 30-48 % of essential medicines were not available during the last five year(15). This explains the sufferings and sometimes failure of participants to find their medications.

All the participants perceived that private doctors and pharmacists give more attention to the patient than governmental ones. However, in major diseases, the participants went to government hospitals or clinics as the needed services were not available in the weak and fragmented private sectors.

Adherence to drug therapy is a major problem, especially in chronic illnesses. In our study, almost all the participants displayed a satisfying level of adherence to the doctor's prescription, while the adherence was at a low level related to missing scheduled doses and stopping the medication when the participants felt better. A report by Yasin et al. showed that missing taking drugs at the scheduled times was the most common reason for medication non-adherence (16). Additionally, a Malaysian study found that two-thirds of respondents admitted that they stopped taking the medicines when they felt better (17). Practicing self-medication to treat diseases is common among participants depending on their experience with medication. This result aligns with other findings where most of the respondents acknowledged practicing self-medication based on their previous experience (18). The possible justification might be the inability of the participants to pay for health care fees (19) or even their lack of the needed knowledge about medicines use. Antibiotics were among the self-medicated medicines, and this finding is in line with what happens in Jordan, where Nusair et al. revealed that the rate of self-medication with antibiotics was high (20). Due to the lack of regulations to prescribe and dispense medicines, antibiotics are dispensed in community pharmacies either without prescription or according to the patient's request. Besides self-medication, participants' opinions were divided regarding sharing medicines with others. In the Indian study, it was found that the majority of people were practicing sharing medicines with individuals having similar symptoms (21), and this may compound the problem of drug-related illnesses (7).

Most participants used herbal medicine to treat their diseases despite half being convinced that herbs might cause harm or interact with other medications. For example, a study in Saudi Arabia reported using herbal medicines for therapeutic purposes among most participants (22).

All participants were fully aware of the expiry date of the medicines they purchased, and almost all of them declared that they usually checked the expiry date of any medicine before purchasing it. This aligns with a study conducted in Kabul, where the findings showed that participants tended to check the expiry date of the medicine before its purchase (6). However, the significance of the expiry date did not represent a major concern to half of the participants, who considered the medicine safe and effective for use a few months beyond the expiry date, especially for solid dosage forms. A review by Jafarzadeh et al. found similar findings confirming that expired medicines were used by households in low- and middle-income countries (22). At the same time, Paut Kusturica et al. had different findings, where the majority of the respondents believed that medications should not be used after the expiration date. However, a fifth of the respondents agreed that medications could be used six months after the expiration (23).

Most participants had a general knowledge that medicines might cause side effects upon use. This was in line with another study, where the majority of respondents acknowledged that medications were associated with side effects (24). Meanwhile, in another study, only around three-quarters of the respondents were aware that using painkillers was accompanied by side effects (25). When participants were asked about the side effects of their medications, they had no sufficient knowledge about these side effects. Similar findings were found in a New Zealand study, where almost half of the participants could not recall any side effects of the medicine they were taking (26).

Usually, when the participants experienced any side effects, they stopped taking medicines until doctors' advice. These results were concomitant with a Malaysian study, where nearly half of the participants stopped taking medication when they experienced unwanted side effects (17).

Obtaining enough information was a necessity for most participants, where they got their information about medicines from doctors and pharmacists, either in the governmental or private sector. The private pharmacy was one of the main sources of information. Some participants read the pamphlet to obtain the needed information; the use of the internet as a source of drug information was increasing among the participants. A study in Finland indicated that pharmacists and doctors were the most frequently used source to look for information about the medicine (27). However, the adequacy of information about

medicines was a concern for most participants, especially the information obtained from governmental doctors and pharmacists. This was also observed in Malaysia, where more than one-third of the participants stated they struggled to get information about their medications from governmental physicians. A similar situation was with governmental pharmacists, as almost half of the participants found it quite hard to receive any information about their medicine (28). Despite the problem of inadequacy of information provided by doctors and pharmacists in health facilities in many developing countries, it should be made clear that in Gaza, where the number of populations covered by one primary health care center (PHCC) is high compared with other Palestinian cities, doctors and pharmacists working in governmental health facilities are overwhemed by patients, and thus do not have enough time to provide them with the adequate needed medicines information.

In a low-income country, the pressing need for most participants is the availability of their needed medications in the public sector. Limitations on the entry of supplies and unavailability of the specified budget affect negatively the presence of these medications, which forces some of the participants to take difficult measures to obtain their medicines.

While most participants recognize the importance of taking medicines as directed, majority of them still use medicines inappropriately. Self-medication, use of herbs, sharing medicines and many other malpractices are still prevalent. Besides negative health outcomes, these malpractices lead to patient's lack of satisfaction. The effect of medicines is largely within the patient's control; thus, engagement of the population in education programs or awareness campaigns will enhance their knowledge about the importance of appropriate use of medicines and the negative implications of improper medicines use. On the other hand, increasing the consultation time between pharmacists and patients might contribute to appropriate medicines use.

Unfortunately, literature rarely identifies the medicines use patterns as well as practices and knowledge about medicines in Gaza, Palestine. Future researches to determine the knowledge about medicines, medicines use practice and medicines source of information are in dire need.

This study had some limitations that should be acknowledged. Firstly, the purposive sampling method used in this study could present selection bias, so the results might not represent the whole population. Secondly, lack of the information provided by survey participants, especially their monthly income. Lastly, the participants were from low and middle-income categories; thus, the obtained data might not be extrapolated to high-income people. The study was strengthened by having data from participants with various levels of education and a wide range of ages.

4. CONCLUSION

Our study highlights participants' varied and sometimes conflicting practices, as well as differing levels of knowledge and awareness of medication use. Some participants used medications inappropriately; self-medication, lack of adherence, and sharing medications with others were other commonly observed poor practices. Some participants did not properly understand the safety of medicines, while others suffered from inadequate information or the unavailability of medicines in the public sector. Policymakers in the Ministry of Health need to pay attention to the availability of medicines, assess the impact of actions taken, and develop appropriate and effective strategies to ensure appropriate use of medicines.

5. MATERIALS AND METHODS

5.1. Research Design

The current study adopted the methodology developed by Dawood et al. (11). This research employed a qualitative methodology by carrying out some focus-group discussions. It aligned with the COREQ Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups (29). The focus groups aimed to explore the perception about the use of medicines at the community level, to get more understanding of the problems of medicines use, the types of medicines use and to understand the situation and key elements affecting medicines use among the general public. The content of the focus groups, along with a semi-structured interview guide, that addressed the study objectives, was prepared in line with the literature reviews on the quality use of medicines and the WHO guidelines for investigation of medicines use by consumers (9, 30, 31). One social pharmacy expert, a public health expert, and a pharmacist revised the semi-structured interview guide. Then it was further tested and adjusted after conducting a pilot test with eight participants who were not included again in the targeted population. The researchers held three focus group discussions between May 2020 and June 2020. The

participants were asked according to the semi-structured interview guide. Moreover, the researchers motivated the participants to share their issues and exchange their ideas interactively based on their perspectives or life experiences (32). The group interaction technique assisted participants exploring and clarifying their individual and shared perspectives (29). Researchers developed the semi-structured interview guide using the English; then, it was translated into the Arabic by professional translators from the Ministry of Health. For backward translation, another independent professional translator carried out the translation activity from Arabic into English. Finally, the harmonization step was employed to confirm the inter-translation validity and avoid conceptual inconsistencies and discrepancies between all translated versions and the original sources (33).

5.2. Study Sample and Setting

The study was carried out in Al-Remal clinic hall, Ministry of Health, Gaza city. Participants were selected based on the purposive sampling method where patients or their relatives attending a primary health care clinic were asked to participate in the study. This method allows the researchers to use their judgment to recruit suitable participants willing to discuss and share their own life experiences of medication use (34). Informed consent was obtained from each participant prior to the interview. To arrange the interviews, consented participants were asked to share any convenient means of contact to be reached out to them in advance. The targeted participants were among the lay public who represented a wide range of attributes and showed the potential to share general, reliable, relevant, and rich information. Thus, they were recruited based on diverse levels of education, age groups, and living, and health status\to achieve broader views and perspectives during the study. The inclusion criteria were the following: subjects who were taking medicines or took them within the last three months, aged 18 and above, and able to read, write and listen. Participants with any form of cognitive impairment or any other mental health problems were excluded. Thirty-two people were initially invited to participate in the focus group discussion. However, some participants were occupied and unavailable at the time of the discussion, and others were hospitalized during the sessions. A total of six people lost the chance to turn up in the discussion.

A final set of 26 participants was divided into three groups, where each focus group comprised seven to ten people, so all members could discuss and share their ideas (35). A total of three focus groups discussions were conducted until we reached the saturation point, i.e., no new information was being generated. The time period for each group ranged from 60 to 90 minutes. It is paramount to point out that researchers did not have any form of personal or professional acquaintance with any participant in the focus groups. Therefore, when initiating focus groups discussion, it is important to build an open relationship and trust with the members to maintain the qualitative aspect of the study before and during the discussion (36). Hence, the researchers started by introducing their background and qualifications; then, they briefly described the study goals and routine activities. Additionally, the participants were kindly asked to sign a consent containing purpose of the study, study procedures, participants' criteria, and declaration about their voluntary participation before commencing the discussion. Moreover, the researchers informed the participants that the discussion and all conversations would be video-recorded, while field notes would be jotted down when necessary.

5.3. Data analysis

Firstly, videotapes were transcribed verbatim into the Arabic language by two research assistants, then the researcher revised and counterchecked the data. Thirdly, the transcripts were translated into the English by two professional translators and then back-translated to ensure the reliability of translations. Finally, two experts checked the quality of the data.

The researchers employed a manual thematic content analysis where they read the transcripts thoroughly many times to point potential themes or categories. Two researchers coded the data to obtain shorthand codes with content descriptions. Patterns and themes were identified from the created codes; two experts reviewed themes to ensure their accuracy and usefulness. The researchers carried out some rearrangements based on the priority of forming a new set of potential categories and subheadings. Another return to the data set was made to compare our themes against the data. To increase the validity of the research, the final results were shared with the participants to get their feedback and ascertain that the results expressed their own ideas and perceptions and were not biased by the researchers' agenda or perspective.

5.4. Ethical approval

Ethical approval was obtained from the "Human Research Ethics Committee, Universiti Sains Malaysia- (JEPeM-USM)" [USM/JEPeM/20020085], and Helsinki Committee for ethical approval, Palestinian Health Research Council, (PHRC/HC/6651/19).

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Author contributions: YA, SCO, and AM made substantial contributions to the conception and design of the study, as well as the analysis and interpretation of the data. AM made substantial contributions to the data collection. All authors drafted the work or revised it critically for important intellectual content. All authors reviewed, critiqued, and approved the final version submitted for publication
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