

Supplement S1. The study questionnaire:

QUESTIONNAIRE FOR THE STUDY

“MEDICATION USE CHALLENGES AMONG IMMIGRANTS ORIGINATING FROM SYRIA LIVING IN NORWAY - WITH FOCUS ON ANTIBIOTICS”

I can participate in the study if:

- I am 18-year-old or older
- I am originally from Syria or lived in Syria before arriving in Norway
- I have understood the aim of the study and I am willing to participate

Part 1: Some background information

1) **Are you:** Woman ☐ Man ☐ Do not wish to disclose ☐

2) **Year of birth** _____ (*example 1978*)

3) **Which country where you born in?** (*Put an X in only one box*)

Syria ☐ Palestine ☐ Other ☐ _____ (*for ex .Lebanon*)

4) **What language is your native tongue?** (*Put an X in only one box*)

Arabic ☐ Kurdish ☐ Armenian ☐ Other ☐ _____ (*for ex. Assyrian*)

5) **What is your ethnicity?**

Arab ☐ Kurd ☐ Armenian ☐ Other ☐ _____ (*for ex. Assyrian*)

6) **What is your marital status?** (*Put an X in only one box*)

Single ☐ Separated ☐ Married ☐ Divorced ☐ Widowed ☐

Other ☐ Please specify: _____

7) **Do you have children?** Yes ☐ No ☐

8) How many children do you have? 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 or more ☐

9) How many years of education have you completed altogether? _____ years
(example 5 years)

10)What was your occupational status in your country of origin? (Put an X in only one box)

Employed for wages ☐ Self-employed ☐ Out of work ☐ Homemaker ☐

In the military ☐ Retired ☐ Unable to work ☐ Job seeker ☐

Student ☐ Health care personnel, i.e., physician, nurse, or pharmacist ☐

Other ☐ Please specify: _____

11)What is your current occupational status in Norway? (Put an X in only one box))

Employed for wages ☐ Self-employed ☐ Out of work ☐ Homemaker ☐

In the military ☐ Retired ☐ Unable to work ☐ Job seeker ☐

Student ☐ Health care personnel, i.e., physician, nurse, or pharmacist ☐

Other ☐ Please specify: _____

12)When did you flee from your home country? Year: _____(example 2013)

13)When did you arrive to Norway? Month and year: _____
(example November 2013)

Part 2: Questions about your health habits

14) Your current weight is (in Kg): _____ (example 75)

15) Your height is (in cm): _____ (example 180)

16) Do you currently smoke? (Put an X in only one box)

No, I have never smoked ☐

No, I quit smoking ☐

Yes, cigarettes occasionally (parties/vacation, not daily) ☐

Yes, cigar/cigarillos/pipe/ shisha (water pipe) occasionally ☐

Yes, cigarettes daily ☐

Yes, cigar/cigarillos/pipe/ shisha (water pipe) daily ☐

Do not wish to disclose ☐

17) How often in the last 12 months did you drink alcohol? (Put an X in only one box)

Never drink alcohol ☐ Not at all the last year ☐ A few times a year ☐

About once a month ☐ 2-3 times a month ☐ About once a week ☐

2-3 times a week ☐ 4-7 times a week ☐ Do not wish to disclose ☐

18) At the moment, how often do you exercise? (On average. Put an X in only one box)

Never ☐ Less than once a week ☐ Once a week ☐

2-3 times a week ☐ Nearly every day ☐ Do not wish to disclose ☐

Part 3: Questions about health related information

19) How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy? *(Please, put an X on the box that best fits your situation)*

Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always ☐

20) How confident are you filling out medical forms by yourself? *(Please, put an X on the box that best fits your situation)*

Not at all ☐ A little bit ☐ Somewhat ☐ Quite a bit ☐ Extremely ☐

21) How often do you have problems learning about your medical condition because of difficulty understanding written information? *(Please, put an X on the box that best fits your situation)*

Never ☐ Occasionally ☐ Sometimes ☐ Often ☐ Always ☐

Part 4: Questions about your health and use of medicines back in your home country

22) When you were living your home country, how did you consider your health? *(You may think about the time just before departing for Norway)*

Very Poor ☐ Poor ☐ Neither ☐ Good ☐ Very Good ☐ I do not know ☐

23) In your home country, have you used, once or more, any of the following medication without the doctor prescription?

	YES	NO	I cannot remember
Drugs for peptic ulcer, gastro-esophageal reflux and digestion problems (e.g., pantoprazole)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medicine for high cholesterol (e.g. Atorvastatin , Simvastatin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medicine for high blood pressure (e.g. Metoprolol, Amlodipine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medicine for diabetes mellitus type I (e.g., insulin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medicine for diabetes mellitus type II (e.g., metformin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication for asthma or COPD (e.g., Ventoline , Seretide)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Painkillers, Analgesics (e.g. Paracet , Voltaren)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antibiotics, Antimicrobials (e.g., amoxicillin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tranquillizers or Sedatives (e.g., alprazolam, diazepam)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication for sleeping problems (e.g., zolpidem)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anti-depressive medication (e.g., escitalopram)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication for allergy (e.g. Cetirizine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24) In your home country, whom do you turn to for information about your medication (s)? *(You may put an X in more than one box)*

Family / friends	<input type="checkbox"/>	My doctor / Physician	<input type="checkbox"/>	Nurse	<input type="checkbox"/>	Pharmacy personnel /pharmacist	<input type="checkbox"/>	Drug formulary/ information leaflet	<input type="checkbox"/>
Herbal shop personnel	<input type="checkbox"/>	Magazines, media, etc.	<input type="checkbox"/>	Internet (generally)	<input type="checkbox"/>	Official online websites	<input type="checkbox"/>		
Other <input type="checkbox"/> Please specify: _____									

25) During the last 12 months in your home country, have you visited any of the following:
(Please, put an X on each line)

	Yes	No	Number of times
Periodic Health examination at your current living place	<input type="checkbox"/>	<input type="checkbox"/>	_____
General practitioner	<input type="checkbox"/>	<input type="checkbox"/>	_____
Another specialist outside the hospital	<input type="checkbox"/>	<input type="checkbox"/>	_____
Consultation w/ doctor without being hospitalized	<input type="checkbox"/>	<input type="checkbox"/>	_____
Emergency room services	<input type="checkbox"/>	<input type="checkbox"/>	_____
Have you been admitted to hospital in the last 12 months in home country?	<input type="checkbox"/>	<input type="checkbox"/>	_____

Part 5: Questions about your health and use of medicines nowadays in Norway

26) Now that you are in Norway, how do you consider your current health?

Very Poor	<input type="checkbox"/>	Poor	<input type="checkbox"/>	Neither	<input type="checkbox"/>	Good	<input type="checkbox"/>	Very Good	<input type="checkbox"/>	I do not know	<input type="checkbox"/>
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27) Have you in, the last 12 months, used any of the following prescription - only-medicines (POM)?

(Please put an X in the table below for each medication you have taken, along with information about frequency of use)

	Daily	Every week but not daily	Less often than every week	NO
Drugs for peptic ulcer, gastro-esophageal reflux and digestion problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medicine for high cholesterol (e.g. Atorvastatin , Simvastatin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medicine for high blood pressure (e.g. Metoprolol, Amlodipine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medicine for diabetes mellitts type I (e.g., insulin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medicine for diabetes mellitus type II (e.g., metformin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication for asthma or COPD (Ventoline , Seretide)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Painkillers, Analgesics (e.g. Paracet, Paralgin ,Voltaren)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antibiotics, Antimicrobials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tranquillizers or Sedatives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication for sleeping problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anti-depressive medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication for allergy (e.g. Cetirizine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other prescribed medication, but do not know for what	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28) Have you, in the last 12 months, used any of the following over the counter medicines (OTC)? *(Please put an X in the table below for each medication you have taken, along with information about frequency of use)*

	Daily	Every week but not daily	Less than every week	NO
Pain killers, (e.g. paracetamol, Ibux)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nasal spray/drops (excluding saltwater solution) (e.g. Otrivine, Vicks Sinex decongestant Nasal spray)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication against heartburn (e.g. Gaviscon or Rennie)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication against nausea/travel sickness (e.g. postafen)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication against constipation (e.g. Lactulose, Dulcolax)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medication for allergy (e.g. Cetirizine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common cold, cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others <i>(please specify)</i>	<input type="checkbox"/>			

29) In the last 12 months here in Norway, did you experience any infection with or without fever, for instance in the upper respiratory tract, urinary tract, or other parts of the body? Please indicate below whether you have had the condition, and if you took antibiotic for that.

Infection Type	Yes No		Name of the of antibiotic taken	Duration of treatment (days)	Prescribed	
	Yes	No			Yes	No
Acute bronchitis	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
Pneumonia	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
Urinary tract infection	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
Sore throat	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
Cough with fever	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
Common cold	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
Other infection(s)	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>

Part 6: Your attitudes and expectations about antibiotic treatment

30) Do you usually use antibiotics when you have the following diseases?	always	Often	Sometimes	rarely	Never
Common cold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acute bronchitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pneumonia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31) Do you usually use antibiotics when you have these symptoms of the respiratory tract as follows?					
Coughing up yellow/green phlegm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sore throat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cough with fever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obstructed nose with headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cough lasting more than 2 weeks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Please specify</i>	More than 37°C	More than 37.5°C	More than 38°C	More than 38.5°C	No Antibiotic
32) Having a fever, you may use antibiotics when your body temperature reaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Your attitudes towards antibiotics

33) Please specify to which extent do you agree or disagree	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
I only wish to use antibiotics if it is necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The doctor should not give me antibiotics when he/she thinks I do not need it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wish to use antibiotics if I get well sooner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The doctor should give me antibiotics when I think I need it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34) Will you ask the doctor to prescribe for you antibiotics when you catch a common cold?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	

35) During the last 12 months here in Norway, have you visited any of the following: (*Please, put an X on each line*)

	Yes	No	Number of times
Health assessment at arrival to your current living place	<input type="checkbox"/>	<input type="checkbox"/>	_____
General practitioner	<input type="checkbox"/>	<input type="checkbox"/>	_____
Another specialist (outside or inside the hospital)	<input type="checkbox"/>	<input type="checkbox"/>	_____
Consultation w/ doctor without being hospitalized	<input type="checkbox"/>	<input type="checkbox"/>	_____
Emergency room services	<input type="checkbox"/>	<input type="checkbox"/>	_____
Have you been admitted to hospital in the last 12 months?	<input type="checkbox"/>	<input type="checkbox"/>	_____

36) Here in Norway, whom do you turn to for information about your medication (s)?

Family / friends	<input type="checkbox"/>	My doctor / Physician	<input type="checkbox"/>	Nurse	<input type="checkbox"/>	Pharmacy personnel / pharmacist	<input type="checkbox"/>	Drug formulary/ information leaflet	<input type="checkbox"/>
Herbal shop personnel	<input type="checkbox"/>	Magazines, media, etc.	<input type="checkbox"/>	Internet (generally)	<input type="checkbox"/>	Official online websites (e.g. felleskatalog)	<input type="checkbox"/>		
Other (<i>Please specify</i>)									

Supplementary Figures

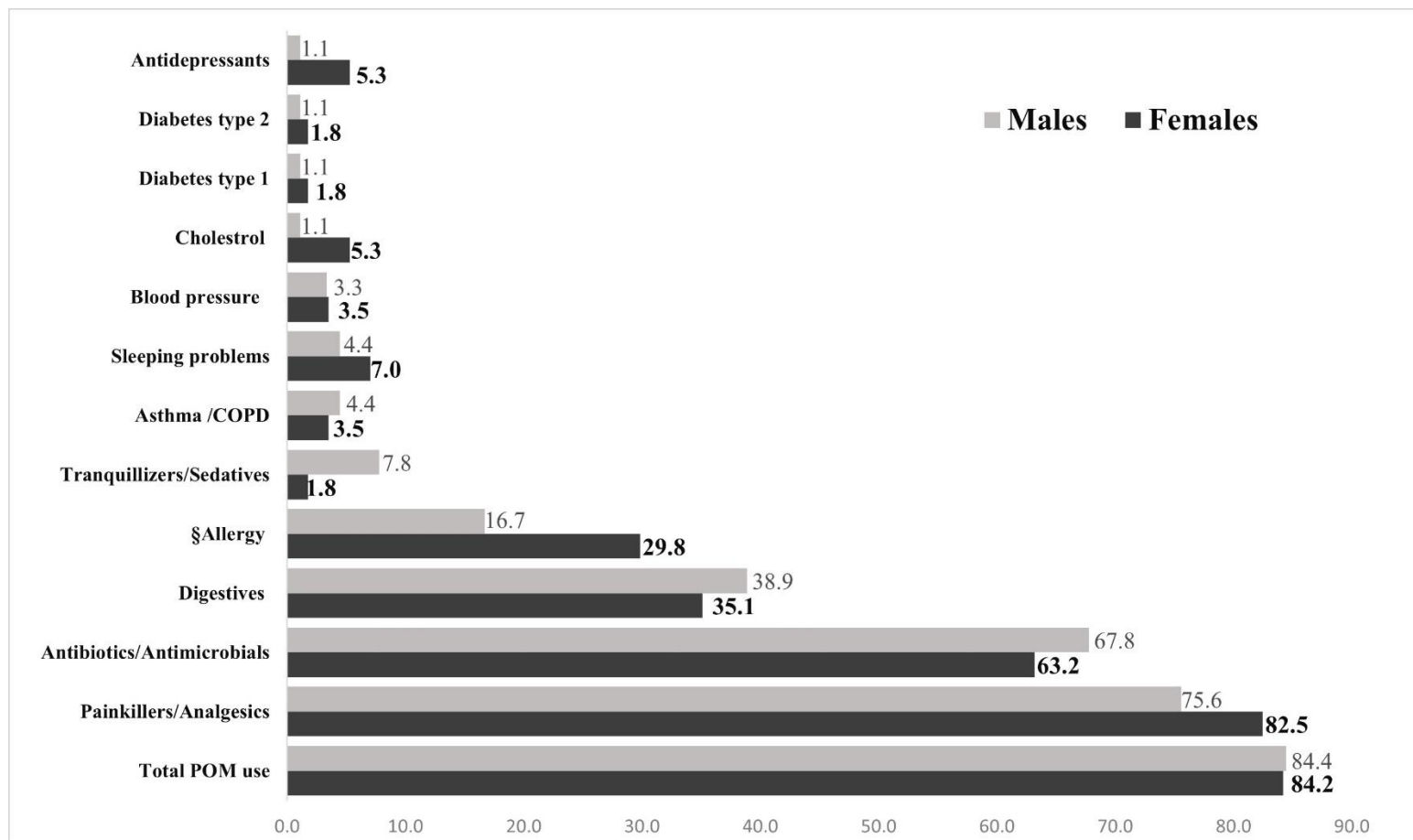


Figure S1. Proportion of past medication use without medical prescriptions in Syria, by sex.

Abbreviations: COPD=Chronic obstructive pulmonary disease. *p-value = < 0.001; §0.05 > p-value ≥ 0.001; p-values derived from the Fisher exact or Chi-square test.

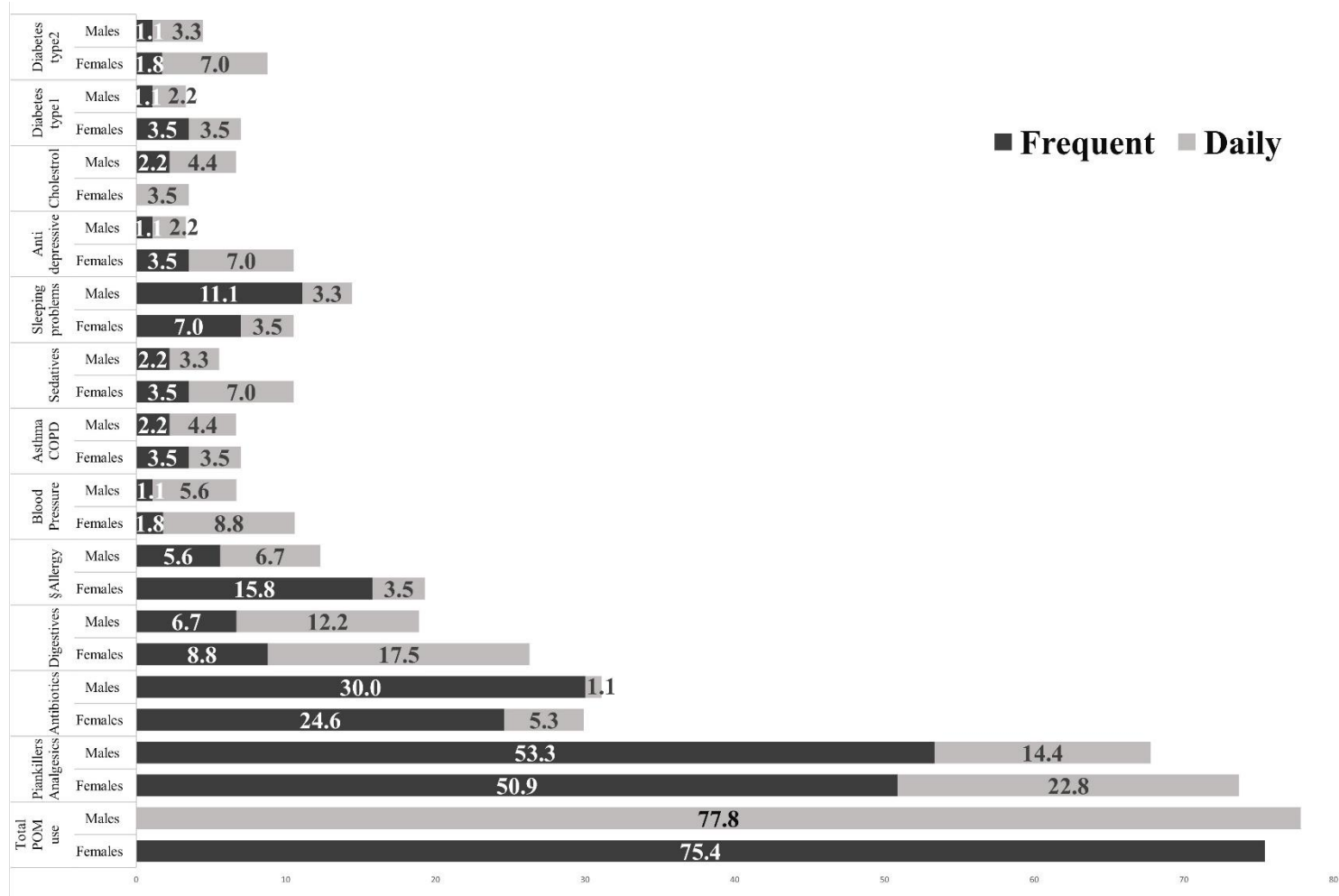


Figure S2. Proportion of recent prescription-only medication use in Norway, by sex and frequency of use.

Abbreviations: COPD= Chronic obstructive pulmonary disease.

*p-value = < 0.001; §0.05 > p-value ≥ 0.001; p-values derived from the Fisher exact or Chi-square test.

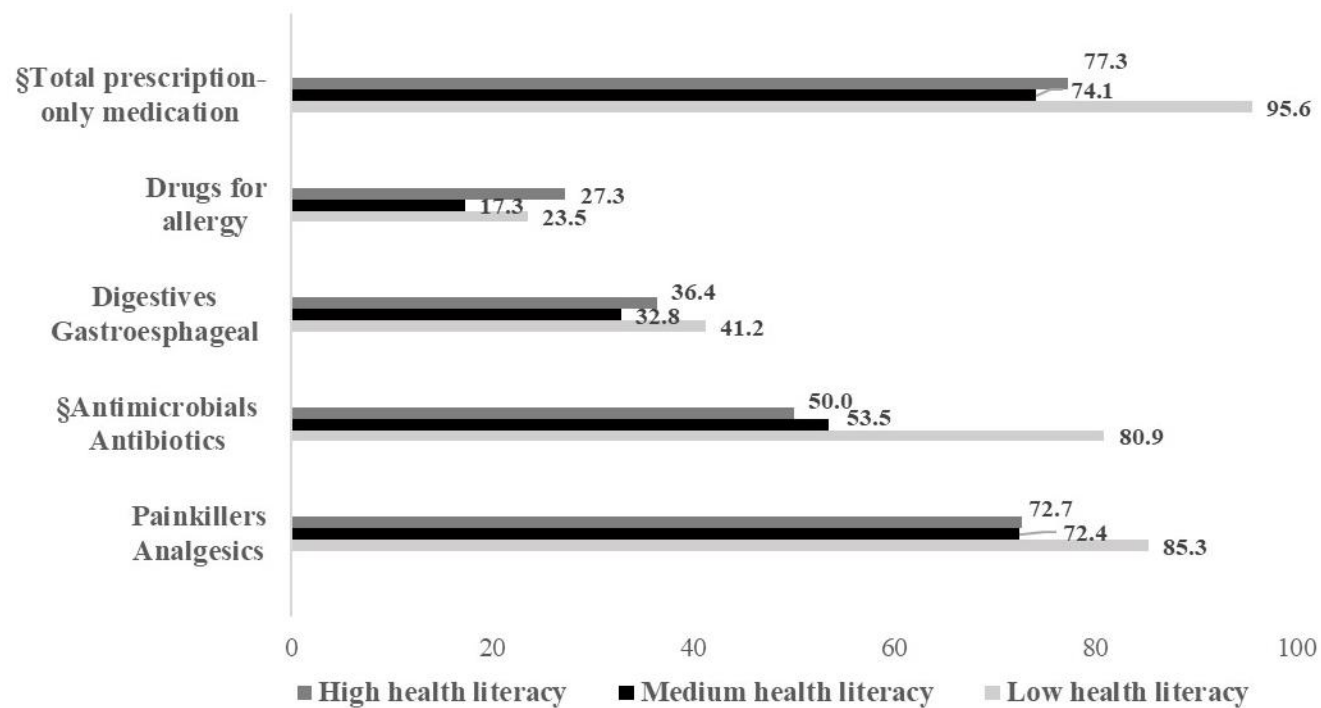


Figure S3. Proportion of past medication use without medical prescriptions in Syria, by level of health literacy (low, medium, high).

*p-value = < 0.05 derived from the Fisher exact or Chi-square test comparing proportions between moderate versus high health literacy; §p-value < 0.05 from the Fisher exact or Chi-square test comparing proportions between low versus high health literacy.

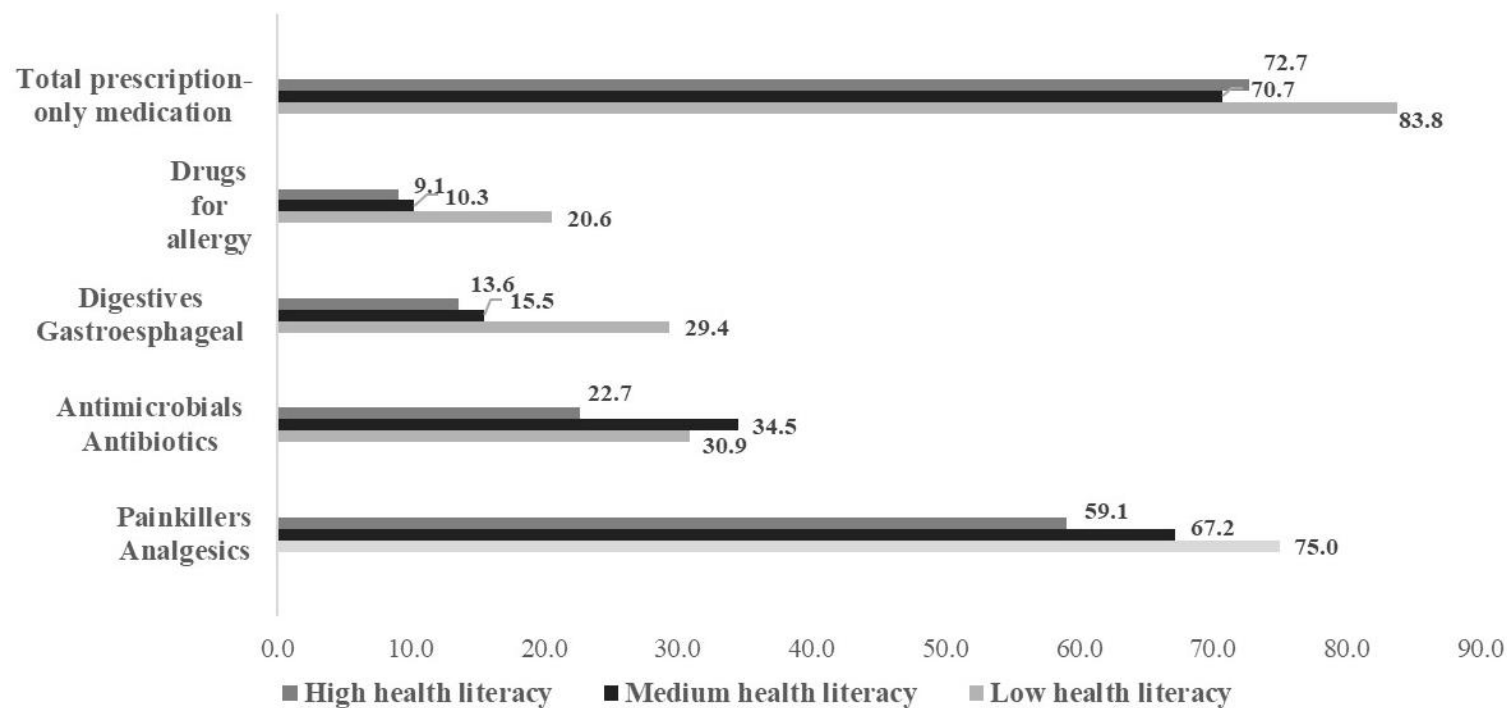


Figure S4. Proportion of recent prescription-only medication use in Norway, by level of health literacy (low, medium, high).

*p-value = < 0.05 derived from the Fisher exact or Chi-square test comparing proportions between moderate versus high health literacy; §p-value < 0.05 from the Fisher exact or Chi-square test comparing proportions between low versus high health literacy. There was no difference in proportions between health literacy level and recent prescription-only medication use in Norway.

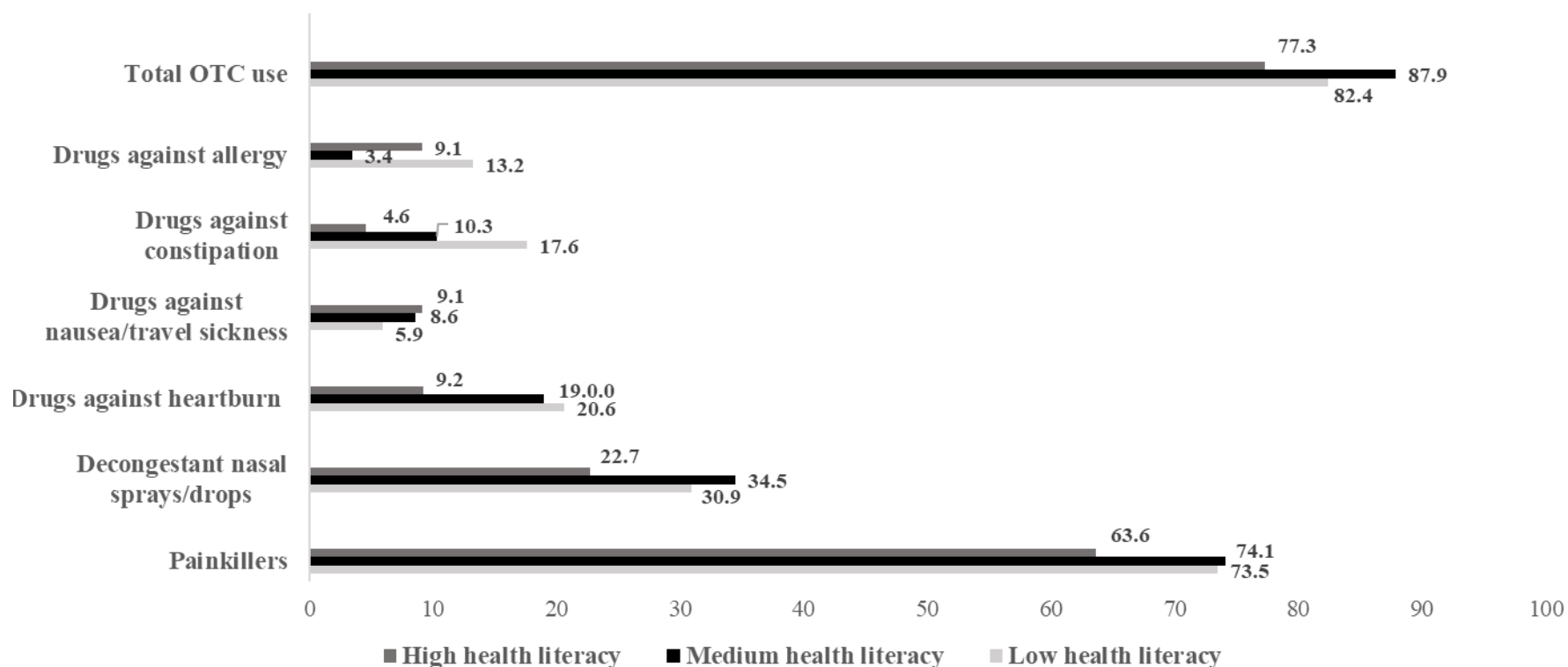


Figure S5. Proportion of recent OTC medication use in Norway, by level of health literacy (low, medium, high).

Abbreviations: OTC=Over-the-counter.

*p-value = < 0.05 derived from the Fisher exact or Chi-square test comparing proportions between moderate versus high health literacy; §p-value < 0.05 from the Fisher exact or Chi-square test comparing proportions between low versus high health literacy. There was no difference in proportions between health literacy level and recent OTC medication use in Norway.

Supplementary table

Table S1: Proportion of recent OTC medication use in Norway, by sex.

OTC drug group	Males		Females	
	Frequent use %	Daily use %	Frequent use %	Daily use %
Drugs against allergy	5.6	4.4	5.3	1.8
Drugs against constipation	8.9	0	12.3	7.0
Drugs against nausea	3.3	0	10.5	3.5
Drugs against heartburn	10.0	5.6	15.8	7.0
Decongestant nasal sprays/drops	30.0	1.1	24.6	5.3
Painkillers	28.9	2.2	29.8	1.8
	Any frequency		Any frequency	
Any OTC drug	81.8		87.7	

Abbreviations: OTC=Over-the-counter.

*p-value = < 0.001; §0.05 > p-value ≥ 0.001; p-values derived from the Fisher exact or Chi-square test. There was no difference in proportions between sex and frequency of OTC drug use.