

Public Knowledge and Attitudes on HIV/AIDS in the U=U Era: Insights from a Nordic Survey Study

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Conclusions

- Public knowledge about HIV and U=U remains limited in the Nordic countries, with some noticeable differences between countries.
- Misconceptions about HIV transmission, the effects of ART, and negative attitudes toward people with HIV are common, underscoring the need for increased public education on HIV to reduce HIV-related stigma.

Background

Robust scientific evidence confirms that individuals living with HIV who are on antiretroviral therapy (ART) and maintain an undetectable viral load cannot transmit the virus through sexual contact. This concept, known as Undetectable = Untransmittable (U=U), is widely recognized as a critical message for combating HIV-related stigma and improving the social, sexual, and reproductive well-being of those living with HIV. Despite its significance, awareness of the U=U message remains low across various populations.

Objective

To assess public awareness of U=U, knowledge of HIV transmission, and attitudes toward people with HIV in the Nordic countries.

Methods

- A validated online quantitative survey study assessing the level of information on HIV/AIDS, knowledge about HIV, and attitudes toward people with HIV was conducted in Denmark (DK), Finland (FI), Norway (NO), and Sweden (SW), in May 2024.
- Participants aged 18 and older were recruited through a panel institute, using random selection based on representative quota sampling. This approach ensured balanced representation across demographic variables such as age, gender, educational level, and geographic location within each country.

Results

- A total of 4000 participants (n=1000 from each country) completed the survey (Table 1, demographic data).

Table 1. Demographics data

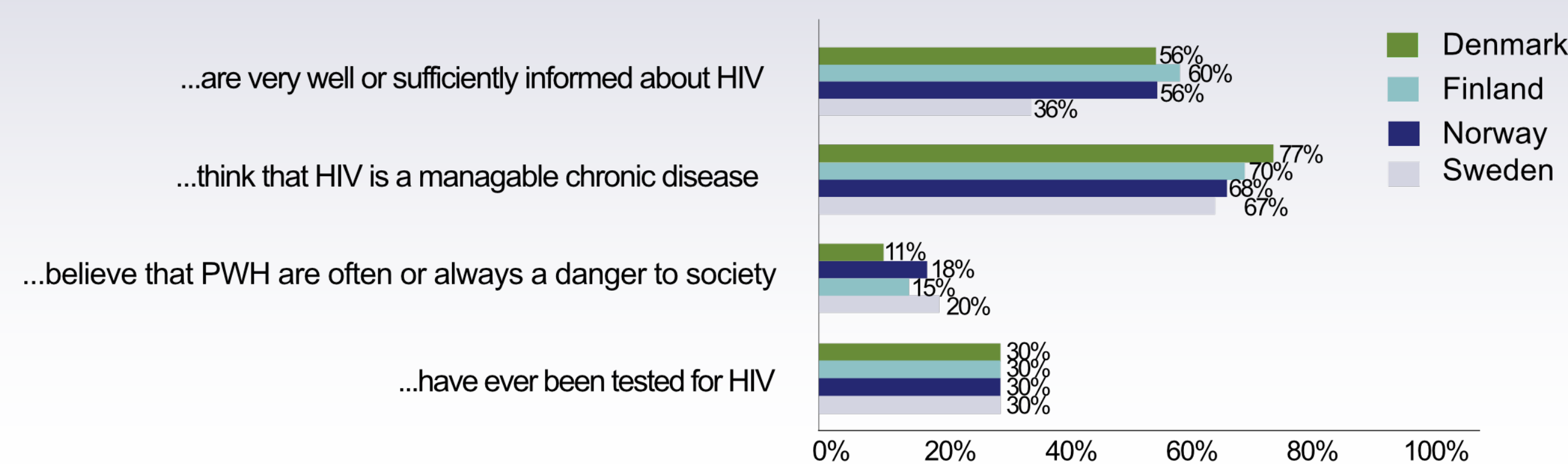
		Denmark	Finland	Norway	Sweden
Participants	number (n)	1000	1000	1000	1000
	Gender				
Gender	male (%)	49	49	50	49
	female (%)	51	50	50	51
	diverse (%)	0	1	0	0
Age Group	< 30 years (%)	17	17	16	17
	30 - 39 years (%)	16	17	18	18
	40 - 49 years (%)	16	15	17	16
	50 - 59 years (%)	18	16	18	17
	60 - 69 years (%)	15	17	14	15
	≥ 70 years (%)	18	18	17	17
Living area	city (%)	81	66	50	60
	close to a city (%)	16	25	36	27
	far away from a city (%)	4	9	14	13
	Educational level*				
Educational level*	basic level (%)	6	11	10	9
	intermediate level (%)	44	51	30	39
	higher level (%)	50	38	60	52

*Basic level: Primary education. Intermediate level: Vocational secondary school; theoretical secondary school. Higher level: Post-secondary studies; college/university education up to 3 years; college/university education >3 years; research training/PhD.

- Overall, 51% of participants reported being informed about HIV and 71% of participants agreed that HIV is a manageable chronic disease. In contrast, 16% believed that people with HIV are a danger to society. Less than a third (30%) of participants remembered having ever been tested for HIV. Country-specific data are shown in Fig 1.

Figure 1. Public awareness and attitudes towards HIV and individuals living with the condition

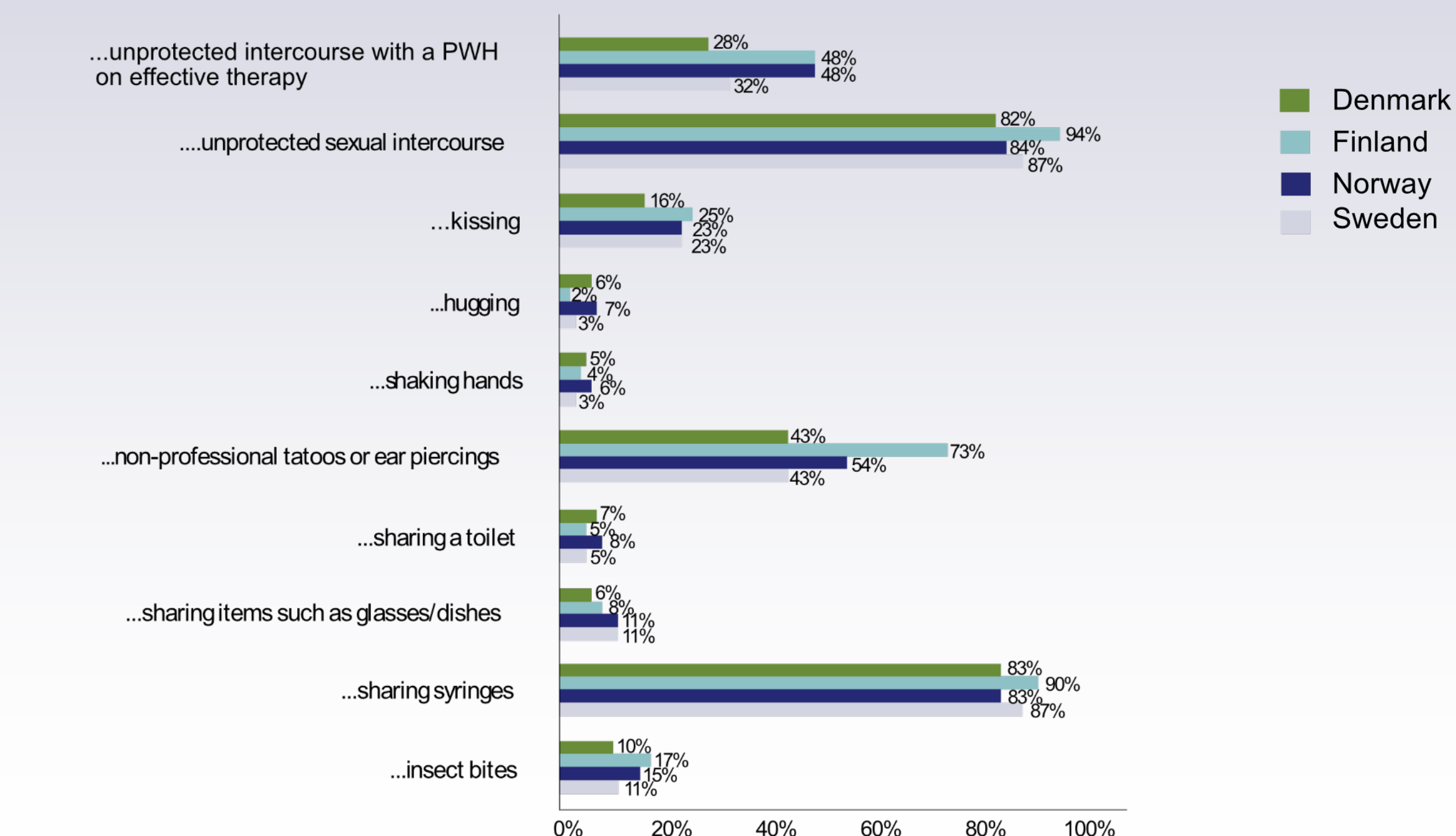
Proportion of participants who stated that they...



- Participants were asked whether they agree, disagree or do not know about specific statements on how HIV is transmitted. Overall, 39% believed that HIV can be transmitted through intercourse with a person with HIV on effective ART, while 22% believed that HIV can be transmitted via kissing, and 9% by sharing items such as plates or glasses. More detailed country-specific data are shown in Fig 2.

Figure 2. Public knowledge about HIV transmission routes

Proportion of participants who believe that HIV can be transmitted through...



Results

- Of all participants, 28% agreed with the U=U message, with responses by country shown in Fig 3a
- Understanding of U=U was greater among females, younger age groups, and participants with a higher education (p < 0.01) (Fig 3b).

Figure 3a. Understanding of U=U

Do you agree with the statement that people with HIV who take HIV therapy and achieve and maintain an undetectable viral load cannot sexually transmit the virus to others?

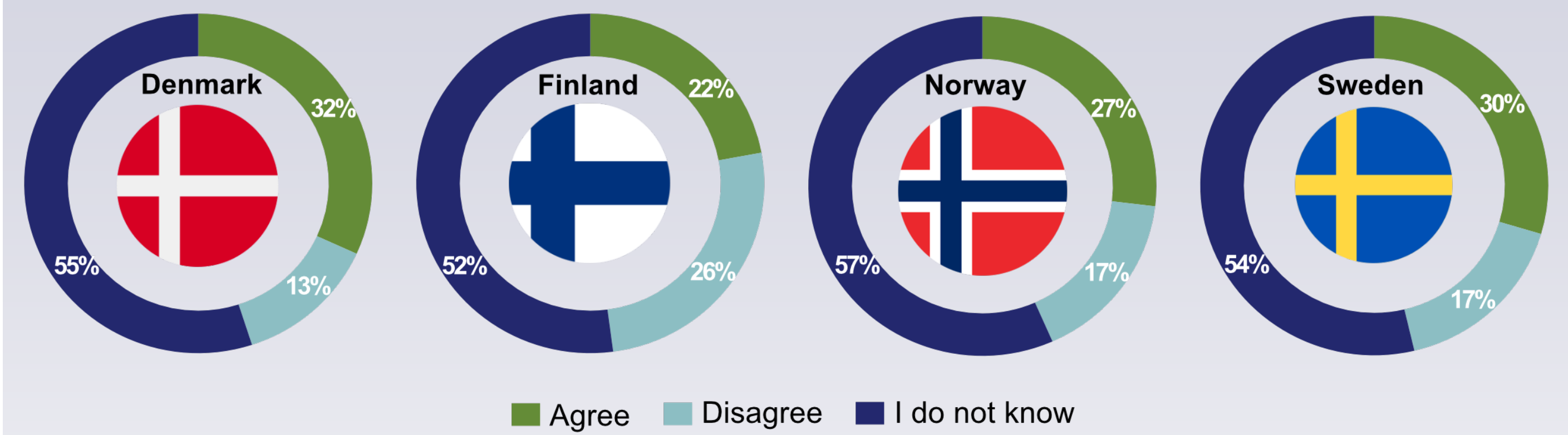
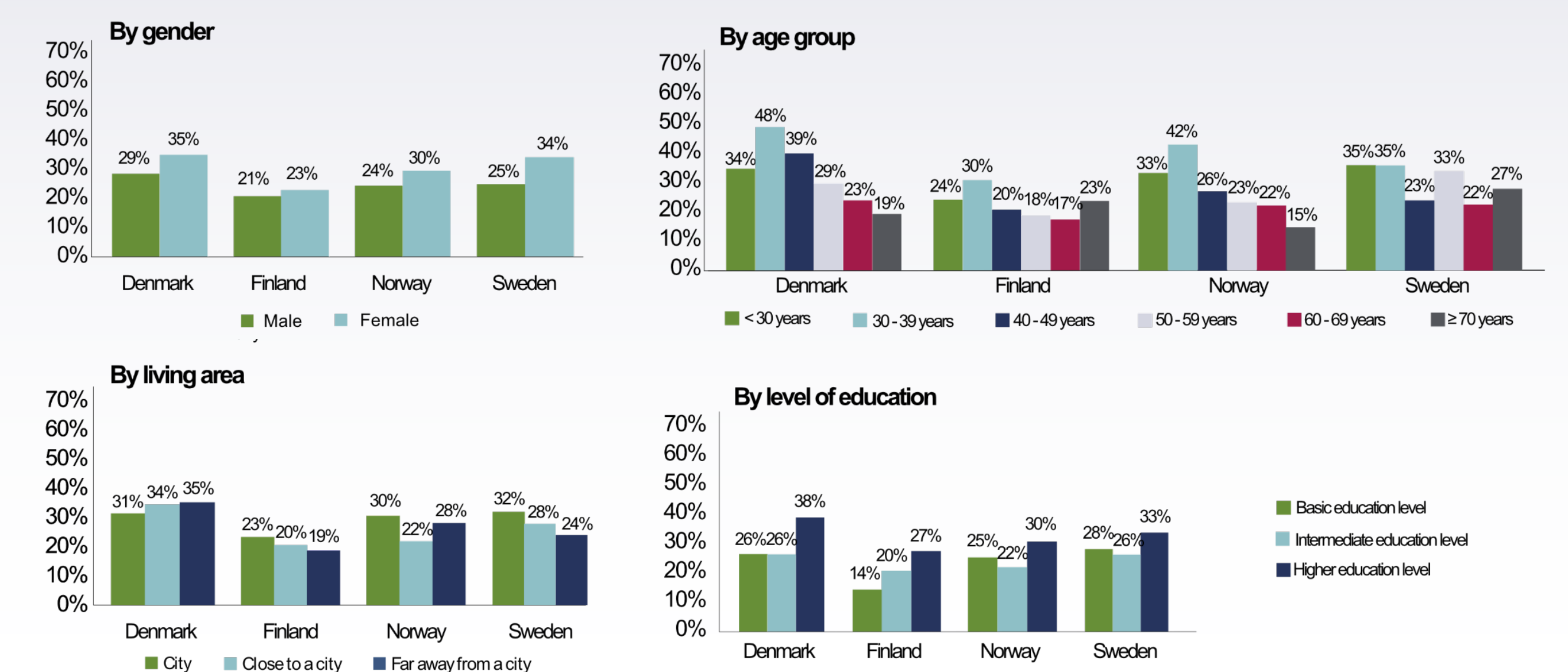


Figure 3b. Percentage of participants agreeing with the U=U statement by subgroup



- Overall, 41% agreed that women with HIV on effective ART can deliver healthy children without HIV, with responses by country in Fig 4a.
- Participants with higher education, females, and younger age-groups were more likely to agree with the vertical transmission statement (p < 0.01) (Fig 4b).

Figure 4a. Understanding of vertical HIV transmission

Do you agree with the statement that women with HIV who take HIV therapy and achieve and maintain an undetectable viral load can give birth to healthy children without HIV?

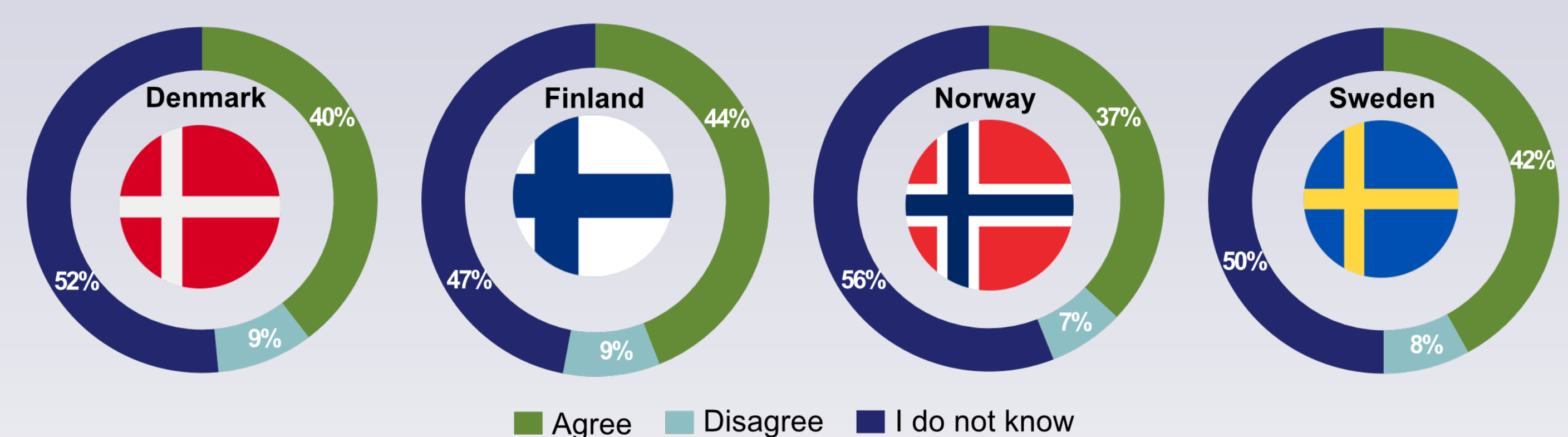
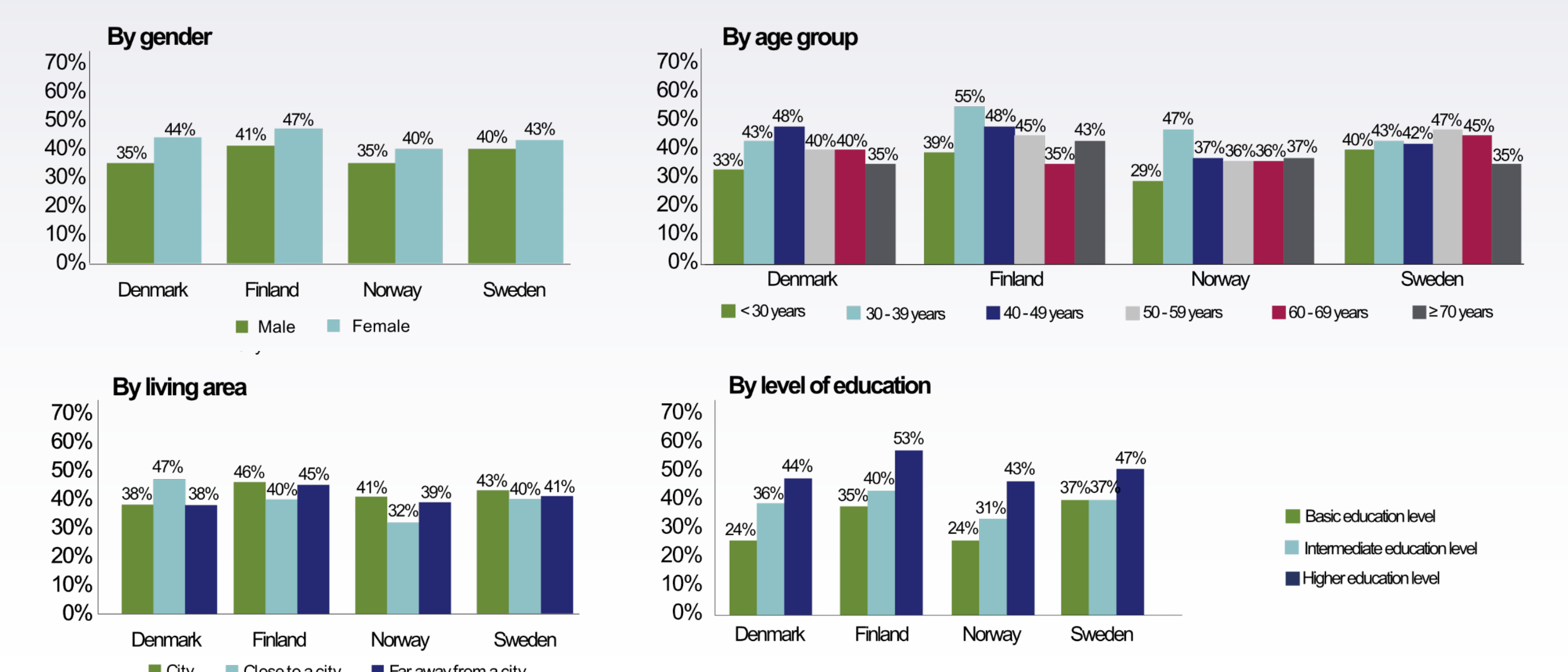


Figure 4b. Percentage of participants agreeing with the vertical transmission statement by subgroup



- Overall, 56% of the participants would mind starting or would not start a relationship, 54% would mind marrying or would not marry, and 67% would mind or would not have a sexual relationship with a person with HIV, with country-specific data shown in Fig 5a.
- Approximately 20% would mind renting or would not rent a house/apartment to an individual living with HIV, while 14% would mind giving or would not give a job to an individual living with HIV (Fig 5a).
- Approximately 30% thought that the HIV should be shared with others e.g. workplace, while 60% thought that the HIV status should be shared with friends and family. Finally, according to 78% of participants a person with HIV who receives an effective HIV-treatment (the virus is no longer detectable in the blood) should share their HIV status with the ones they have sexual interaction with. Data by country are shown in Fig 5b.

Figure 5. Attitude/stigma related questions

5a. Proportion of participants that would mind or definitely would not...

