



თავისუფლება



TEMIDA

**POPULATION  
SIZE  
ESTIMATION  
OF TRANSGENDER  
AND NON-BINARY  
PEOPLE  
IN GEORGIA**

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This publication presents the results of the first empirical population size estimation of trans- and non-binary people conducted in Georgia. The results of this study should be used for planning national programs aimed at HIV prevention among trans and non-binary people, as well as for improving services for trans and non-binary people in Georgia.

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### ORGANIZATIONS AND OTHER INSTITUTIONS:

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♥ **Women's Initiatives Supporting Group**

♥ **Tanadgoma — Informational Medical and Psychological Center**

♥ **Infectious Diseases, AIDS & Clinical Immunology Research Center**

♥ **Georgian Harm Reduction Network**

♥ **National Center for Disease Control and Public Health**

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## ABBREVIATIONS

<b>CI</b>	Confidence interval
<b>ECOM</b>	Eurasian Coalition on Health, Rights, Gender and Sexual Diversity
<b>EECA</b>	Eastern Europe and Central Asia
<b>He / she / they</b>	A personal pronoun used in English texts on transgender issues to demonstrate gender neutrality; only one pronoun is used in the Georgian language
<b>HIV</b>	Human immunodeficiency virus
<b>MSM</b>	Men who have sex with men
<b>NCDC</b>	National Centre for Disease Control
<b>NGO</b>	Non-governmental organization
<b>PSE</b>	Population size estimation
<b>UNAIDS</b>	The Joint United Nations Programme on HIV/AIDS

## EXECUTIVE SUMMARY

This publication presents the results of the first empirical population size estimation of trans- and non-binary people conducted in Georgia using several variations of the multiplier method, as well as the capture-recapture method in individual social networks (Telefunken). The study was carried out by the QUEER Association – TEMIDA in partnership with ECOM – Eurasian Coalition on Health, Rights, Sexual and Gender Diversity as part of the regional project «Trans\*Map in EECA». The consensus value of the estimates obtained is 0.06 [0.05–0.07]% of the country's population, or 720 [600–840] trans and non-binary persons in Tbilisi, 100 [90–110] in Batumi, and 80 [70–90] in Kutaisi. The results of this study should be used for planning national programs aimed at HIV prevention among trans and non-binary people, as well as for improving services for trans and non-binary people in Georgia.

## BACKGROUND

Despite evidence of the importance and overall impact of prioritizing key populations in implementing effective and efficient HIV responses, many countries have limited current data or no data on key population size estimations (PSE). Where data are available, they are often not used in key documents and policy decisions. However, with rapidly evolving methods, given persistent stigma and changing laws and policies related to the criminalization of key populations including laws focused on same-sex practices and gender identity, the need for current and local level estimates is crucial [1].

There is limited information about how transgender, nonbinary, and other gender diverse (trans) people have been studied and represented by researchers [2]. An assessment of strategic information in seven countries of the EECA region (Armenia, Belarus, Georgia, Kyrgyzstan, North Macedonia, Tajikistan and Estonia) showed that the largest gap relates to information on transgender people [3]. In 2018, Armenia conducted the first bio-behavioral study of trans people in the region and estimated the number of trans women [4]. In 2019-2020, Ukraine carried out a pilot bio-behavioral study and population size estimation of trans women and trans men [5], [6]. According to UNAIDS<sup>1</sup>, Azerbaijan also conducted an estimation of the number of trans people in 2021. There is no information available in other countries on transgenders PSE. The last PSE of Georgian MSM was implemented in 2018 [7].

In Kyrgyzstan and Tajikistan, trans people are recognized as one of the groups vulnerable to HIV in the national documents that define the activities of the national HIV response [8]. There are no such documents in Georgia; there is also no protocol for the provision of medical care during transgender transition (including sex reassignment surgery).

In Kyrgyzstan, Tajikistan, Georgia, and Belarus, bio-behavioral studies of MSM are carried out regularly conducted, but so far, the questionnaire used has not included any blocks of questions directly related to the problem of the transgender population.

In Georgia, the issue of legal recognition of the transgender transition is not legally regulated. Therefore, there is no mandatory requirement to amend identity documents as part of this process. Legislation provides for the possibility of name change, which is a simple procedure and can be considered as an important component of legal gender recognition. After changing the name in a person's identity document, the relevant data can be amended in their birth certificate, as well as in diplomas, driver's licenses and in any other documents (Agency for the Development of Public Services under the Ministry of Justice).

According to established practice in Georgia, in order to change the gender marker in identity documents, the Agency for the Development of Public Services of the country requires a certificate confirming the operation of surgical sex reassignment surgery. In this case, the change is first made in the person's birth certificate, and on the basis of this, amendments can be made to identity cards and, theoretically, to all other documents containing this information. However, there is no clear regulation of this issue.

<sup>1</sup> <https://kpatlas.unaids.org/dashboard>

According to further established practice in the country, before undergoing medical procedures related to transgender transition (for example, hormone therapy, sex reassignment surgery, including mammoplasty and mastectomy, see [9] for a detailed list of such procedures), some medical institutions require a certificate issued by a psychiatrist or sexologist, although there are no protocols that would regulate these issues in Georgia, and endocrinologists are mainly guided by US and EU guidelines.

In several countries in the Eastern Europe and Central Asia (EECA) region (Armenia, Kyrgyzstan, Russia, Tajikistan, and Ukraine), non-governmental organizations, both ones established by trans people themselves and by wider civil society, provide trans people with health and HIV-related services. In Georgia, trans-specific services are provided by the following non-governmental organizations: QUEER Association — TEMIDA, Women's Initiatives Supporting Group (WISG), Equality Movement, Tanadgoma — Informational Medical and Psychological Center, and Identoba Youth [8]. Some of these NGOs have internal databases that contain information on the number of transgender people who received services. In addition, Equality Movement, Tanadgoma and the National Centre for Disease Control (NCDC) have an information on the number of trans women, who use HIV-services.

According to the Georgian trans community, the following medical institutions provide trans-specific services: Rustavi Mental Health Center, Medical Ecosystem Pineo, League Clinic, Psychological and Sexological Clinic, National Institute of Endocrinology, Kuzanov Clinic, Caraps Medline, Total Charm, Women's Initiatives Supporting Group, Queer Association — TEMIDA, etc.

However, clinics generally do not maintain internal statistics on the number of clients who have received trans-specific services.

Thus, a preliminary overview of the situation shows that although the population size estimate of transgender people in Georgia is currently unknown, there are several potential data sources in the country that could be used during this study.



## PURPOSE OF THE STUDY

Estimate the number of transgender people (men, women and non-binary people) in Georgia.

An additional goal is educational: the maximum involvement of the transgender community of Georgia, as well as relevant stakeholders, in all stages of the assessment will allow the country to subsequently independently carry out such research, for example, as part of regular bio-behavioral research.

The study was carried out by the QUEER Association — TEMIDA in partnership with the Eurasian Coalition on Health, Rights, Gender and Sexual Diversity (ECOM) as part of the EECA regional project «Trans\*Map in EECA».

This cross-sectional pilot study to estimate the number of transgender people in Georgia is based on a quantitative methodology. Within this framework, as much data as possible was collected from independent sources was collected on the number of trans people who have used a particular service of state, non-governmental or for-profit organizations. Following this, a survey of transgender people in Georgia was conducted. An estimate (both point and interval) of the population size was made by comparing the data sets obtained.

## METHODS USED FOR POPULATION SIZE ESTIMATION

There are many approaches to estimating the size of hidden social groups [10]. Different survey and population size estimation methods can result in different size estimates for the same population in the same location because of a range of their limitations and different given key population definitions used [11]. The methodology for conducting such assessments is contained in manuals prepared by WHO, UNADS and other agencies (see e.g. [12]), however, the applicability of certain methods in a specific country is determined taking into account local conditions. The methods used and the data sources are listed in Table 1. The methods are described below.

**Table 1. Data sources for each of the methods used.**

DATA SOURCES	METHOD
Statistical data on the population of Georgia by age and place of residence	Extrapolation
Data from NGOs working with trans people on the number of unique clients during a specified period	Multiplier
Data from medical institutions on the number of transgender patients who applied to them during a specified period	Multiplier
Monitoring data of transgender users of the Grindr and Hornet mobile applications collected by TEMIDA	Multiplier
NCDC data on the number of unique transgender clients who received HIV services (including PrEP) during a specified time period	Multiplier
Data from the Agency for the Development of Public Services on the number of people who applied to change the gender marker in documents, or the number of times the gender marker was changed in documents during a specified period	Multiplier
Data from the survey of trans people	Telefunken

**Multiplier method** — This method is used if there is quantitative information from at least two independent sources, it is known that the measured groups intersect, and if it is possible to estimate the volume of this intersection. For example, the first source is a list from a body that contacts representatives of the target group (statistical reporting, operational information, and client database), and the second source is information received directly from representatives of the target group about their contact with this body (an affirmative answer to the relevant question during the survey) [12].

Formula 1 shows how the point estimates were calculated.

$$PSE = \frac{N}{R} \cdot I \quad (1)$$

where: *N* is the sample size of the survey of trans people, *R* is the number of respondents who reported using a service, *I* is the data from the service provider on the number of trans and non-binary clients

The accuracy of the estimate depends on the validity of the statistics, the adequacy of the sampling, and the reliability of the survey data. The multiplier method can be applied to any comparable data source related to the same population.

**Extrapolation of international data** — This entails a review and analysis of international statistics on the number of trans people in other countries, and extrapolation of such statistics to big Georgian cities.

**Telefunken method** — This is a variation of the capture re-capture method. This method was proposed in 2012 [13]. As part of this method, study participants are asked to provide information about themselves and their acquaintances (height, weight, hair color) and a «Telefunken code» (whereby the last 4 digits of their mobile phone numbers are encoded) (Table 2).

**Table 2. The principle of creating a unique anonymous participant code.**

CHARACTERISTIC	VALUE	CODE ELEMENT
The last four digits of the phone number	0, 1, 2, 3, 4	L
	5, 6, 7, 8, 9	B
The last four digits of the phone number	0, 2, 4, 6, 8	E
	1, 3, 5, 7, 9	O
Height	166–175 cm	166175
	176–185 cm	176185
	186–195 cm	186195
	below 165 cm	000165
	over 196 cm	196000
Weight	101–120 kg	101120
	61–80 kg	061080
	81–100 kg	081100
	below 60 kg	000060
Hair color	dark	D
	red	R
	light	L
	white	W
	no hair	N

At the end of the survey, the interviewer asked each of the participants the questions required to generate a unique "Telefunken code". Following this, the interviewer asked the participants to randomly select in their phone 5 trans and non-binary people aged 18 years or older and living in the area where the study was being conducted. If a participant had less than 5 contacts in their phone who met such criteria, then they were asked to name all available contacts. The participant generated unique codes according to the scheme presented above for each of these acquaintances. If the participant did not have a telephone, did not know the phone numbers of their acquaintances, or refused to provide the relevant data, the interviewer recorded this in the questionnaire. The rate of refusals and lack of phone numbers was taken into account during the final calculations.

Compared to other methods, this has the advantage that there is no need for additional resources (the information needed to generate codes is obtained directly during the survey), and the participants remain anonymous. To enhance the efficiency of coding, all interviewers underwent special training. Cards with examples were also provided to participants in order to minimize subjectivity in describing the characteristics of their acquaintances.

The calculation of the population size of trans people using dual coverage based on the assessment of social networks was carried out using the Lincoln-Petersen formula (2):

$$PSE = \frac{N}{R} \cdot S \quad (2)$$

*where: PSE is the estimated population size, N is the number of trans and non-binary people covered by the study, S is the number of valid «Telefunken» codes provided by respondents during the study, R is the number of respondents with a «Telefunken» code, indicated by other respondents, excluding random coincidences.*

The number of random coincidences was determined using linear distributions of each of the categories of variables (see the «Results» section).

$$\text{Var}(PSE) = \frac{N \cdot S \cdot (N - R) \cdot (S - R)}{R^3} \quad (3)$$

$$95\% \text{ CI: } PSE \pm 1.96 \cdot \sqrt{\text{Var}(PSE)} \quad (4)$$

The sample of the survey of trans people comprised 100 people.

A convenience sample was formed, as the study is a pilot and there is still no information on the structure and size of the trans community in Georgia.

Criteria for inclusion in the survey sample were age (over 18 years old), self-identification as a trans person (male, female, or non-binary person), absence of signs of alcohol or drug intoxication, and informed consent to participate in the survey.

The survey was conducted using an assisted, self-administered, online questionnaire (Annex 1). A social worker from TEMIDA invited the respondent to fill out the questionnaire at the organization's office, and helped the respondent complete the «Telefunken» section of the questionnaire. If a respondent had a desire to complete the questionnaire outside the office of TEMIDA (e.g., for security reasons), the social worker accommodated such requests, and a corresponding note was made in the questionnaire.

The study used a face-to-face interview format that can be conducted both physically and remotely using a variety of electronic platforms. By using a pre-prepared questionnaire previously developed on an electronic platform, the interviewer is able to consistently conduct the interview in the same manner by following the relevant instructions. Face-to-face interviews were used for the following reasons:

- 1 The order of completing the questionnaire during the interview process was strictly observed, and the participation of the target group relevant to the research could be ensured.
- 2 Some respondents from the research target group had only a basic level of education, which made it difficult for them to complete the questionnaire consistently and accurately without the help of an interviewer.
- 3 This format made it was possible to clarify any questions respondents had during the interview, thus, face-to-face interviews helped to prevent the problem of missing data during the survey.

The QUEER Association — TEMIDA used the snowball method to recruit potential respondents. At the very beginning of the study, TEMIDA recruited 10 transgender «seeds» from among their clients. Each «seed» was asked to recruit at least three trans people from their own social network. Each respondent received 20 laris as an incentive to participate in the study, and an additional five laris for recruiting other transgender people.

Before the start of the survey, the prepared questionnaire was piloted in Tbilisi with the involvement of five transgender clients of the QUEER Association — TEMIDA in order to eliminate any ambiguities in understanding the questionnaire's questions, or any possible incorrect wording.

The questionnaire was available in Georgian and English.

## EXTRAPOLATION OF DATA COLLECTED

The overwhelming majority of trans-specific services are concentrated in Tbilisi; therefore, it is assumed that the estimates obtained during the study primarily reflect the situation primarily in the capital and two other big cities in Georgia, namely Batumi and Kutaisi. In accordance with the recommendations of public health specialists and trans activists in Georgia (the meeting was held on 18.01.2023). The extrapolation has been done using a multiplier reflecting the ratio of the population of Tbilisi to the others cities.

## ETHICAL ISSUES

The social workers of TEMIDA, involved in processing the information, were instructed to ensure the confidentiality of the information received.

Before the survey participants completed the questionnaire, they were asked to provide their informed consent (Annex 2) to participating in the study. All participants were provided with responses to any questions that they may have had. Potential participants were also informed that participation in the study was completely voluntary, and that they could terminate their participation at any time.

It was also explained to the participants that any information they provided during the research would be confidential (for example, information that can be used to identify the participant will not be used, and only generalized information will be included in the analytical report).

The study protocol was approved by the NCDC Ethics Committee (IRB # 2022-014 of 11.04.2022).



## RESULTS



**Demographics.** During the period from 19.08.2022 to 27.10.2022, 100 trans and non-binary people in Georgia were surveyed, and data on the number of trans and non-binary people using certain services was collected from independent sources. The main socio-demographic parameters of the sample of trans people surveyed are provided in Table 3.

The average age of the respondents is 28 years. Half (49%) identify as trans women and another 41% as non-binary persons. The vast majority completed the questionnaire in Georgian (95%) and live in Tbilisi (90%), slightly less than two-thirds (62%) did so outside the office of the QUEER Association – TEMIDA. Approximately the same proportions of respondents left their city for an extended period of time, among those who left, two-thirds (65%) went to another city in Georgia, while one-third went to another country.

**Table 3. Socio-demographic parameters of the sample of the survey of trans people.**

VARIABLE	% OR AVERAGE
<b>Language of questionnaire, <math>p &lt; 0.001</math></b>	
Georgian	95
English	5
<b>Where was the questionnaire completed, <math>p = 0.02</math></b>	
in the office of the QUEER Association-TEMIDA	38
in another place	62
<b>Where do you live now?, <math>p &lt; 0.001</math></b>	
in Tbilisi	90
in another city/town of Georgia	10
outside of Georgia	0
<b>In the past six months, have you left your city for more than a week?, <math>p = 0.13</math></b>	
yes	58
no	42
<b>Where did you go from your city? (among those who left their city for more than a week, <math>N = 58</math>), <math>p = 0.03</math></b>	
to another city of Georgia	65
to another country	33
don't want to respond	2
Average age, years (min. 18, max. 54)	28
<b>Which word best describes your current identity?, <math>p &lt; 0.001</math></b>	
trans woman	49
trans man	10
non-binary person	41
other	0

### **Population size estimation based on trans people seeking services (multiplier method).**

The research team sent inquiries regarding the total number of individual trans and non-binary clients who used the services of the various organizations listed in the «Background» section between June 2020 and June 2022. Responses were received from 8 of the 14 organizations.

Both trans and non-binary respondents of our survey use the trans-specific services of organizations of various forms of ownership (Table 4), which in turn means that when estimating the population size,  $N = 100$  should be substituted into formula (1), and the calculation results are presented in Table 5.

**Table 4. Distribution of the respondents of the online survey according to the medical and social services of organizations of various forms of ownership they use in connection with their transgender or non-binary identity.**

INSTITUTION	WHOLE SAMPLE	NON-BINARY PEOPLE	TRANS-PEOPLE
Queer-Association — Temida	93	38	55
Equality Movement NGO	67	28	39
Women's Initiatives Supporting Group	30	13	17
Tanadgoma — Informational Medical and Psychological Center	54	23	31
Agency for the Development of Public Services	10	1	9
Rustavi Mental Health Center	9	3	6
Medical Ecosystem Pineo	16	3	13
League Clinic	20	4	16
Psychological and Sexological Clinic	13	7	6
National Institute of Endocrinology	22	2	20
Kuzanov Clinic	25	5	20
Caraps Medline	24	5	19
Total Charm	2	1	1
Other specialists	17	7	10

**Table 5. Input data and point estimates of the number of trans and non-binary people accessing services (multiplier method, formula (1),  $N = 100$ ).**

INSTITUTION	HOW MANY TRANS AND NON-BINARY CLIENTS (I)	RESPONDENTS WHO USED SERVICES (R)	PSE
Queer-Association — TEMIDA	134	93	144
Equality Movement NGO	27	67	40
Women's Initiatives Supporting Group	98	30	327
Tanadgoma — Informational Medical and Psychological Center	121	54	224
Agency for the Development of Public Services	–	10	–
Rustavi Mental Health Center	6	9	67

INSTITUTION	HOW MANY TRANS AND NON-BINARY CLIENTS (I)	RESPONDENTS WHO USED SERVICES (R)	PSE
Medical Ecosystem Pineo	16	16	100
League Clinic	–	20	–
Psychological and Sexological Clinic	–	13	–
National Institute of Endocrinology	78	22	355
Kuzanov Clinic	–	25	–
Caraps Medline	–	24	–
Total Charm	–	2	–
Infectious Diseases, AIDS & Clinical Immunology Research Center	17	–	–
Other specialists	–	17	–

**Population size estimation based on trans people using online dating services (multiplier method).** The research team counted the number of active profiles of trans people in Georgia on a weekly basis during November 2022; the results are presented in Table 6. The average number of profiles and the results of the survey of trans and non-binary people served as input data for calculating the point estimate of the population size (Table 8).

It should be noted that although the profiles of non-binary people were not found on any sex work sites (in general, trans women register on these sites), non-binary respondents to our survey noted that they also use such sites (Table 7). The same is true for mobile apps: while only 5 accounts of non-binary users were identified on Grindr based on user-reported gender identity information, there were significantly more users of the app among our non-binary respondents. Thus, in the population size estimation, N = 100 should be substituted into formula (1), and the results of the calculations are presented in Table 8.

**Table 6. Results of monitoring mobile applications and dating sites: the number of active profiles of trans and non-binary people in Georgia.**

ONLINE PLATFORM	WEEK 1	WEEK 2	WEEK 3	WEEK 4	AVERAGE
Grindr	45	51	49	62	52
Hornet	13	14	11	13	13
xgeorgia.me	56	52	62	68	59
eskort.gg	28	29	25	26	27
makeoce.me	78	81	82	83	81
eurogirlescort.com/boys-trans/	51	49	50	49	50
amor.ge	4	5	5	5	5

**Table 7. Distribution of online survey respondents according to the websites and mobile dating apps they use.**

ONLINE PLATFORM	WHOLE SAMPLE	NON-BINARY PEOPLE	TRANS PEOPLE
Grindr	53	26	27
Hornet	21	9	12
xgeorgia.me	0	0	0
eskort.gg	27	3	24
makoce.me	0	0	0
eurogirlsescort.com/boys-trans/	23	3	20
amor.ge	14	2	12

**Table 8. Average numbers of profiles of trans and non-binary people in Georgia, corresponding results of the survey of trans and non-binary people, and point estimates of the population size (multiplier method, formula (1), N = 100).**

ONLINE PLATFORM	HOW MANY PROFILES (I) OF TRANS AND NON-BINARY PEOPLE	RESPONDENTS WHO USED SERVICES (R)	PSE
Grindr	53	26	27
Hornet	21	9	12
eskort.gg	0	0	0
eurogirlsescort.com/boys-trans/	27	3	24
amor.ge	0	0	0

**Population size estimation according to the «Telefunken» method (double coverage in individual social networks).** This method was used to estimate the number of trans people in Georgia for the first time. In total, 423 valid «Telefunken codes» were collected during the survey of trans and non-binary people (243 trans women and trans men, 180 non-binary people).

Trans and non-binary people can be characterized as having weakly overlapping networks of acquaintances, which can affect the results obtained using the «Telefunken» method. In order to test this assumption, we compared the «Telefunken codes» obtained from trans people with the codes obtained from non-binary respondents. The results are presented Table 9. As can be seen, there are the most intersections (25%) between the arrays of «Telefunken codes» of trans respondents and their contacts, there are half as many intersections (12%) among non-binary people and their contacts, meanwhile there was only one common code between the array of non-binary respondents, and that of trans respondents. There are even fewer common codes between the contacts of trans respondents and the contacts of non-binary people (8%). At the same time, in the array of codes of non-binary respondents, there is approximately the same number of intersections with the contacts of trans and non-binary people (10 and 12%, respectively). The data presented shows that trans people are more likely to communicate with other trans people, while non-binary people do not show such unambiguous preferences when establishing their social circle.

**Table 9. Mutual intersections in the arrays of «Telefunken codes».**

	<b>TRANS PEOPLE, N = 59</b>	<b>NON-BINARY PEOPLE, N = 41</b>	<b>CONTACTS OF TRANS PEOPLE, N = 243</b>	<b>CONTACTS OF NON-BINARY PEOPLE, N = 180</b>
Trans people, N = 59	–	1	15	7
Non-binary people, N = 41	1 (2%)	–	4	5
Contacts of trans people, N = 243	15 (25%)	4 (10%)	–	19
Contacts of non-binary people, N = 180	7 (12%)	5 (12%)	19 (8%)	–

In other words, the group of trans people (predominantly represented in this survey by trans women, see Table 3) is more homogeneous than the group of non-binary respondents. In turn, this means that in further calculations using the «Telefunken» method, one should try to separately estimate the number of trans people and the number of non-binary people.

The number of random coincidences was determined using linear distributions of the variables (Table 10). The probability that two respondents will have the same appearance code is presented in Table 11.

**Table 10. Linear distributions of height, weight, and hair color variables in «Telefunken codes».**

<b>VARIABLE (NUMBER OF OPTIONS)</b>	<b>WHOLE SAMPLE</b>	<b>TRANS-PEOPLE</b>	<b>NON-BINARY PEOPLE</b>
<b>Height (5)</b>			
- less than 166 cm	13	9	4
- 166–175 cm	41	22	19
- 176–185 cm	35	22	13
- 186–195 cm	8	4	4
- 196 cm or taller	2	1	1
<b>Weight (4)</b>			
- less than 60 kg	28	14	14
- 61–80 kg	48	32	16
- 81–100 kg	19	10	9
- 101–120 kg	4	2	2
<b>Hair color (5)</b>			
- dark	60	39	21
- red	6	2	4
- light	29	14	15
- white	2	2	0
- no hair	2	1	1

**Table 11. Calculation of the probability that two respondents will have the same appearance code.**

VARIABLE	SUM OF THE SQUARES OF THE PROPORTION OF EACH VARIABLE		
	WHOLE SAMPLE	TRANS-PEOPLE	NON-BINARY PEOPLE
Height	$(13/100)^2 + (41/100)^2 + (35/100)^2 + (8/100)^2 + (2/100)^2 = \mathbf{0.3143}$	$(9/100)^2 + (22/100)^2 + (22/100)^2 + (4/100)^2 + (1/100)^2 = \mathbf{0.9778}$	$(4/100)^2 + (19/100)^2 + (13/100)^2 + (4/100)^2 + (1/100)^2 = \mathbf{0.0563}$
Weight	$(28/100)^2 + (48/100)^2 + (19/100)^2 + (4/100)^2 = \mathbf{0.3465}$	$(14/100)^2 + (32/100)^2 + (10/100)^2 + (2/100)^2 = \mathbf{0.1324}$	$(14/100)^2 + (16/100)^2 + (9/100)^2 + (2/100)^2 = \mathbf{0.0537}$
Hair color	$(60/100)^2 + (6/100)^2 + (29/100)^2 + (2/100)^2 + (2/100)^2 = \mathbf{0.4485}$	$(39/100)^2 + (2/100)^2 + (14/100)^2 + (2/100)^2 + (1/100)^2 = \mathbf{0.1796}$	$(21/100)^2 + (4/100)^2 + (15/100)^2 + (0/100)^2 + (1/100)^2 = \mathbf{0.0683}$
Product of the sums (probability of coincidence of two random codes)	<b>0.0488</b>	<b>0.0233</b>	<b>0.0206</b>

The part of the code corresponding to the numbers from the respondent's phone number contains 8 characters, so there are  $2^8 = 256$  different combinations. The probability of a random match of the full "Telefunken" codes for two respondents is  $0.0488 * 1 / 256 = 0.0002$  for the entire sample, 0.0001 for the sub-sample of trans men and trans women, and 0.0001 for the sub-sample of non-binary people.

Thus, for each of the contacts named by the respondents, the probability of a match will be  $423 * 0.0002 = 0.0846$ , and the expected number of random matches in the covered sample (100 people) will be  $100 * 0.0846 = 8$ . Accordingly, for the sub-sample of 59 trans people, the expected number of random matches will be  $59 * 243 * 0.0001 = 1$ , and for the sub-sample of 41 non-binary people  $41 * 180 * 0.0001 = 1$ .

Using formula (2), we obtain point estimates of the population size of trans and non-binary people (whole sample)  $PSE = (423 * 100) / (25 - 8) = 2,488$ , for the sub-sample of trans men and trans women  $PSE = (243 * 59) / (15 - 1) = 1,024$ , and for the sub-sample of non-binary people  $PSE = (180 * 41) / (5 - 1) = 1,845$ .

Accordingly, the variance calculated by formula (3) for the entire sample will be  $Var(PSE) = (100 * 423 * (100 - 17) * (423 - 17)) / 17^3 = 290,133$ , for the sub-sample of trans men and trans women  $Var(PSE) = (59 * 243 * (59 - 14) * (243 - 14)) / 14^3 = 53,842$ , and for the sub-sample of non-binary people  $Var(PSE) = (41 * 180 * (41 - 4) * (180 - 4)) / 4^3 = 750,915$ .

The 95% confidence interval calculated using formula (4) for the entire sample will be  $2,488 \pm 1,056$  people, for the sub-sample of trans men and trans women  $1,000 \pm 455$ , and for the sub-sample of non-binary people  $1,800 \pm 1,698$ .

Thus, the population size estimation of the number of all trans and non-binary people in Georgia according to the "Telefunken" method will be 2,488 [1,432–3,544] or 2,500 [1,400–3,500] when rounded to the nearest hundred. The corresponding values rounded to the nearest hundred for the sub-sample of trans men and trans women would be 1,000 [500–1,400] and for the sub-sample of non-binary people 1,800 [100–3,500].

## TRIANGULATION AND DISCUSSION OF THE RESULTS

The goal of this study was to estimate the number of transgender people (men, women and non-binary people) in Georgia. To do this, 100 people aged 18 to 54, mostly living in Tbilisi, were surveyed, and information was collected on the use of the services of state and non-state organizations by trans and non-binary people.

The sample covered by the study is characterized by several characteristics that are important from the point of view of the applicability of the methods used for the population size estimation, and the interpretation of the results obtained.

First, clients of non-governmental organizations providing services to trans and non-binary people are very significantly represented among the surveyed trans and non-binary people. 93% were clients of TEMIDA, 67% of Equality Movement and 54% of Tanadgoma (Table 3). Such high proportions of clients among the sample mean that population size estimations based on a comparison with NGO data are likely to be underestimated (see formula (1) — the number of respondents who indicated in the survey that they belong to an independent source goes in the denominator, so the larger the number, the smaller the estimation itself).

Second, half (58%) of respondents reported that they left their city for more than a week, while 33% went to another country (Table 3). This indicates the significant mobility of the sample, represented by the majority (90%) residents of Tbilisi, and also limits the applicability of the classical «capture-recapture» method. With regard to the modification of the double coverage method used in our study (i.e., the «Telefunken» method), high sample mobility can affect the results only to a very limited extent.

At the same time, changes in the composition of the population of Georgia (and especially Tbilisi) due to the arrival of non-Georgian speaking refugees from Ukraine and the Russian Federation are obviously not represented in our data, since the vast majority (95%) of respondents completed the questionnaire in Georgian. In addition, the high mobility of the sample means that data on the number of services received by trans people from Georgian specialists (e.g. gender correction surgery) may not reflect real needs, since these services can be obtained by people in other countries (e.g. in Turkey, Iran, or the Russian Federation).

Third, the sample is characterized by heterogeneity — the majority (59%) are trans people (and among them, primarily trans women), while 41% are non-binary respondents (Table 3). In terms of the applicability of population size estimation methods, this heterogeneity means that those variations of the coefficient method that are based on information about services related to gender correction (for example, cosmetic surgery services or correction of a gender marker in identity documents), as well as on information about the use sex work sites, will reflect the trans population rather than interactions with non-binary people. In this regard, these population size estimations will be underestimated.

Finally, certain data (Table 3) indicates the presence of tangible errors. For instance, according to the Equality Movement NGO, 27 trans and non-binary clients applied to the organization over the course of two years, but according to respondents, 67 of them used the services of Equality Movement over the same period of time (a similar situation was found with regard to the data of the Rustavi Mental Health Center). There are at least two possible explanations for this discrepancy: either the system of recording clients or patients does not accurately reflect interactions with trans and non-binary people, or the respondents themselves may confuse the names of the organizations to which they applied for certain services.

Regardless of the reason for the inconsistencies that have arisen, their very existence makes it more likely that the resulting estimates will shift to lower values.

All the population size estimations obtained are summarized for convenience in Table 12. Since the maximum number of recorded clients is 134 people (see Queer Association – TEMIDA in Table 4), then all scores less than this number will not be relevant, and the set of values will be smaller (Table 13).

**Table 12. Summary of population size estimations obtained.**

SOURCE OF DATA FOR THE ASSESSMENT	PSE
Queer-Association – TEMIDA	144
Equality Movement NGO	40
Women's Initiatives Supporting Group	327
Tanadgoma – Informational Medical and Psychological Center	224
Rustavi Mental Health Center	67
Medical Ecosystem Pineo	100
National Institute of Endocrinology	355
Grindr	151
Hornet	62
escort.gg	100
eurogirlsescort.com/boys-trans/	217
amor.ge	36
Telefunken (whole sample)	2500
Telefunken (sub-sample of trans men and trans women)	1000
Telefunken (sub-sample of non-binary people)	1800

The respondents of our study included people from 18 to 54 years old, the vast majority (90%) were residents of Tbilisi (Table 3). Accordingly, the population of Tbilisi in the indicated age interval should also be the basis for comparing the obtained population size estimations.

**Table 13. «Cleaned up» aggregate of population size estimations (estimations, large than numbers of actually recorded clients) in comparison with the population of Tbilisi of the corresponding age.**

SOURCE OF DATA FOR THE ASSESSMENT	PSE	95% CI	% OF THE POPULATION OF TBILISI AGED 18–54*
Queer-Association – TEMIDA	144	137–151	0.03
Women's Initiatives Supporting Group	327	246–408	0.06
Tanadgoma – Informational Medical and Psychological Center	224	194–254	0.04
National Institute of Endocrinology	355	244–466	0.06
Grindr	151	128–174	0.03
eurogirlsescort.com/boys-trans/	217	160–274	0.04
Telefunken (whole sample)	2500	1400–3500	0.44
Telefunken (sub-sample of trans men and trans women)	1000	500–1400	0.18
Telefunken (sub-sample of non-binary people)	1800	100–3500	0.32

Note: \* Unfortunately, it was not possible to directly determine the population of Tbilisi aged 18–54 based on official sources, so we resorted to extrapolation. As of 1.01.2022<sup>2</sup>, the population of Georgia aged 18 to 54 was 1,740,795 people, while the total population of Georgia was 3,688,647. The population of Tbilisi is 1,202,250, accordingly, the population of the capital aged 18 to 54 will be  $(1,740,795 / 3,688,647) * 1,202,250 = 568,382$  people.

Table 13 shows that the estimations are clearly divided into two groups. The first group includes relatively small values (from 144 to 355 people, or from 0.03 to 0.06% of the population of the country's capital), obtained using various versions of the multiplier method. The other includes the results of the «Telefunken» method (from 1,000 to 2,500 people, or from 0.18 to 0.44% of the population of Tbilisi).

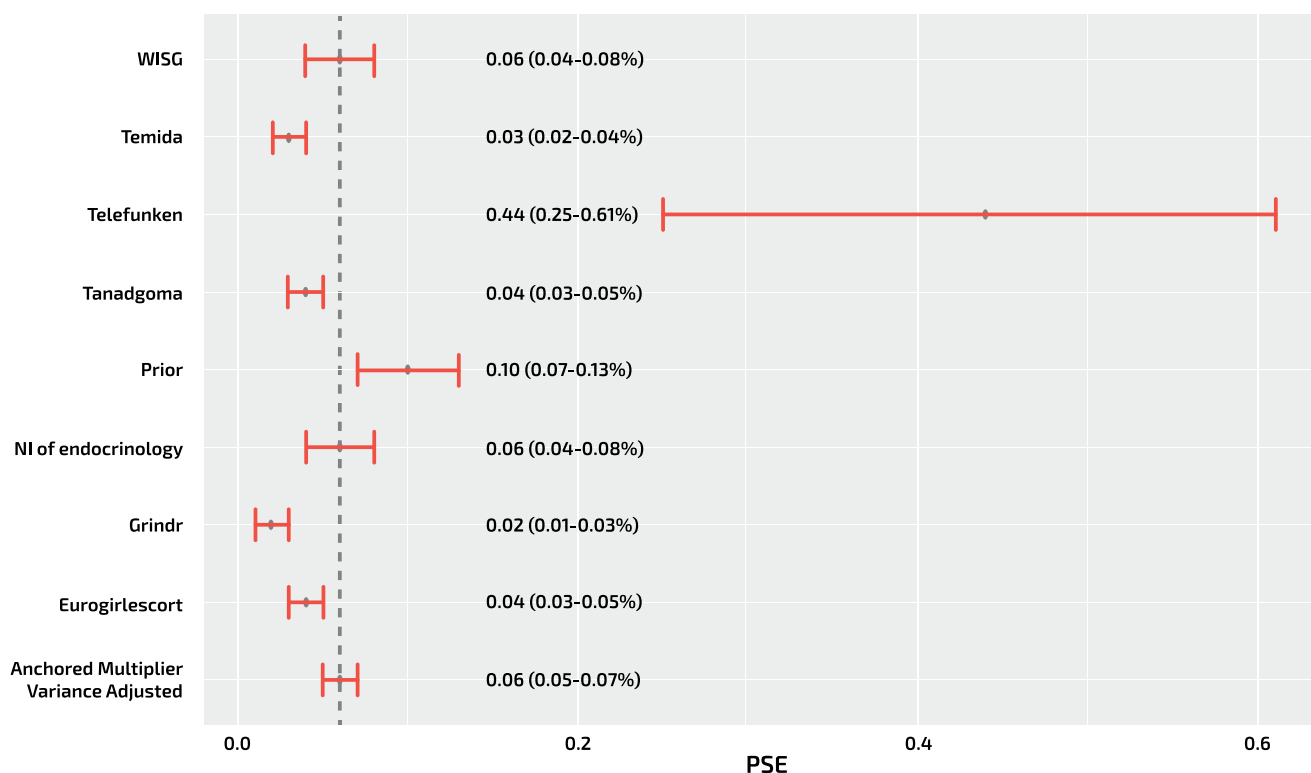
As noted in the «Background» section, in the EECA region, population size estimations of trans people exist in only three countries. In 2018, Armenia estimated the number of trans women at 100 people [4] (which corresponds to 0.01% of the population of the country's capital). During 2019–2020, Ukraine carried out a pilot bio-behavioral study and population size estimations of trans women and trans men (8,200 [95% CI: 3,400–14,000] [5], 9,963 [95% CI: 7,352–12,571] [6]), which corresponds to 0.07–0.08% of the population of regional centers in government-controlled areas. According to UNAIDS<sup>3</sup>, in 2021, Azerbaijan estimated the number of trans people at 1,000 people (corresponding to 0.05% of the population of the country's capital). Based on limited data from the USA [14], estimations of the number of transgender adults significantly increased over the past decade, with a current best estimation of 390 per 100,000 adults (0.39%). Thus, it is clear that in comparison with data from the USA, the estimations of the number of trans and non-binary people that currently exist in the EECA region are very conservative. The data obtained in our study is divided into two groups: the results based on information about the services received by trans and non-binary people are in line with the estimations of other countries in the EECA region, while the range of values obtained by the “Telefunken” method is closer to North American estimations.

The consensus estimation (0.06%, 95% CI: 0.05–0.07, Figure 1) based on the data was obtained using the Anchored Multiplier method. The Anchored Multiplier calculator [15], developed by researchers at the University of California at San Francisco led by Paul Wesson, uses a Bayesian model to combine empirical estimations. «Stronger» data (with narrower confidence intervals) influence the final estimation more than «weaker» data (with wider confidence intervals).

<sup>2</sup> <https://www.geostat.ge/en/modules/categories/41/population>

<sup>3</sup> <https://kpatlas.unaids.org/dashboard>

**Figure 1. Obtaining a consensus estimation of the number of trans and non-binary people in Tbilisi using the tied multiplier method (0.1% of the population of Tbilisi aged 15–54 was taken as an a priori estimation of the number, by analogy with the data from Ukraine [5], [6]).**



The total population of Georgia's the biggest cities as of 01.01.2022<sup>4</sup>, was used to extrapolate the data obtained (Table 14).

**Table 14. Extrapolation of the obtained data to three big cities (rounded to tens).**

CITY	POPULATION OF THE CITY (1.01.2021)	PSE AS 0.06 [0.05–0.07]% OF THE CITY'S POPULATION
Tbilisi	1,202,250	720 [600–840]
Batumi	172,100	100 [90–110]
Kutaisi	134,400	80 [70–90]

**The limitations of the presented study** result from the fact that it is a pilot study, and from the limited amount of resources for implementation. Thus, the use of a «convenience» sample predetermined that a significant number of NGO clients were included among the respondents, which in turn could result in underestimations when using the multiplier method. The heterogeneity of the sample (trans women, trans men, non-binary people) could affect both the results of applying different versions of the multiplier method, and the use of the «Telefunken» method.

<sup>4</sup> <https://www.geostat.ge/en/modules/categories/41/population>

The migration crisis of 2022 and the lack of new immigrants in the sample made it impossible to consider people who have not yet integrated into Georgian society (migrants from Russian Federation used Georgia as a transit country). In addition, the difficulties existing in organizations of different forms of ownership in recording trans and, especially, non-binary clients could also result in underestimates of the population size.

The estimates obtained in this study reflect the total number of trans women, trans men and non-binary people. Unfortunately, the pilot nature of the study and its relatively small convenience sample do not make it possible to divide the obtained numbers into subgroups. Such data are also not available in other countries of the EECA region. However, based on the Telefunken calculations of trans and non-binary people in Table 13 (trans people 0.18% and non-binary people 0.32%), we can hypothetically assume that the ratio of trans- and non-binary people is 1:2, which, taking into account Table 14, gives 240 trans- and 480 non-binary people for Tbilisi, 33 and 77 for Batumi, respectively, and 27 and 53 for Kutaisi. At the same time, these figures should not be taken as an indisputable truth, bearing in mind that the estimate is still approximate data.

Thus, the presented results should be taken as rather a conservative estimate, which can be improved in the future, by considering the indicated limitations, i.e., random sampling, greater differentiation of the target groups of population size estimations, and systematic efforts to improve monitoring and evaluation systems in organizations providing services to trans and non-binary people.



## CONCLUSIONS



For the first time in Georgia, an empirical estimation of the number of trans and non-binary people was carried out using several variations of the multiplier method, as well as the double coverage method in individual social networks ("Telefunken").

It is shown that the consensus value of the obtained estimations (the number of trans and non-binary people) is 0.06 [0.05–0.07]% of the Georgian cities' population.

The analysis of individual social networks indicates a greater homogeneity of the group of trans people compared to the group of non-binary respondents. However, non-binary people also benefit from the trans-specific services available in the country.

This study is characterized by a number of limitations that should be taken into account in future estimations of the number of trans and non-binary people.

## REFERENCES

- 1 A. Rao et al., «HIV-related data among key populations to inform evidence-based responses: protocol of a systematic review», *Syst Rev*, vol. 7, no. 1, p. 220, Dec. 2018, doi: 10.1186/s13643-018-0894-3.
- 2 Z. Marshall, V. Welch, A. Minichiello, M. Swab, F. Brunger, and C. Kaposy, «Documenting Research with Transgender, Nonbinary, and Other Gender Diverse (Trans) Individuals and Communities: Introducing the Global Trans Research Evidence Map», *Transgend Health*, vol. 4, no. 1, pp. 68–80, May 2019, doi: 10.1089/trgh.2018.0020.
- 3 S. Chikhladze and M. Kasianczuk, «Two years of progress: Assessment of Existing Strategic Information on HIV among MSM and Trans People in Armenia, Belarus, Estonia, Georgia, Kyrgyzstan, and North Macedonia», Tallinn, 2019.
- 4 S. Grigoryan, R. Ohanyan, A. Papoyan, Z. Petrosyan, M. Asryan, and A. Asatryan, «Integrated Biological-Behavioral Surveillance Survey among People who inject Drugs, Female Sex Workers, Men who have Sex with Men and Transgender Persons», Yerevan, 2018. [Online]. Available: [https://ecom.ngo/wp-content/uploads/2018/12/IBBS\\_ARMENIA\\_2018\\_eng\\_FINAL.pdf](https://ecom.ngo/wp-content/uploads/2018/12/IBBS_ARMENIA_2018_eng_FINAL.pdf)
- 5 M. Kasianczuk and O. Trofymenko, «Analytical report: Population size estimation for transgender people in Ukraine», Kyiv, 2020.
- 6 O. Ковтун, Т. Салюк, Ю. Сахно, В. Паніотто, Н. Харченко, and О. Лиштва, «Оцінка чисельності ключових груп, груп-містків та інших категорій населення в Україні, 2020: метод масштабування соціальних мереж («The Network Scale Up Method»)), Київ, 2021. [Online]. Available: [https://aph.org.ua/wp-content/uploads/2021/05/Scale-up\\_2020\\_ukr\\_web\\_fin0921.pdf](https://aph.org.ua/wp-content/uploads/2021/05/Scale-up_2020_ukr_web_fin0921.pdf)
- 7 I. Chikovani, N. Shengelia, L. Sulaberidze, N. Marjanishvili, and N. Tsereteli, «Population Size Estimation Men Who Have Sex with Men in Georgia, 2018», Tbilisi, 2018. [Online]. Available: [http://curatiofoundation.org/wp-content/uploads/2022/03/MSM-2018\\_PSE-Report\\_FV\\_Eng.pdf](http://curatiofoundation.org/wp-content/uploads/2022/03/MSM-2018_PSE-Report_FV_Eng.pdf)
- 8 S. Chikhladze, M. Kasianczuk, S. Orbelyan, and S. Sheremet, «Two years of progress: MSM and trans community participation in HIV decision-making processes in Armenia, Belarus, Georgia, Kyrgyzstan, North Macedonia, Tajikistan and Ukraine», Tallinn, 2020.
- 9 Транс-здоровье: Физическое здоровье трансгендерных людей. СПб: Т-Действие, 2019.
- 10 M. S. Handcock, K. J. Gile, and C. M. Mar, «Estimating hidden population size using Respondent-Driven Sampling data», *Electron J Stat*, vol. 8, no. 1, Jan. 2014, doi: 10.1214/14-EJS923.
- 11 K. Sabin et al., «Availability and Quality of Size Estimations of Female Sex Workers, Men Who Have Sex with Men, People Who Inject Drugs and Transgender Women in Low- and Middle-Income Countries», *PLoS One*, vol. 11, no. 5, p. e0155150, May 2016, doi: 10.1371/journal.pone.0155150.

- 12 «Guidelines on Estimating the Size of Populations Most at Risk to HIV», UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance. WHO, Geneva, p. 51, 2010. [Online]. Available: [http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/2011\\_estimating\\_populations\\_en.pdf](http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/2011_estimating_populations_en.pdf)
- 13 K. Dombrowski, B. Khan, T. Wendel, K. McLean, E. Misshula, and R. Curtis, «Estimating the Size of the Methamphetamine-Using Population in New York City Using Network Sampling Techniques», *Adv Appl Sociol*, vol. 02, no. 04, pp. 245–252, 2012, doi: 10.4236/aasoci.2012.24032.
- 14 E. L. Meerwijk and J. M. Sevelius, «Transgender Population Size in the United States: a Meta-Regression of Population-Based Probability Samples», *Am J Public Health*, vol. 107, no. 2, pp. e1–e8, Feb. 2017, doi: 10.2105/AJPH.2016.303578.
- 15 P. D. Wesson, W. McFarland, C. C. Qin, and A. Mirzazadeh, «Software Application Profile: The Anchored Multiplier calculator—a Bayesian tool to synthesize population size estimates», *Int J Epidemiol*, vol. 48, no. 6, pp. 1744–1749, Dec. 2019, doi: 10.1093/ije/dyz101.

## ETHICAL ISSUES

Text of the informed consent (see Annex 2).

**1. Do you agree to participate in the study?**

yes       no      → go to end

**2. Where are you completing the questionnaire?**

in the office of the QUEER Association — TEMIDA  
 in another place

**3. Where do you live now?**

in Tbilisi  
 in another city/town of Georgia  
 outside of Georgia

**4. In the past six months, have you left your city for more than a week?**

yes       no      → go to question 6

**5. Where did you go from your city?**

to another city of Georgia  
 to another country  
 don't want to respond

**6. Your age? (number) \_\_\_\_\_ (if less than 18 → go to end)**

**7. Which word best describes your current identity?**

trans woman                       non-binary person  
 trans man                               other (please, write) \_\_\_\_\_

## USE OF TRANS-SPECIFIC SERVICES

Now I'm going to ask you a few questions about whether you have used the trans-specific services of various governmental and non-governmental organizations during the past two years.

**8. Please try to remember as accurately as possible whether you have consulted these doctors in connection with any transgender issues (i.e. hormone therapy, sex reassignment operations, including mammoplasty and mastectomy, penectomy, vaginoplasty, phalloplasty, cosmetic surgery for feminization or masculinization, etc.)**

	<input type="checkbox"/> yes
Ekaterine Berdzenishvili — psychiatrist, Rustavi Mental Health Center	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Giorgi Cheishvili — psychiatrist, Medical Ecosystem Pineo	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Maia Chavchanidze — sexologist, League clinic	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Andro Kandelaki — sexologist, Psychological and Sexological Clinic	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Shota Janjghava — endocrinologist, National Institute of Endocrinology	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Iva Kuzanov — plastic surgeon, Kuzanov Clinic	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Guga Kuzanov — plastic surgeon, Kuzanov Clinic	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Alexander Kuzanov — plastic surgeon, Kuzanov Clinic	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember

Alexander Kalantarov — plastic surgeon, Caraps Medline	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> don't remember
George Sulamanidze — plastic surgeon, Total Charm	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> don't remember
Manana Malaghuradze — psychologist, Women's Initiatives Supporting Group	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> don't remember
Salome Shiukashvili — psychologist, Women's Initiatives Supporting Group	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> don't remember
Tekla Latibashvili — psychologist, Queer Association — TEMIDA	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> don't remember
Other specialist (please write) _____	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> don't remember

**9. Do you have a profile on a mobile dating app, such as Grindr or Hornet?**

- yes, on Hornet                       no      →      go to question 11  
 yes, on Grindr                       don't want to answer      →      go to end  
 yes, on both Hornet and Grindr

**10. Does your profile on Grindr and/or Hornet indicate that you are a trans person?**

- yes               no

**11. Do you have a trans profile on any of the following websites for people involved in sex work?**

- yes, on <https://eskort.gg/category/trans-escorts>                       no  
 yes, on [AMOR.GE](https://www.amor.ge)                       don't want to answer  
 yes, on <https://www.eurogirlsescort.com/boys-trans/>

**12. During the past two years, have you used the services of the following non-governmental organizations?**

QUEER Association – TEMIDA	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Equality Movement	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember
Tanadgoma – Informational Medical and Psychological Center	<input type="checkbox"/> yes
	<input type="checkbox"/> no
	<input type="checkbox"/> don't remember

**13. During the past two years, have you applied to the Agency for the Development of Public Services to change the gender marker in your documents (i.e. ID, passport, etc.)?**

yes                       don't remember  
 no                          don't want to respond

**TELEFUNKEN**

Now I'm going to ask you a few questions about your appearance and the last four digits of your phone number (only the last 4 digits, not the whole phone number!). These characteristics will be used to create a unique, anonymous code to be used in further analysis.

QUESTION	ANSWER OPTIONS
<b>14. Write the last 4 digits of your phone number (please keep in mind that this data will remain anonymous data)</b>	98 – Don't have the phone number 99 – Don't want to respond
Encode the last 4 digits of your phone number (re-coding will be automatic)	0, 1, 2, 3, 4 – L 5, 6, 7, 8, 9 – B
Encode the last 4 digits of your phone number (re-coding will be automatic)	0, 2, 4, 6, 8 – E 1, 3, 5, 7, 9 – O

QUESTION	ANSWER OPTIONS
<b>15. Your height (please keep in mind that this data will remain anonymous data)</b>	166-175 cm 176-185 cm 186-195 cm below 165 cm over 196 cm
<b>16. Your weight (please keep in mind that this data will remain anonymous data)</b>	101-120 kg 61-80 kg 81-100 kg below 60 kg
<b>17. Your hair color (please keep in mind that this data will remain anonymous data)</b>	D – dark R – red L – light W – white N – no hair

I would like to ask you the same questions about five of your acquaintances who are trans women, trans men or non-binary persons, who live in your city, and who are over 18 years old. Please randomly select their phone numbers and provide the same information about them (separately for each column).

QUESTION	ANSWER OPTIONS	Q.2.1. FIRST ACQUAINTANCE	Q.2.2. SECOND ACQUAINTANCE	Q.2.3. THIRD ACQUAINTANCE	Q.2.4. FOURTH ACQUAINTANCE	Q.2.5. 5-TH ACQUAINTANCE
<b>18. Does he / she / they live in your city?</b>	1 – yes 2 – no					
<b>19. Is he / she / they over 18 years old?</b>	1 – yes 2 – no					
<b>20. Write the last 4 digits of his / her / their phone number</b>	98 – Don't know phone number 99 – Don't want to respond					
Encode the last 4 digits of his / her phone number (re-coding will be automatic)	0, 1, 2, 3, 4 – L 5, 6, 7, 8, 9 – B					
Encode the last 4 digits of his / her phone number (re-coding will be automatic)	0, 2, 4, 6, 8 – E 1, 3, 5, 7, 9 – O					

QUESTION	ANSWER OPTIONS	Q.2.1. FIRST ACQUAINTANCE	Q.2.2. SECOND ACQUAINTANCE	Q.2.3. THIRD ACQUAINTANCE	Q.2.4. FOURTH ACQUAINTANCE	Q.2.5. 5-TH ACQUAINTANCE
<b>21. His / her / their height</b>	166-175 cm 176-185 cm 186-195 cm below 165 cm over 196 cm					
<b>22. His / her / their weight</b>	101-120 kg 61-80 kg 81-100 kg below 60 kg					
<b>23. His / her / their hair color</b>	D – dark R – red L – light W – white N – no hair					

**END**

Our questionnaire has come to an end. Thank you so much for participating in this study! If you have any questions about the study or how it is organized, you can contact Project manager of the QUEER Association – TEMIDA. More information about ECOM can be found at <https://ecom.ngo>.

### **STUDY NAME**

Population Size Estimation of Trans People in Georgia.

We ask you to participate in the study. The study is being conducted by the QUEER Association – TEMIDA with the support of the Eurasian Coalition on Health, Rights, Gender and Sexual Diversity (ECOM).

The Ethics Committee of the National Centre for Disease Control in Georgia has approved the study protocol. If you have questions or concerns about your rights as a study participant, you can contact the Ethics Committee by e-mail.

The purpose of the study is to estimate the number of transgender people (men, women and non-binary people) in Georgia.

### **WHAT HAPPENS IN THE STUDY**

You will be one of more than 100 individuals who are invited to participate in the study. As part of the study, we will ask you to fill in a short questionnaire. During the interview, we will ask you questions about your experience using trans-specific services in Georgia, and participating in prevention and treatment programs. All components of the study will take approximately 30 minutes of your time. Participation in this study is voluntary.

Before deciding to participate in the study, you can ask the study team any questions.

### **RISKS AND DISCOMFORTS**

We do not anticipate any risks to people participating in this study. If you feel uncomfortable, you can choose not to respond to any of the questions that you do not wish to answer.

### **POTENTIAL BENEFITS**

You will be compensated with a supermarket voucher or its equivalent for your time. You will receive it only if you complete all the interviews. You will not receive any other benefit from participating in this study. However, the information you provide will be helpful to better plan HIV programs for transgender people in Georgia.

### **ALTERNATIVES**

You have the alternative to not participate in the study. If you choose not to participate, you will still be able to receive any health and social services available to you now. No services, nor access to services, will be taken away from you based on your decision to participate in the study or not.



## CONFIDENTIALITY

All questionnaires will only include your participant code (not your name or any other personal data). The data collected will not include your name. Only the study team will have access to the data. Information from your questionnaire will be used only for research purposes. We will not include your name in any reports or publications.



## RIGHT TO REFUSE OR WITHDRAW

Participation in this study is voluntary. You have the right to choose not to participate in this study. If you decide to participate in the study and then change your mind, you can withdraw from the research and stop your interview at any time. In case you end your participation, we will delete your answers.



## ADDITIONAL QUESTIONS

If you have any questions about the study or how it is organized, you can contact Advocacy Specialist of the QUEER Association — TEMIDA, or ECOM's Advocacy Coordinator.

More information about ECOM can be found at <https://ecom.ngo>.

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Person Providing Consent (Signature and Printed Name)

Date

Time

## ABOUT AUTHORS



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