DISSEMINATING AND COMMUNICATING GENDER STATISTICS

UNECE Workshop on Disseminating, Communicating and Using Gender Statistics in Kazakhstan
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Women and Men in Kazakhstan

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Agenda

1 Paradigm shift: From dissemination to communication
2 Design and Layout: Basic dos and don’ts
3 Visualization: How to simplify complex information
4 Examples
5 Writing comments on statistical results
6 *Practical exercise*
7 Conclusions
Agenda

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1 From dissemination to communication

Dissemination = Input orientation

- Statistics get disseminated when statistics process is finished
- Centralized dissemination: Users have to come and get it
- One way communication: No way to respond for the user
- Mostly numbers instead of charts and text
- Expert language
- No context information
YOU ARE NOT YOUR USER
1 From dissemination to communication

Communication = Output orientation (user friendly)

- Statistics process is not the only occasion for publishing
- Decentralized dissemination: Users get data via different channels (pull & push)
- Interactive communication: Users can respond or ask questions (real contact persons)
- Few numbers, charts, small tables and explanatory text
- Easily understandable language, translation of statistical terms
- Context information, comparisons (e.g. average values)
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2 Design and Layout

- Colours
- Fonts
- Format
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3 Visualization

- At a glance: Less is more!
- Charts tell stories
- Tables give exact figures

Gender Pay Gap Kazakhstan 2011

HR - Gender Pay Gap

- 63%
- 100%
3 Charts- pie, bar or line chart?

- Bar charts for frequencies
- Pie charts for shares (total of 100%)
- Line charts for trends
- Maps for regional distribution

→ plus several combinations
3.1 Pie charts

- Pie charts for better comparison of shares of 100%
  - Start at 12 o’clock with the biggest share, then downward
  - Maximum 6 pieces
  - Sum up smaller shares in “others” or use bar chart
3.1 Pie charts

Causes of death of women in Kazakhstan 2015*

- Cardiac diseases 52%
- Circulatory Disorder 20%
- Breast Cancer 11%
- Lung Cancer 9%
- Bacterial diseases 5%
- Others 3%

*Prototype pie chart: not real figures.

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3.2 Bar charts

- Bar charts are suitable for
  - Visualization of frequencies or shares
  - Rankings (sort results!)
  - Structure of shares (staple diagrams – few shares only)
  - Population pyramid
3.2 Bar charts


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3.2 Bar charts

- Vertical bars
  - Time series
  - Short lettering
  - Vertical publication format

- Horizontal bars
  - Long lettering (regional comparisons)
  - Horizontal format
3.3 Line charts

- Line charts for time series and trends
- No single data points, better scale
- Choose direct lettering instead of legends
3.3 Line charts

Morbidity rate of psychiatric and behavioural disorders due to alcohol abuse

number of afflicted per 100000 people

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3.4 Musts for all charts

- Significant headline, subheading if necessary
- Round values (8,534,213 people to 8.5m people)
- Units in headline or, better, on the scale (%, per 1,000 inhabitants, millions, Tenge, …)
- Adapt scales to values, use proportional scales (10,20,50…)
- Don’t disrupt scales, if you must, SIGNAL IT!
- Don’t compress or stretch scales.
“Above all else show the data.”  
Edward Tufte
3.5 Delete ‘non data ink’

- Frames, ticks, data points, areas
- Thick (grid)lines
- Reduce lettering
- Use scales or values
- Again: less is more!
3.6 Tables – structure is everything

- Use tables to show exact figures
- Round values if possible
- A table can be used to show various criteria (but still not too many), if a chart is not suitable
- Units should be close to data (especially when units are mixed)
- Use underlines to facilitate reading
- Tables should not be too long – huge data sets should be extracted from database
- Again: less is more!
3.6 Tables – structure is everything

<table>
<thead>
<tr>
<th>5.16 Active tuberculosis morbidity rate by age groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td><strong>Women</strong></td>
</tr>
<tr>
<td>Total, percent</td>
</tr>
<tr>
<td>0 – 14</td>
</tr>
<tr>
<td>15 – 17</td>
</tr>
<tr>
<td>18 – 34</td>
</tr>
<tr>
<td>35 – 54</td>
</tr>
<tr>
<td>55-64</td>
</tr>
<tr>
<td>65 and older</td>
</tr>
<tr>
<td>Total, thous. people</td>
</tr>
<tr>
<td><strong>Men</strong></td>
</tr>
<tr>
<td>Total, percent</td>
</tr>
<tr>
<td>0 – 14</td>
</tr>
<tr>
<td>15 – 17</td>
</tr>
<tr>
<td>18 – 34</td>
</tr>
<tr>
<td>35 – 54</td>
</tr>
<tr>
<td>55-64</td>
</tr>
<tr>
<td>65 and older</td>
</tr>
<tr>
<td>Total, thous. people</td>
</tr>
</tbody>
</table>

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4 Examples for visualization


© Kerstin Hänsel
4 Examples for visualization

4 Examples for visualization

Source: Women and Men in Georgia 2016

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4 Examples for visualization

Prototype chart for regional distribution (slideshare, no Headline available)
4 Examples for visualization

We are Mongolian men and women

- 68 percent of us live in urban areas and 32 in rural
- Our average life expectancy is 66
- Our average height is 168 centimetres
- Our average weight is 68 kilograms
- We are 1,585,952 in total
- 15 percent of us have a university degree
- Our median age at marriage is 26
- 659,700 of us are employed
- 46 percent of us have active

- 69 percent of us live in urban areas and 31 in rural
- Our average height is 157.7 centimetres
- Our average weight is 59.4 kilograms
- We are 1533,983 in total
- 1 out of each 5 of us has a university degree
- Our median age at marriage is 24.5
- 580,100 of us are employed
- 54 percent of us have active participation in electoral processes

Source: Statistics Mongolia, tweet
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5 Writing comments

- Start with the overall trend (what, when, where)
- From a user’s perspective: what is relevant? What is not?
- Choose one to three important facts/developments
- Use simple and active language, short phrases, avoid nouns
- Shares are better to compare

Additionally:

- Explain statistical terms when necessary
- Add context information that may have influenced the trend
- Stay neutral, but mention obvious patterns and relationships
5 Writing comments

Distribution of households by sex of head of household in urban and rural areas in 2014, %

Urban

Rural

Source: Geostat, Integrated Household Survey.

The above statistics indicates the fact that Georgia is predominantly men headed household. It remains the same in the rural and urban areas. The number of men-headed households is almost twice as high as that of women-headed households.

Source: Women and Men in Georgia 2016

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6 Practical exercise

![Breast cancer morbidity rate of women](image)


© Kerstin Hänsel
The number of breast cancer disorders in Kazakhstan increased between 2011 and 2015 from around 41 to 49 per 100,000 women. In 2015 nearly 4,400 women developed this disease. Women in the upper age classes were hit most frequently. Three quarters (74%) were aged 50 years or older. The biggest increase was among women between 60 and 69 years: Their share rose by about 6 percentage points from 20% (2011) to 26% (2015). Young women between 15 and 29 years made up the smallest part (1%). Still, 65 Kazakh women in this age group contributed to the new breast cancer cases.
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7 Conclusions for Gender Publications

- Choose the right format (A4 instead of 14.93 x 21.08 cm)
- Use colours for highlighting
- Design small tables, choose relevant indicators, use underlining
- Create appropriate charts for suitable data, delete non-data-ink
- Write explanatory text (description of charts, statistical terms, metadata)
- Present shares instead of absolute figures, round values when possible
THANKS FOR LISTENING ANY Questions?
Additional slides
2.1 Colours

- Are defined in the Corporate Design Manual
- Can be used for orientation in chapters
- Can highlight a development and can fade it from spotlight
- Can link criteria and demarcate them
- Help to brand the Committee for Statistics/ statistical subject
2.2 Fonts

- Are defined in the Corporate Design manual (Colibri)
- Should fit to the content
  - data + neutral font type
  - poem + romantic font type
- Should have well readable figures 1 2 3 4 5 6 7 8 9 0
- Should be of appropriate size, never smaller than 6pt
2.3 Format

- Should fit to the content (text, tables) and the publishing channel (print/pdf)
- But: Sometimes content has to be changed due to the format
- Meets users needs (not too heavy books, reading on screens...)
Gathering user needs

- Talk to your users about their needs (on the phone, at fairs, directly...)
- Follow the news and political discussions on the media and social web to see what your data is used for
- Co-operate with journalists, offer support
4 Examples for visualization

Source: Men and Women in Kazakhstan 2011-2015

© Kerstin Hänsel
4 Examples for visualization

Source: Women and Men in Georgia 2016
4 Examples for visualization

Distribution of households by sex of head of household in urban and rural areas in 2014, %

Urban

Rural

Source: Geostat, Integrated Household Survey.

The above statistics indicates the fact that Georgia is predominantly men headed household. It remains the same in the rural and urban areas. The number of men-headed households is almost twice as high as that of women-headed households.

Source: Women and Men in Georgia 2016

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### 4 Examples for visualization

**4.2. Infant Mortality Rate (number of deaths for children < 12 months)**

Infant Mortality Rate by gender

(number of children died < 12 months; every 1000 births)

<table>
<thead>
<tr>
<th>years</th>
<th>both genders</th>
<th>girls</th>
<th>boys</th>
<th>both genders</th>
<th>girls</th>
<th>boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>2 225</td>
<td>912</td>
<td>1 313</td>
<td>22.6</td>
<td>19.0</td>
<td>26.0</td>
</tr>
<tr>
<td>2005</td>
<td>3 258</td>
<td>1 428</td>
<td>1 830</td>
<td>29.7</td>
<td>26.8</td>
<td>32.4</td>
</tr>
<tr>
<td>2007</td>
<td>3 771</td>
<td>1 629</td>
<td>2 142</td>
<td>30.6</td>
<td>27.2</td>
<td>33.8</td>
</tr>
<tr>
<td>2008</td>
<td>3 453</td>
<td>1 445</td>
<td>2 008</td>
<td>27.1</td>
<td>23.5</td>
<td>30.5</td>
</tr>
<tr>
<td>2009</td>
<td>3 393</td>
<td>1 460</td>
<td>1 933</td>
<td>25.0</td>
<td>22.3</td>
<td>27.7</td>
</tr>
<tr>
<td>2010</td>
<td>3 337</td>
<td>1 434</td>
<td>1 903</td>
<td>22.8</td>
<td>20.1</td>
<td>25.4</td>
</tr>
<tr>
<td>2011</td>
<td>3 150</td>
<td>1 371</td>
<td>1 779</td>
<td>21.1</td>
<td>18.8</td>
<td>23.2</td>
</tr>
</tbody>
</table>

3.2 thousands newborns died in the period of their first 12 months of life because of various diseases, poisoning, and traumas in 2011. The increase in the Infant Mortality Rate (starting from 2004) is caused by the country’s transition to the WHO-recommended Live Birth Criteria and infant mortality accordingly, so the Birth, Marriage and Death Registration Offices began registering of deaths of newborns with low weight (starting from 500 gr.) and additional signs of life. Within period 2005-2007 the rate growth is largely associated with ongoing transition of the country to new criteria of live births, when health facilities of the republic have been continuing to tune up their system of newborns death registration system in line with these requirements.

4 Examples for visualization

### Sahiyyə Health

#### 2.7. Hamila qadınların xastalananması

*Morbidity among pregnant women*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemiya</td>
<td>11.1</td>
<td>20.0</td>
<td>18.2</td>
<td>21.0</td>
<td>22.2</td>
<td>22.7</td>
<td>23.7</td>
<td>23.1</td>
<td>20.9</td>
</tr>
<tr>
<td>Qan dövrən sistemində xəstəlikləri</td>
<td>0.3</td>
<td>2.2</td>
<td>1.7</td>
<td>1.5</td>
<td>1.4</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Proteinuriya, ödənər və hipertenziv hallar</td>
<td>2.1</td>
<td>1.9</td>
<td>1.6</td>
<td>1.7</td>
<td>1.9</td>
<td>2.3</td>
<td>2.6</td>
<td>2.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Sıxlik-cinsiyət sisteminin xəstəlikləri</td>
<td>0.7</td>
<td>3.0</td>
<td>3.3</td>
<td>3.6</td>
<td>3.4</td>
<td>3</td>
<td>2.9</td>
<td>3.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Hamisəlik dövrəndə venoz fissələri</td>
<td>0.4</td>
<td>1.3</td>
<td>1.0</td>
<td>1.1</td>
<td>0.9</td>
<td>1.3</td>
<td>1.6</td>
<td>1.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Digo xəstəliklər</td>
<td>10.1</td>
<td>3.2</td>
<td>5.8</td>
<td>7.9</td>
<td>8.4</td>
<td>7.4</td>
<td>6.8</td>
<td>6.6</td>
<td>9.7</td>
</tr>
<tr>
<td>Xəstəliklənən hamilə qadınlar</td>
<td>75.3</td>
<td>68.4</td>
<td>68.4</td>
<td>63.2</td>
<td>61.8</td>
<td>62.3</td>
<td>61.4</td>
<td>61.8</td>
<td>61.2</td>
</tr>
<tr>
<td>Casni, fissələ nəfat</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Types of diseases</th>
<th>Types of diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia</td>
<td>Diseases of blood circulation system</td>
</tr>
<tr>
<td></td>
<td>Cases of edema, proteinuria and hypertensive</td>
</tr>
<tr>
<td></td>
<td>Diseases of urino-genital system</td>
</tr>
<tr>
<td></td>
<td>Venous complications during pregnancy</td>
</tr>
<tr>
<td></td>
<td>Other disorders</td>
</tr>
<tr>
<td></td>
<td>Pregnant women</td>
</tr>
<tr>
<td></td>
<td>having no diseases</td>
</tr>
</tbody>
</table>

**Qadınların mətənəsilə şələhli olunan söz üzərində xəstəliklərdən şəbəkəli alınmış hamila qadınların sayı ilə xarakterizə olunur:**

2015-cı ildə hamila qadınların 87.0% fəza terəvət tərəfindən mətənəsilə olunmuşdur. Hamiliyyə yaxşı qalımı qadınların texnimon bir 5 növbəndən biri anemiyindən saxışt çıxmaqlıdır.

*Level of examined women is characterized by number of pregnant women covered by therapist. Share of pregnant women examined by therapist in 2015 had reached 87.0%. Nearly one of each 5 women with completed pregnancy suffered from anemia.*

Source: Men and Women in Azerbaijan 2016

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