

Digital technologies as modern infrastructure for information support of education and scientific communication: the experience of USUST

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Konferencja naukowa

Technologie Informatyczne i Cyberbezpieczeństwo

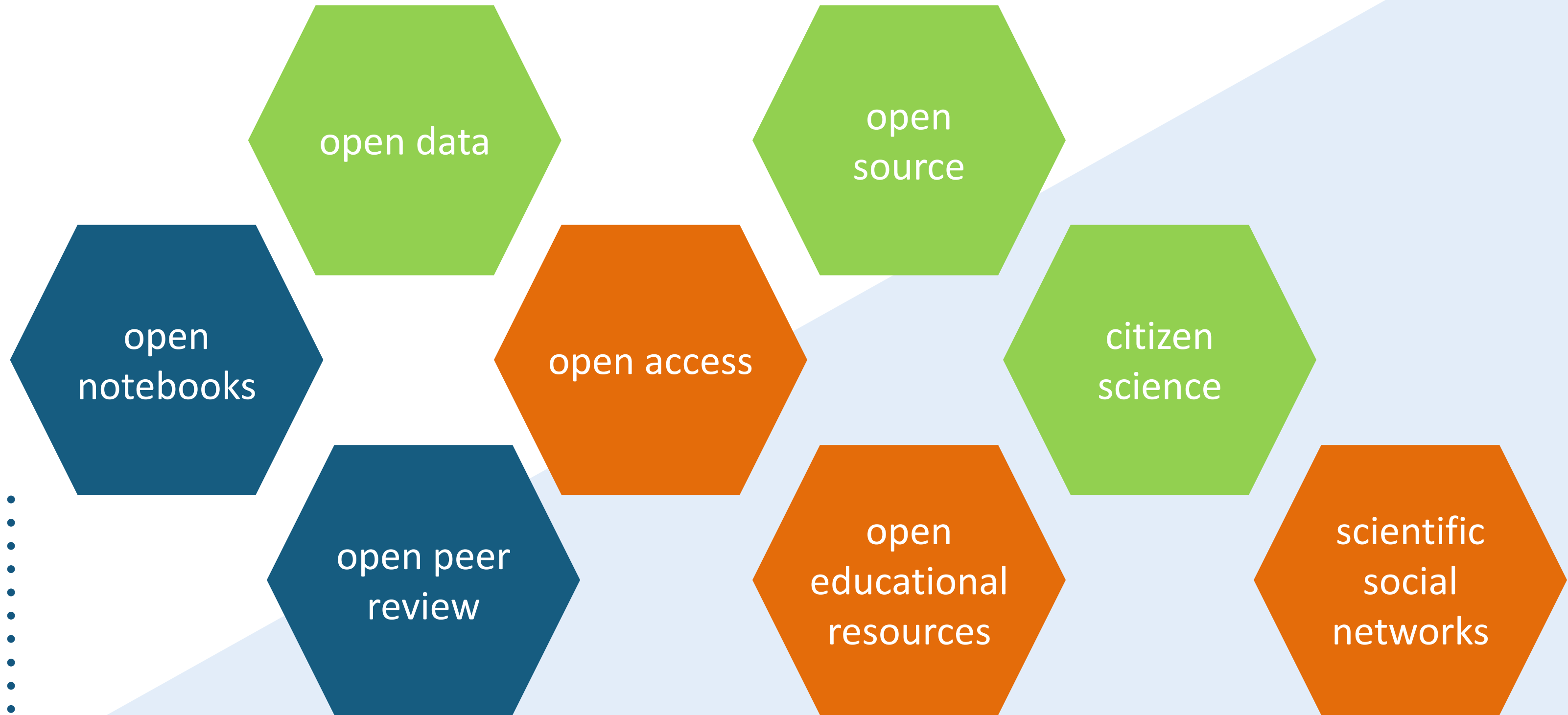
Biała Podlaska, Polska



Open science supporting vulnerable
communities: empowering university
libraries in crisis response



Pillars of the Open Science



CAELUM

Open science supporting
vulnerable communities:
empowering university
libraries in crisis
response



**Co-funded by
the European Union**

Purpose

empower and facilitate university library staff
to transform libraries into hubs of mutual
learning, support and engagement with
vulnerable communities

Partners



23



9



11



11



137



Project web site: caelum.ut.ee

Open data: <https://zenodo.org/communities/caelum/records?q=&l=list&p=1&s=10&sort=newest>

Questionnaires / interviews

Respondents: 72

Considered in cluster analysis:
5 closed questions

Q1

What type of crisis has affected you the most?

War or armed conflict; Mental health or well-being problems in academic life; Disinformation during emergencies (e.g., war, natural disasters); Crisis of the environmental conditions and quality; Information overload and problems related to open science in research; Political turbulence

Q2

Have you ever received support from the library during the crisis?

Yes; No; Not sure

Q3

In a crisis, what forms of support would you expect or seek from a library?

Online library services (e-books, databases, etc.); Physical space for study/work; Internet or Wi-Fi; Trainings and courses; Cultural activities and social interaction; Charging stations; Manuals for the use of academic databases; Assistance with the preparation of official or other documents

Q4

Your age group?

18...25; 26...35; 36...45; 46...60; 61+

Q5

Your role in the academic community?

Academic staff; Library staff; Student; Citizen scientist; Administrative or support staff; Not an academic community member

Four clusters

72 respondents

49%

cluster 1

11%

cluster 2

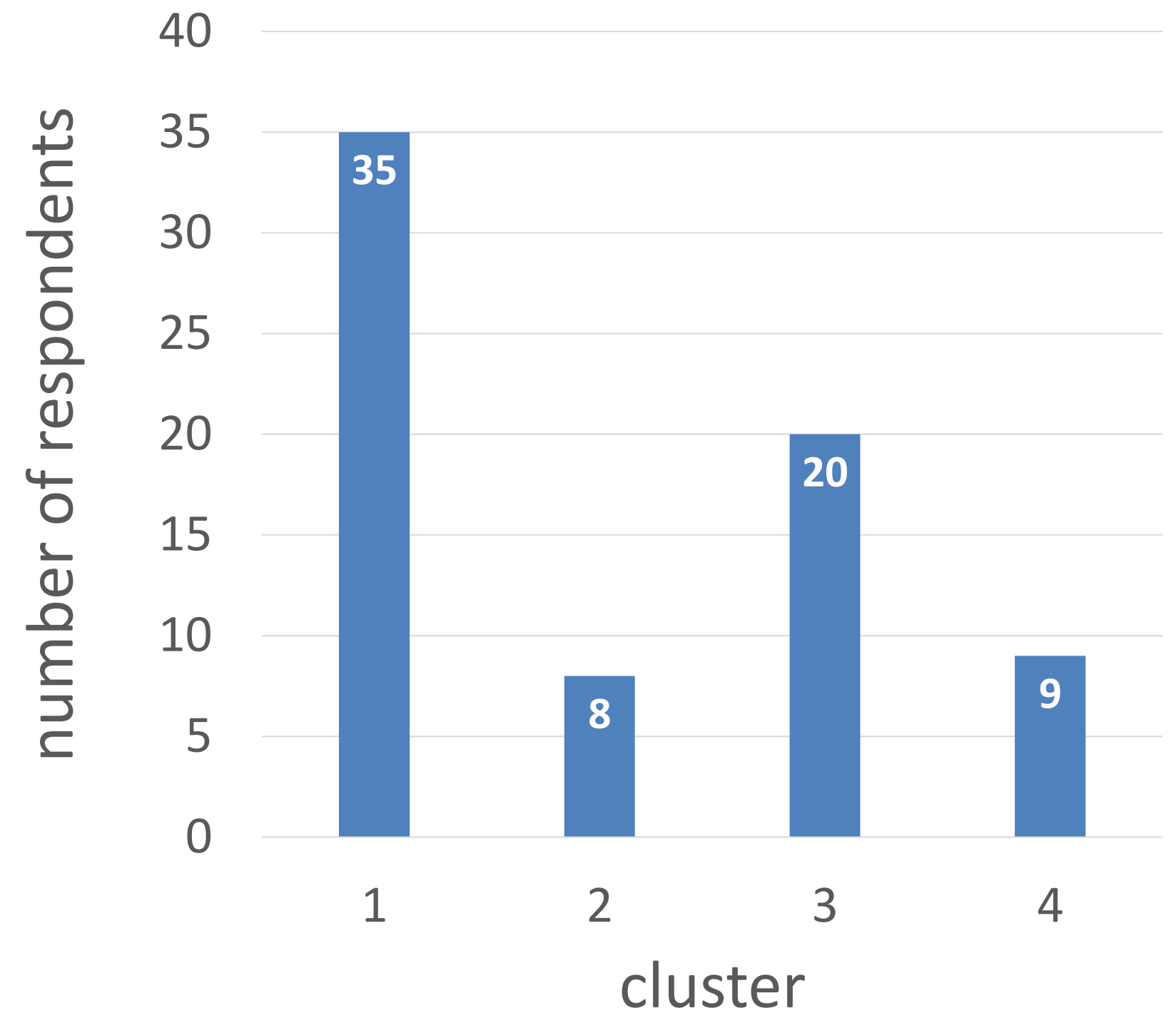
28%

cluster 3

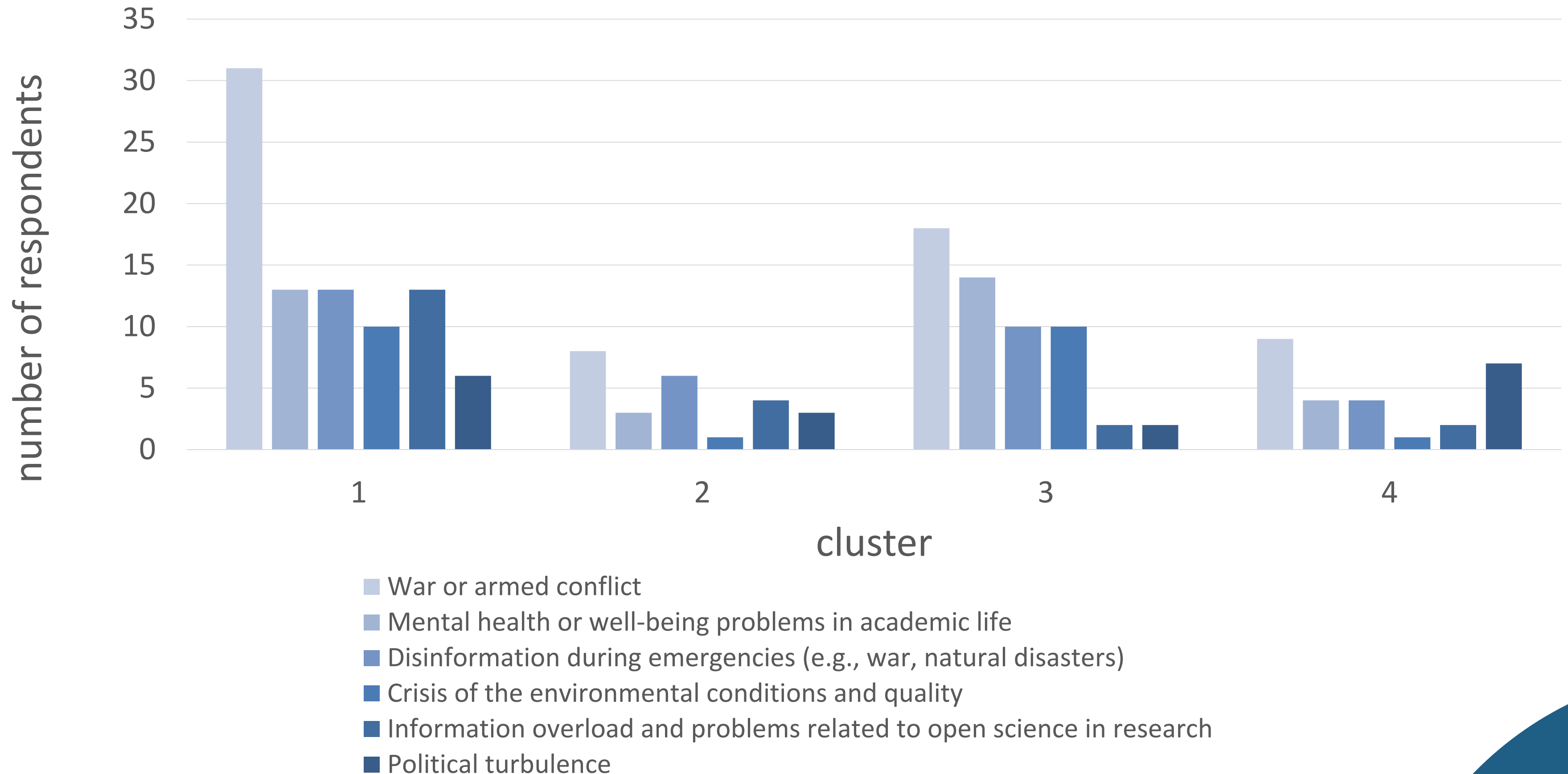
12%

cluster 4

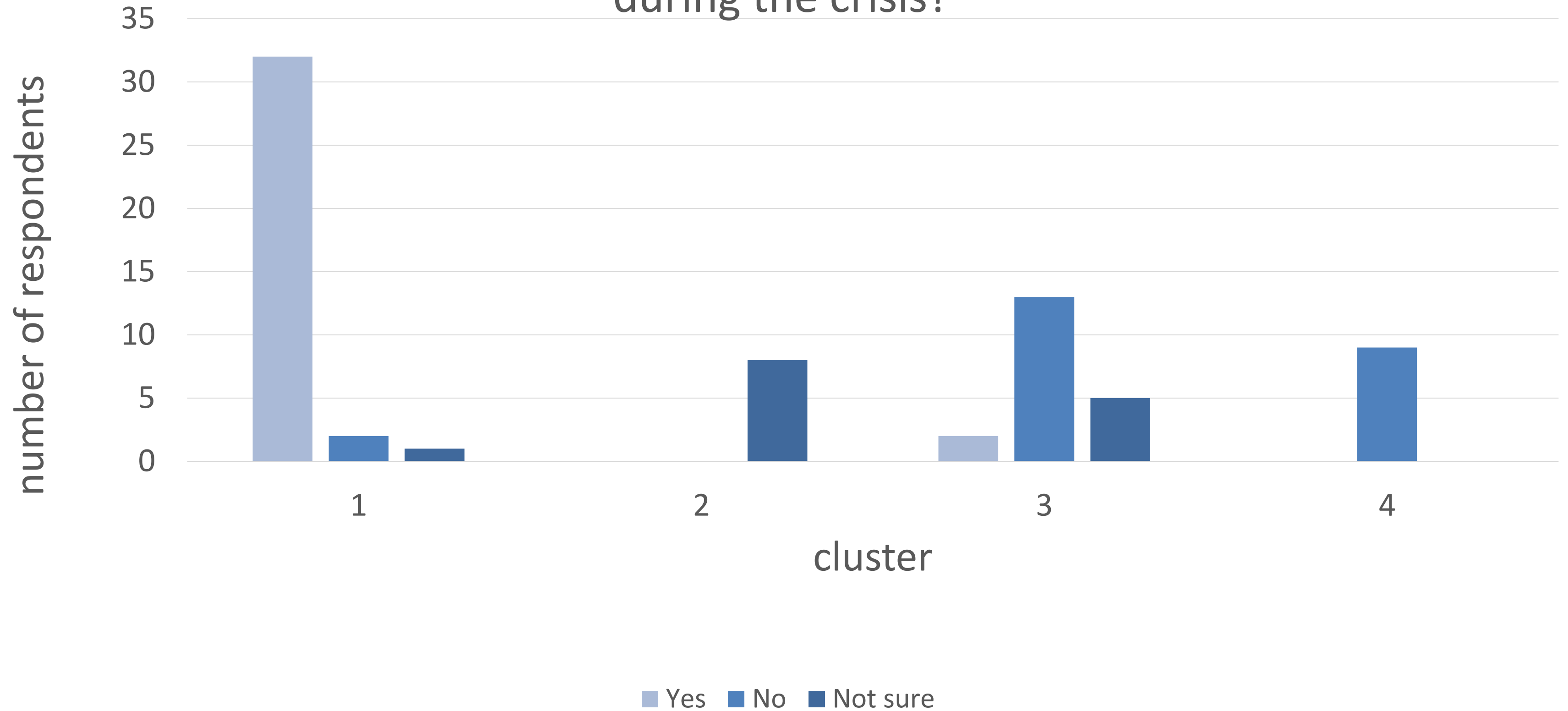
respondents' distribution



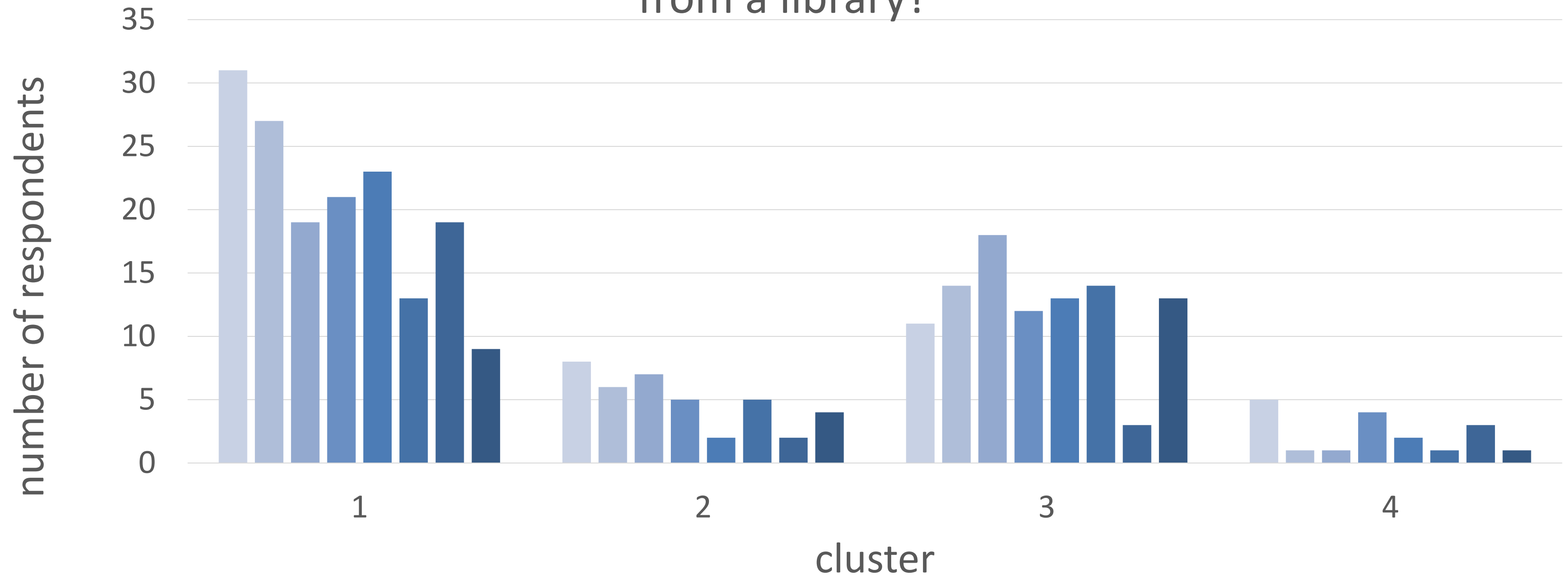
Q1 – What type of crisis has affected you the most?



Q2 – Have you ever received support from the library during the crisis?



Q3 – In a crisis, what forms of support would you expect or seek from a library?



Online library services (e-books, databases, etc.)

Internet or Wi-Fi

Cultural activities and social interaction

Manuals for the use of academic databases

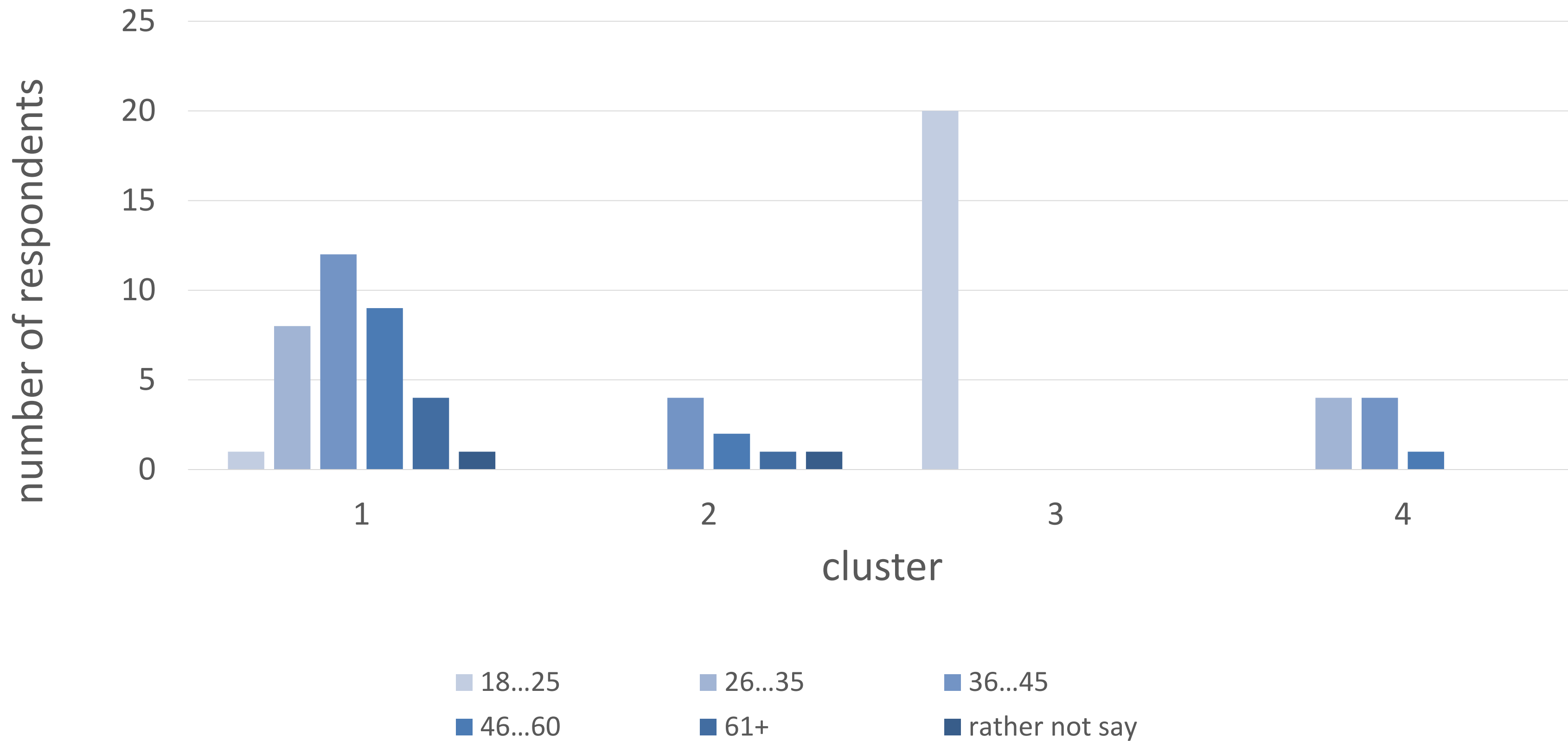
Physical space for study/work

Trainings and courses

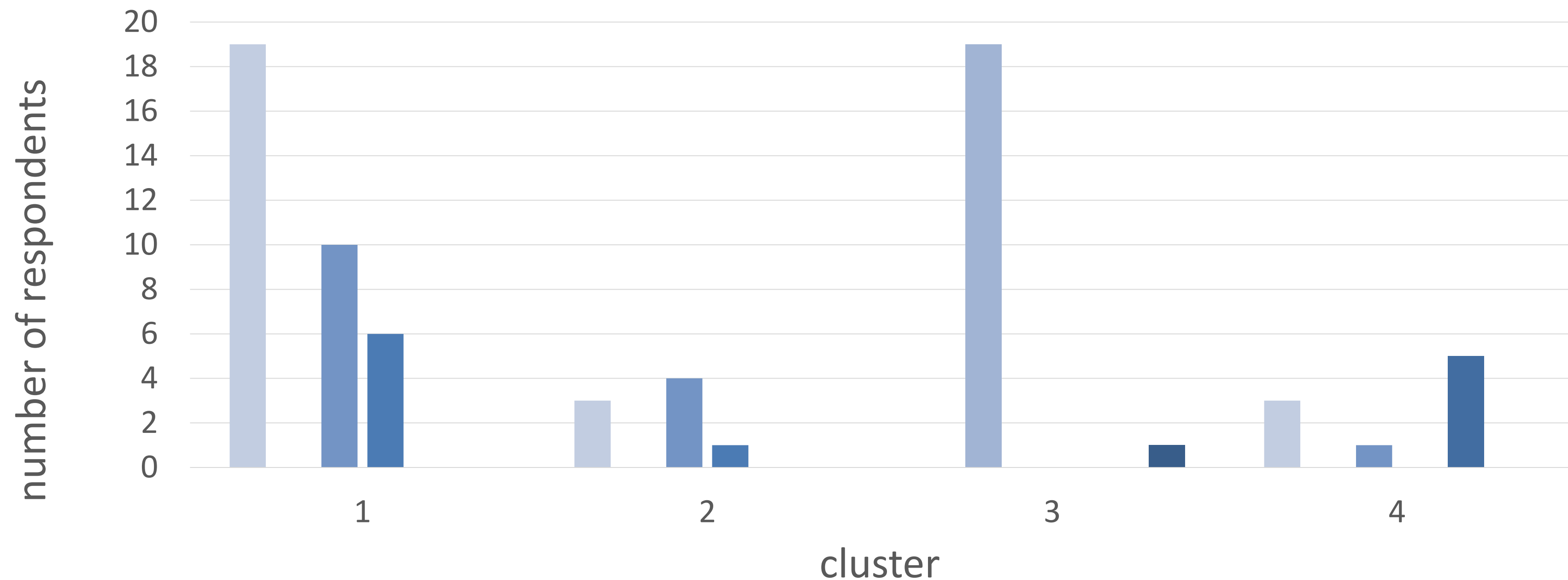
Charging stations

Assistance with the preparation of official or other documents

Q4 – Your age group?



Q5 – Your role in the academic community?



- Academic staff (e.g., educator, researcher)

■ Student
- Library staff

■ Citizen scientist
- Not an academic community member

■ Administrative or support staff

Common clusters' features

Top-1 affected by:
War or armed conflict

C1

Core: 26+ aged, academic and library staff, citizen scientists who received library support.

Affected by: *2nd top* – Mental health or well-being problems in academic life; Disinformation during emergencies; Information overload and problems related to open science in research; *almost (totally) not* – Political turbulence.

Library's support expected: *most* – Online library services; *least* - Assistance with the preparation of official or other documents.

C2

Core: 36-60 aged, academic and library staff who are unsure about receiving the library support

Affected by: *2nd top* – Disinformation during emergencies; *almost (totally) not* – Crisis of the environmental conditions and quality.

Library's support expected: *most* – Online library services; *least* - Cultural activities and social interaction; Manuals for the use of academic databases.

C3

Core: 18-25 aged, students who did not receive library support.

Affected by: *2nd top* – Mental health or well-being problems in academic life; *almost (totally) not* – Information overload and problems related to open science in research; Political turbulence.

Library's support expected: *most* – Internet or Wi-Fi; *least* - Manuals for the use of academic databases.

C4

Core: 26-45 aged, not an academic community member and academic staff who did not receive library support.

Affected by: *2nd top* – Political turbulence; *almost (totally) not* – Crisis of the environmental conditions and quality.

Library's support expected: *most* – Online library services; *least* - Physical space for study/work; Internet or Wi-Fi; Charging stations; Assistance with the preparation of official or other documents.

Semantic analysis

Respondents: 72

Open-ended questions considered: 4

Q1

What do you think helps the library create services and a space of support and safety in times of crisis?

Q2

What activities or services could the library offer to support your community during a crisis?

Q3

Please provide examples of disinformation you have encountered

Q4

Can you give an example of how the disinformation crisis has affected you and/or your family?

Semantic analysis

Respondents: 72

Open-ended questions considered: 4

Clusters' breakdown: Q1 – Q4

C1

Current library: foundation & broad support

Visionnaire library: multi-functional centre

Disinformation examples: wide and diverse range

Disinformation impact: reactive, panic-driven behaviours

C2

Current library: tangible & immediate needs (e.g., safe space, qualified personnel)

Visionnaire library: modern co-working and academic space

Disinformation examples: environmental threats and identity-related propaganda

Disinformation impact: relational and psychological harm

C3

Current library: engagement & information dissemination (student awareness, events)

Visionnaire library: support system for navigating the practical and emotional challenges

Disinformation examples: immediate, tangible dangers

Disinformation impact: significant interpersonal conflict

C4

Current library: visibility & specialized expertise (advertising/information announcements)

Visionnaire library: high-level information broker and a facilitator of expert knowledge

Disinformation examples: viewing the examples through a strategic lens

Disinformation impact: challenge of protecting vulnerable family members

CONCLUSIONS

6/8 pillars of the open science are *implemented* in the USUST

Academic libraries *can* be transformed into hubs of mutual learning, support and engagement with vulnerable communities

The Russian-Ukrainian war has broadened the spectrum of library innovation in higher education institutions in the context of *open knowledge*

RECOMMENDATIONS

Consider *four* target groups to develop libraries

One target group should be dedicated to *students*

Highest priority for the developed services – to reduce the impact of *war* (armed conflict)

The most expected service from libraries – *online* library services

REFERENCES

Kolesnykova, T., Soroka, M., Shcherbatiuk, T., & Rybalka, R. (2025). *Focus Group and Survey Report on the Role of Libraries During Crises Implementation country: Ukraine*. Zenodo. <https://doi.org/10.5281/zenodo.16037768>



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