公益社団法人
日本看護科学学会
Japan Academy of Nursing Science

Survey of Members of the Japan Academy of Nursing Science (JANS): Impacts of COVID-19 on Research Activities and Support Expected from JANS

(Survey Period: July 1 to August 10, 2020)

COVID-19 Nursing Research Countermeasures Committee
Member Surveying Team

Naoki Yoshinaga, Gojiro Nakagami, Yoko Shimpuku, Hiroki Fukahori, Junko Sugama

Survey Report
Version 1, February 1, 2021
Version 2, March 8, 2021
Version 3, May 31, 2021
Version 4, June 21, 2021
Version 5, December 18, 2023

Background

The novel coronavirus infection (COVID-19) spread rapidly and became a pandemic in early 2020, producing a wide range of serious ongoing impacts at all levels of society from individuals to entire populations. The Japanese scientific community is not an exception: the effects of the declaration of state of emergency and other aspects of the COVID-19 pandemic have required researchers to conform to rigorous behavioral restrictions and shift to working from home and giving classes remotely. The requests to stay home and temporarily close businesses have interrupted research activities. Many positive changes for conducting research were observed according to a survey on the global scientific research community conducted by ResearchGate [1]: 46% of respondents "spent more time on researching and reading articles," 46% "spent more time on writing manuscripts and submitting them for publication," and 61% "spent less time for teaching" since entering the pandemic. At the same time, 52% answered that they "spent less time on experiments and surveys," suggesting a reduction concerning actual effort spent on "creating knowledge" by the community as a whole. Similar findings were obtained in a survey conducted in Japan, in which approximately 50% of scientific researchers answered that they "spent less time on research" [2].

The expected impacts of the COVID-19 pandemic are varied for members of the scientific community depending on their field. For example, university-based nursing faculty staff are required to spend a greater proportion of their time teaching compared with staff in other areas, and they are also expected to spend more time for undergraduate education, a large portion of which consists of practicum. Furthermore, the majority of nursing faculty staff are female, which makes them more likely to be affected by interference to their research activities linked to life events. This has been recognized as a problem for nursing faculty staff even before the pandemic [3]. It is possible that such factors that interfere with research activities have been worsened by the impacts of the COVID-19 pandemic. However, limited data are available on the practical impacts and problems experienced by the scientific community in nursing in the COVID-19 pandemic. In Japan, the nationwide state of emergency was declared on April 17, 2020. Although it was lifted on May 25, 2020, it was unknown whether infections would spread again, in which case intermittent periods of similar conditions would be repeated. Therefore, identifying the impacts of the COVID-19 pandemic on research activities experienced by the scientific community in nursing and developing measures needed by researchers to support their research activity are urgent objectives.

This study thus conducted an online survey on members of the Japan Academy of Nursing Science (JANS), the largest scientific community in nursing in Japan, to obtain data on the effects of the COVID-19 pandemic on research activities and the types of support provided by JANS that would be helpful for researchers.

Outline of methods

Study design: Cross-sectional online survey

Participants: JANS members who provided their consent to participate in the survey

Survey period: July 1 to August 10, 2020

Ethical considerations: This survey was conducted with the approval of the Institutional Review Board of the University of Miyazaki (Approval no. O-0733 [dated June 29]). Survey questionnaires were distributed using the online member management system. Data of participants who checked the consent box for participation in the questionnaire were included in the analysis.

Analysis: Descriptive statistics are presented for all items as a first report. For categorical variables in single-choice items, stacked bar charts of the various options are presented. For categorical variables with multiple options, stacked bar charts of “Yes” and “No” are presented. Continuous variables are presented by calculating the mean values. Free-response questions are presented after confirming with multiple researchers that personally identifiable information has not been included.

Core members of the survey team: Naoki Yoshinaga (Board Member, COVID-19 Nursing Research Countermeasures Committee; Board Member, Young Scientists Committee; Associate Professor, University of Miyazaki), Gojiro Nakagami (Board Member, COVID-19 Nursing Research Countermeasures Committee; Chairperson, Young Scientists Committee; Associate Professor, The University of Tokyo), Yoko Shimpuku (Board Member, COVID-19 Nursing Research Countermeasures Committee; Board Member, Young Scientists Committee; Professor, Hiroshima University), Hiroki Fukahori (Board Member, COVID-19 Nursing Research Countermeasures Committee; Chairperson, Committee for Research and Promotion of Science; Professor, Keio University), Junko Sugama (Chairperson, COVID-19 Nursing Research Countermeasures Committee, Vice-chairperson of the Board of Directors; Professor, Kanazawa University).

Results

The collected results are presented in graphs and other figures after the questionnaire items below.

I. If you wish to provide consent to participate in this survey, please click to check the box below and proceed with the questions. If you wish not to provide consent, please close the browser.

Q1_1

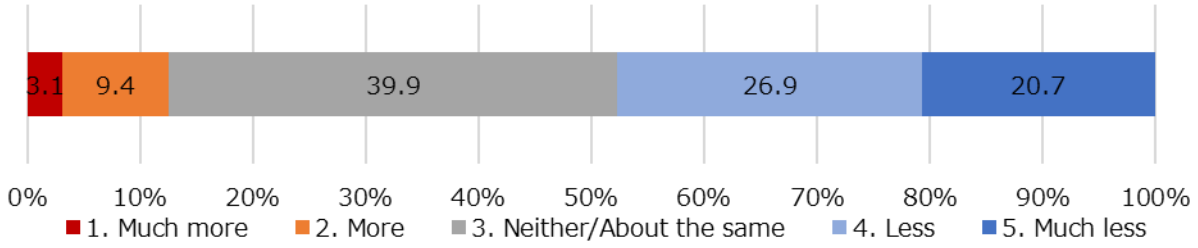
☐ I provide my consent to participate in this survey

Consent was obtained from 1,532 of 9,524 members (response rate: 16.1%) *[During the survey period, announcements were made on the Academy's website and email-based requests for cooperation were also sent to 9,447 members who had registered their e-mail addresses]*

II. The following items are about your research activities in the previous three months (April to June 2020) while under the social impacts of the COVID-19 pandemic.

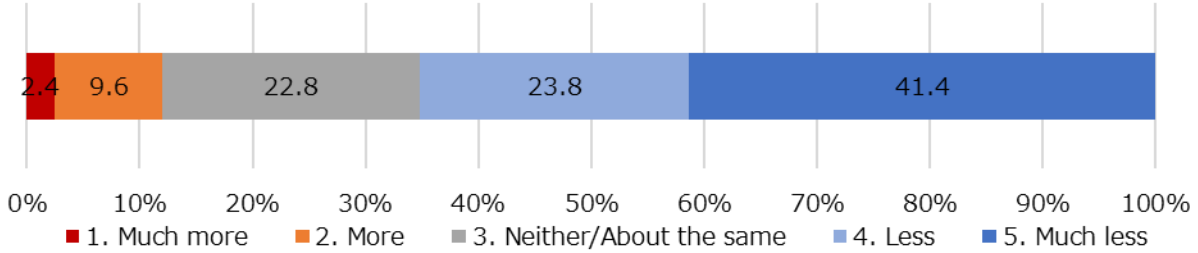
Q2_2

Q1. How much has your motivation to your research activities changed during the COVID pandemic? (n=1,530)



Q2_2

Q2. How much has the total time that you spend on your research activities changed during the COVID-19 pandemic? Please select the option that best describes your situation. (n=1,526)

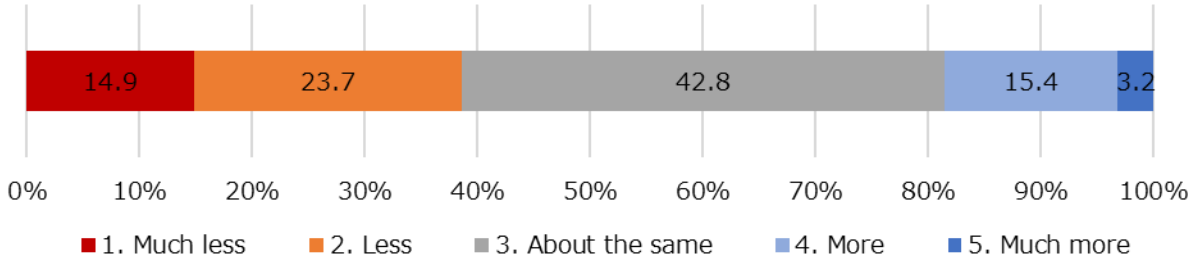


Q3. The following is an item from a questionnaire survey conducted by ResearchGate, a social networking service for researchers. How has the time you spend on the following activities changed during the COVID-19 pandemic? Please select the option that best describes your situation.
(Reference: [ResearchGate survey]: https://www.researchgate.net/institution/ResearchGate/post/5e81f09ad785cf1ab1562183_Report_COVID-19_impact_on_global_scientific_community)

	1. Much less	2. Less	3. About the same	4. More	5. Much more
1. Literature search	1	2	3	4	5
2. Writing papers	1	2	3	4	5
3. Writing grants	1	2	3	4	5
4. Career opportunities (activities for career development such as collecting information and writing documents related to employment, new career opportunities, or promotions)	1	2	3	4	5
5. Experiments/Surveys	1	2	3	4	5
6. Teaching	1	2	3	4	5
7. Lab management	1	2	3	4	5
8. Collaborating with other scientists	1	2	3	4	5
9. Purchasing lab equipment (e.g. equipment, materials, office supplies, and software)	1	2	3	4	5
10. Attending conferences (attending research-related conferences and events)	1	2	3	4	5

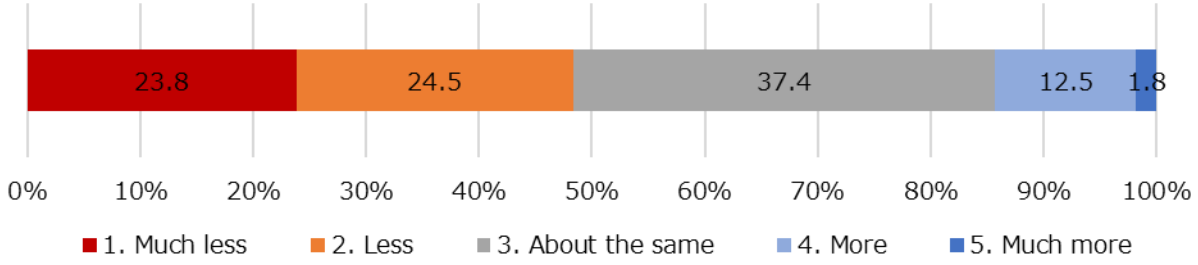
Q2_Q3-1

1. Literature search (n=1,525)



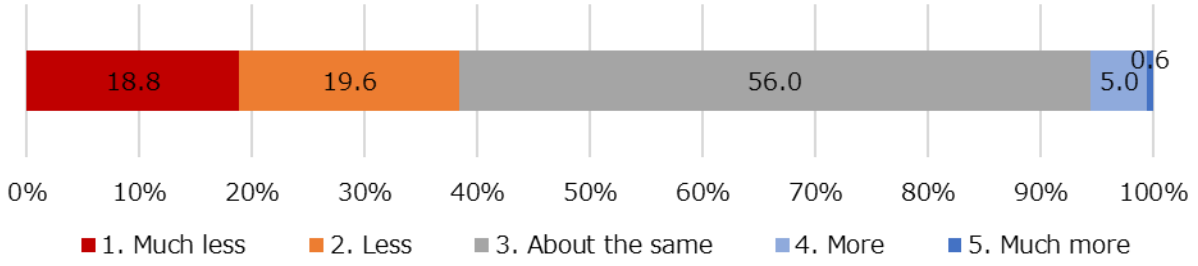
Q2_Q3-2

2. Writing papers (n=1,516)



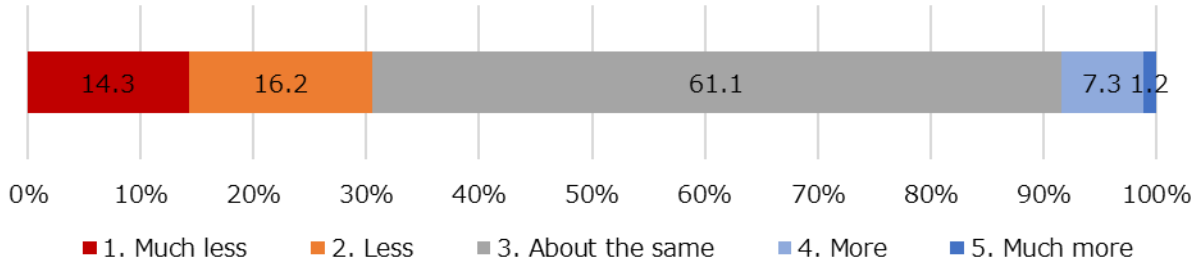
Q2_Q3-3

3. Writing grants (n=1,502)



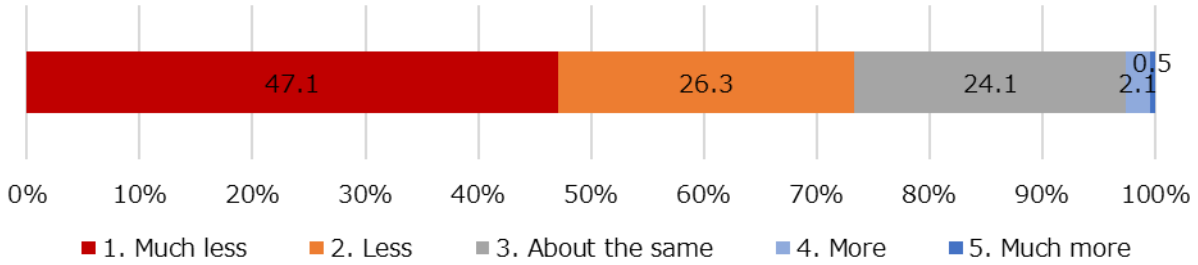
Q2_Q3-4

4. Career opportunities (n=1,516)



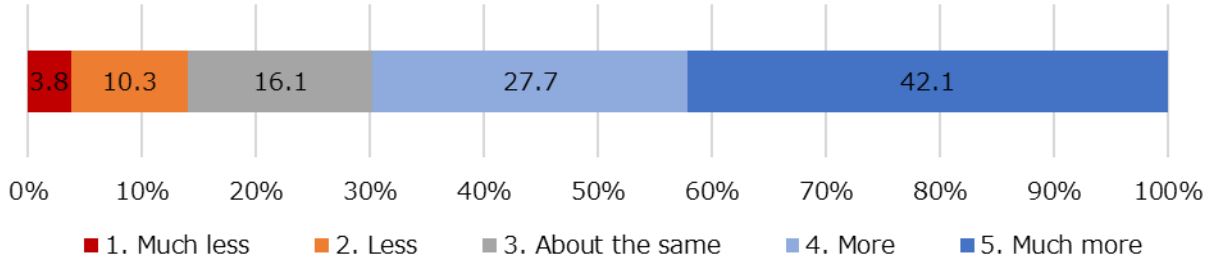
Q2_Q3-5

5. Experiments/Surveys (n=1,505)



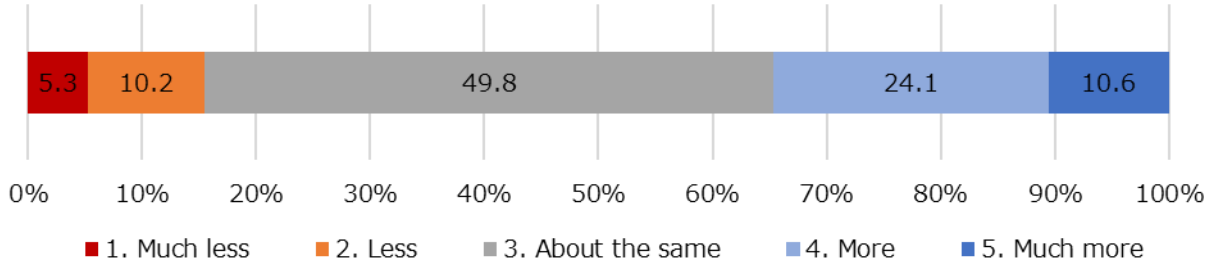
Q2_Q3-6

6. Teaching (n=1,512)



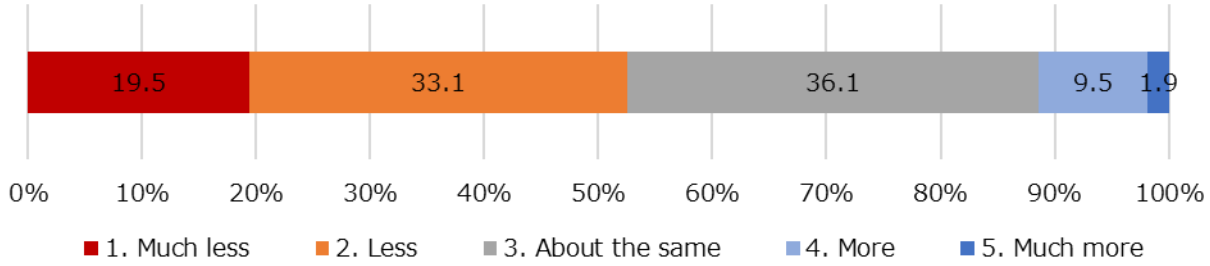
Q2_Q3-7

7. Lab management (n=1,497)



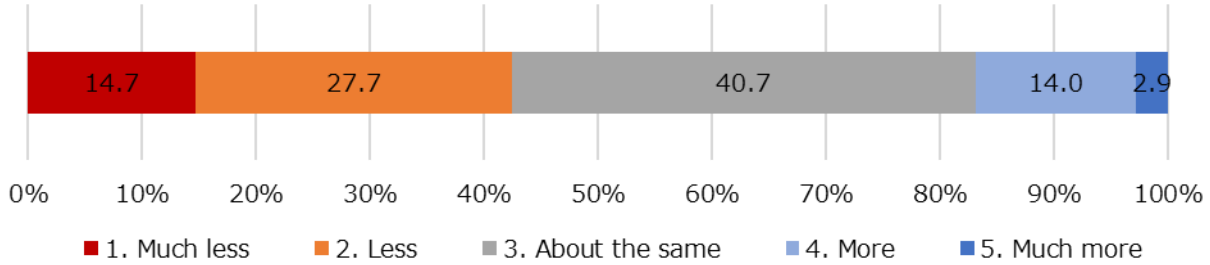
Q2_Q3-8

8. Collaborating with other scientists (n=1,510)



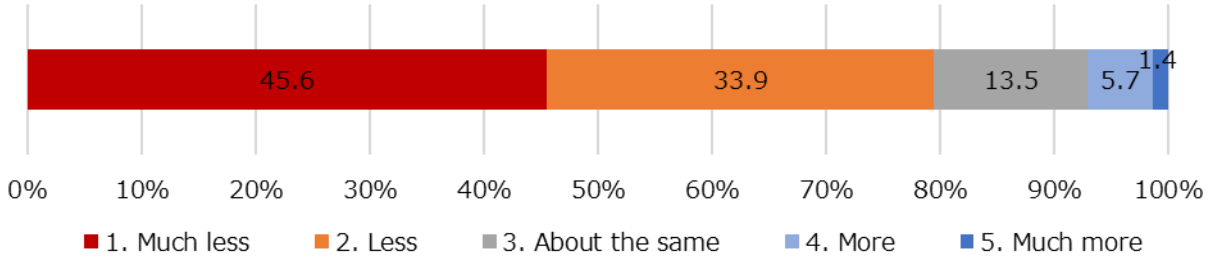
Q2_Q3-9

9. Purchasing lab equipment (n=1,503)



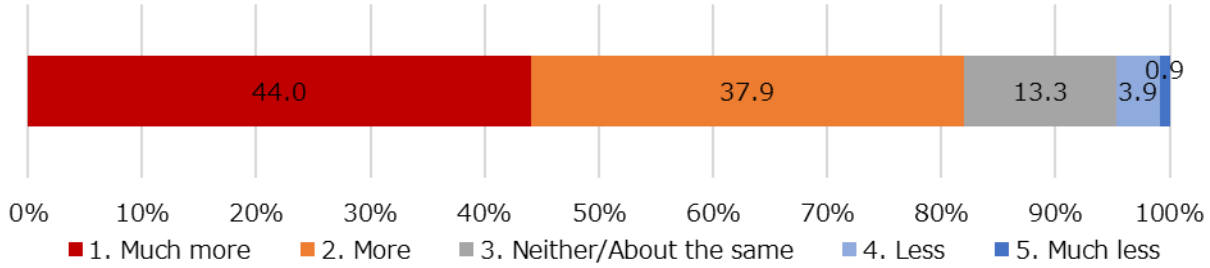
Q2_Q3-10

10. Attending conferences (n=1,519)



Q2-Q4

Q4. How much were your overall research activities impacted in the COVID-19 pandemic? Please select the option that best describes your situation. (n=1,526)



> If you selected “4. Not very much” or “5. Not at all,” please explain the reasons or measures you have taken.

Note: Answers to free-response questions are only available in the Japanese version.

Q5. The following are items on factors that could impact your research activities during the COVID-19 pandemic. How much did these factors impact your research activities? Please select the option that best describes your situation. Please select “Non-applicable” if the item does not apply to you (e.g., if you do not have research assistants, or if do not have teaching duties).

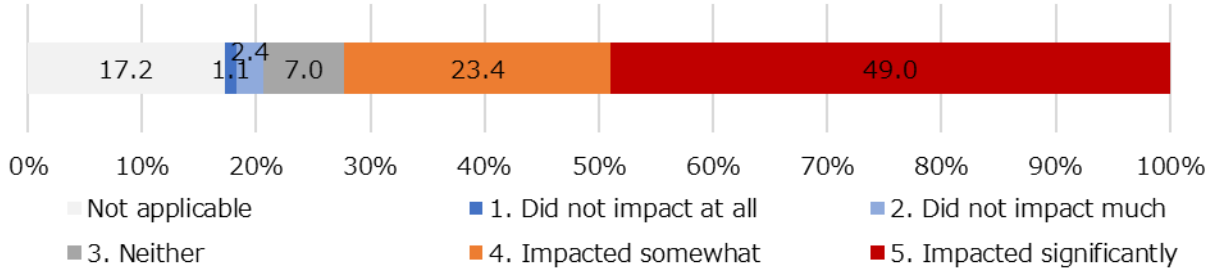
	Non-applicable	1. Did not impact (my research activities) at all	2. Did not impact (my research activities) much	3. Neither	4. Impacted (my research activities) somewhat	5. Impacted (my research activities) significantly
1. Difficulty in in-person contact with study participants	1	2	3	4	5	6
2. Difficulty in entering research facilities/institutions	1	2	3	4	5	6
3. Difficulty in securing means of transport for domestic travel and business trips	1	2	3	4	5	6
4. Difficulty in securing means of transport for overseas travel and business trips	1	2	3	4	5	6
5. Difficulty in accessing equipment, literature, materials, data, computers, and software necessary for research	1	2	3	4	5	6
6. Difficulty in using research technical assistants (including doctoral research assistants)	1	2	3	4	5	6
7. Research efficiency lowered by working from home	1	2	3	4	5	6
8. Difficulty in holding meetings with co-researchers inside/outside your affiliated organization	1	2	3	4	5	6
9. Decreased function of departments, organizations, and institutions related to research (administration, ethics review boards, organizations participating in the research project, partners in outsourcing for surveys and research)	1	2	3	4	5	6
10. Difficulty securing the necessary budget owing to changes to the research plan	1	2	3	4	5	6
11. Difficulty of peer support and communication related to research	1	2	3	4	5	6

12. Slowdown in joint research with co-researchers	1	2	3	4	5	6
13. Slowdown in joint research with graduate students	1	2	3	4	5	6
14. Increase in time for research supervision	1	2	3	4	5	6
15. Delays in the review and publication processes of submitted manuscripts (Japanese/English)	1	2	3	4	5	6
16. Guilt and conflicts in not being able to contribute to COVID-19 measures professionally	1	2	3	4	5	6
17. Increased time spent for lectures (including preparation and assessment)	1	2	3	4	5	6
18. Increased time spent for seminars (including preparation and assessment)	1	2	3	4	5	6
19. Increased time spent for practicum (including preparation and assessment)	1	2	3	4	5	6
20. Increased time spent for clinical practice	1	2	3	4	5	6
21. Increased time spent on the health management of students and staff (e.g., checking health status)	1	2	3	4	5	6
22. Increased time spent on supporting students and staff showing fear of infection	1	2	3	4	5	6
23. Increased time spent on counseling other students and staff (for employment, mental health, economic support)	1	2	3	4	5	6
24. Increased time spent on management/administration (meetings, committee activities, open campus, career workshops)	1	2	3	4	5	6
25. Increased time spent on learning information and communications technology (ICT)	1	2	3	4	5	6
26. Increased time spent on ICT-related support for managers, colleagues, subordinates, and the organization (e.g., installation and support for using online meeting systems)	1	2	3	4	5	6
27. Increased time spent on social contributions related to COVID-19 (e.g., academic society committee activities, public lectures)	1	2	3	4	5	6
28. Increased time spent on housework related to COVID-19	1	2	3	4	5	6
29. Increased time spent on infection prevention and health management related to the effects of COVID-19 in the family	1	2	3	4	5	6
30. Internal and interpersonal conflicts in the family related to COVID-19	1	2	3	4	5	6

31. Increased time spent on childcare owing to COVID-19-related closures of daycares, kindergartens, schools, or restricted attendance of school	1	2	3	4	5	6
32. Increased time spent on care of parents or other elderlies related to COVID-19 (closures of day services and short stays)	1	2	3	4	5	6
33. Guilt and conflicts in not being able to perform COVID-19 measures adequately for the housework, childcare, or care for elderlies/parents (e.g., measures to prevent infection in the home)	1	2	3	4	5	6

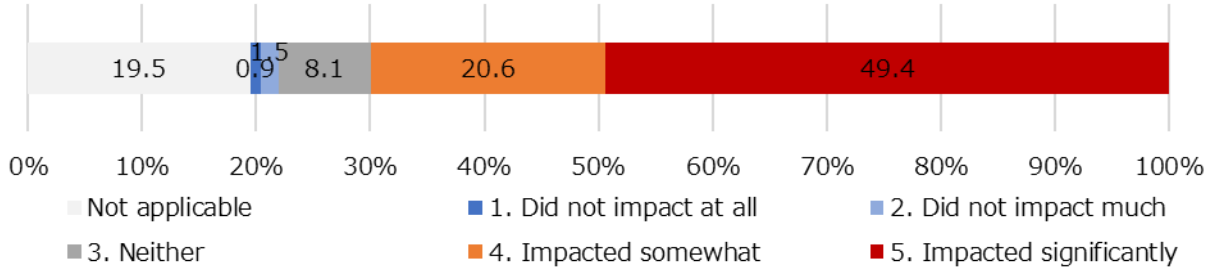
Q2-Q5-1

1. Difficulty in in-person contact with study participants (n=1,520)



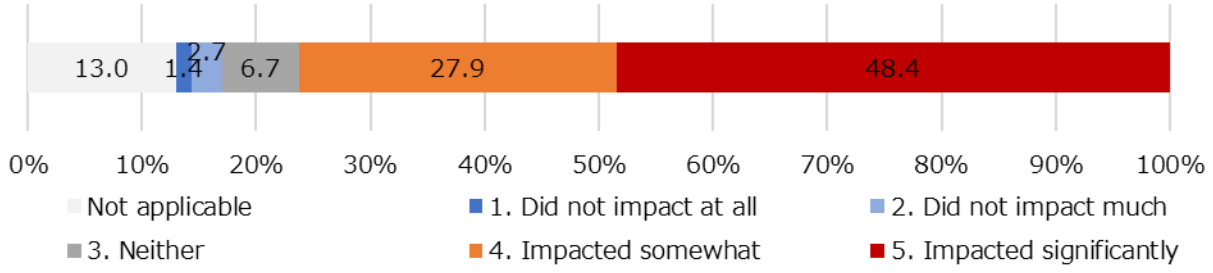
Q2-Q5-2

2. Difficulty in entering research facilities/institutions (n=1,509)



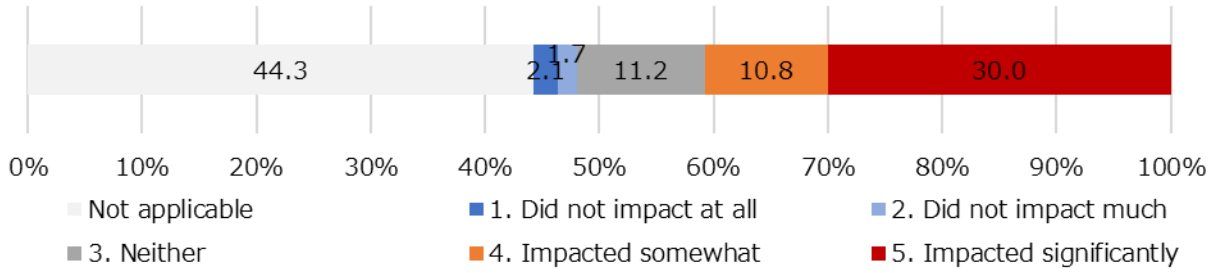
Q2-Q5-3

3. Difficulty in securing means of transport for domestic travel and business trips (n=1,514)



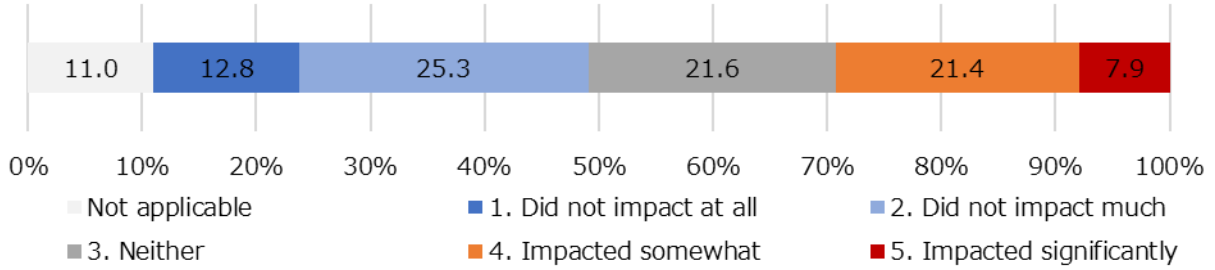
Q2-Q5-4

4. Difficulty in securing means of transport for overseas travel and business trips (n=1,506)



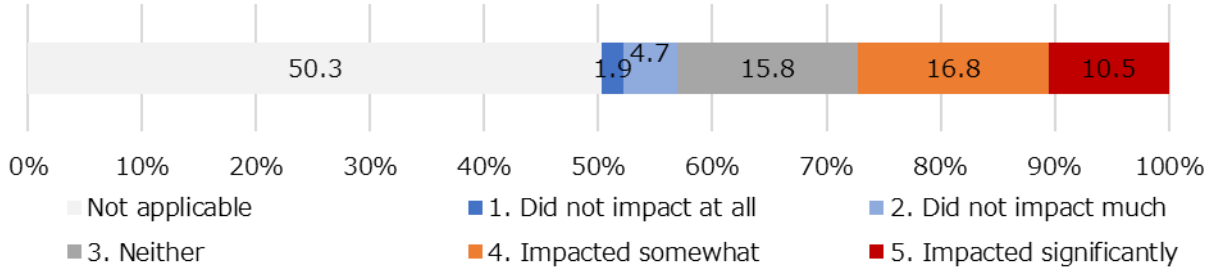
Q2-Q5-5

5. Difficulty in accessing equipment, literature, materials, data, computers, and software necessary for research (n=1,513)



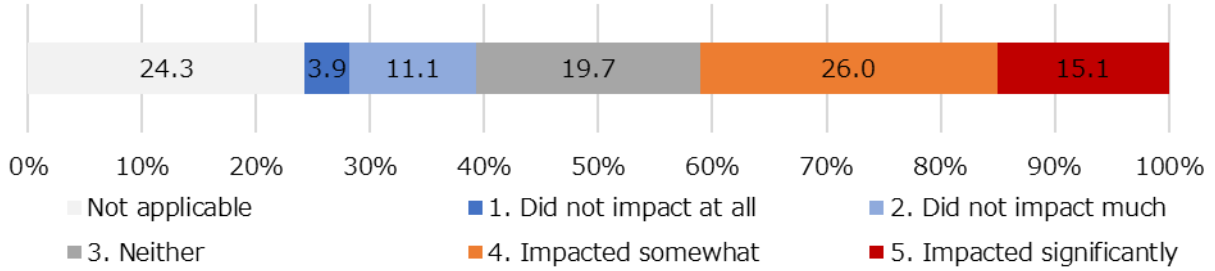
Q2-Q5-6

6. Difficulty in using research technical assistants (including doctoral research assistants) (n=1,502)



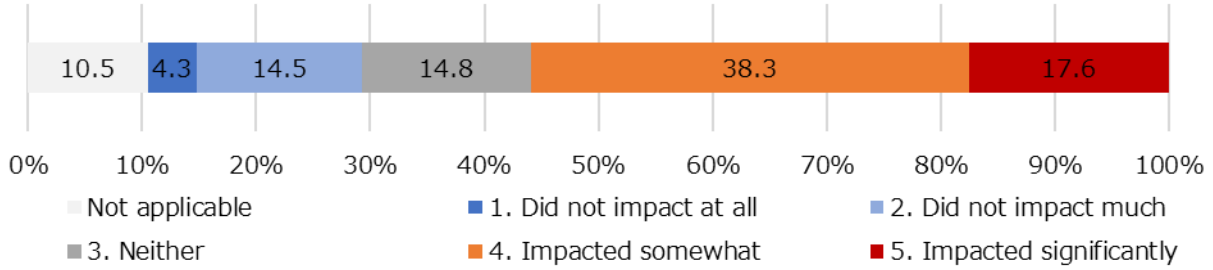
Q2-Q5-7

7. Research efficiency lowered by working from home (n=1,513)



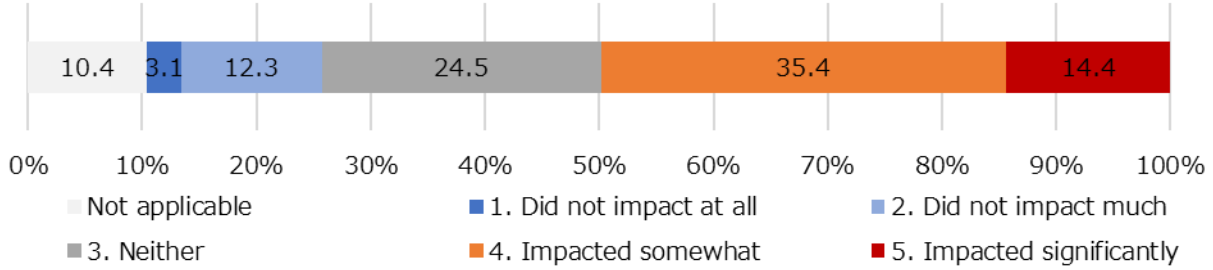
Q2-Q5-8

8. Difficulty in holding meetings with co-researchers inside/outside your affiliated organization (n=1,518)



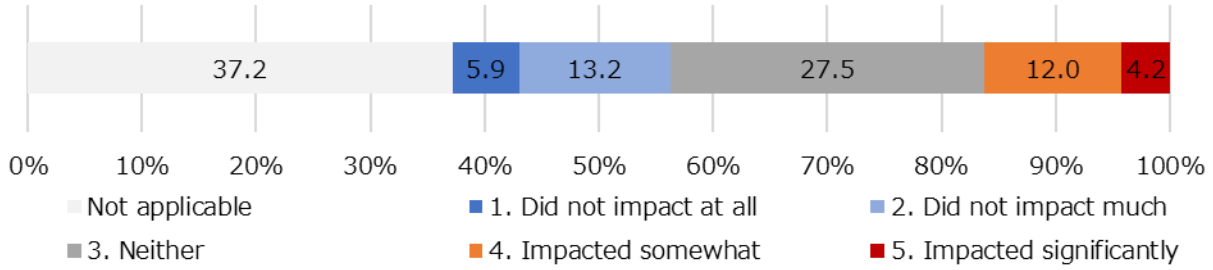
Q2-Q5-9

9. Decreased function of departments, organizations, and institutions related to research (administration, ethics review boards, organizations participating in the research project, partners in outsourcing for surveys and research) (n=1,507)



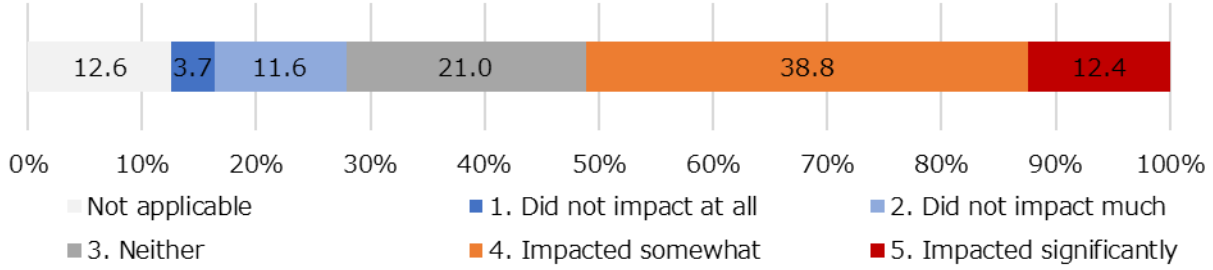
Q2-Q5-10

10. Difficulty securing the necessary budget owing to changes to the research plan (n=1,511)



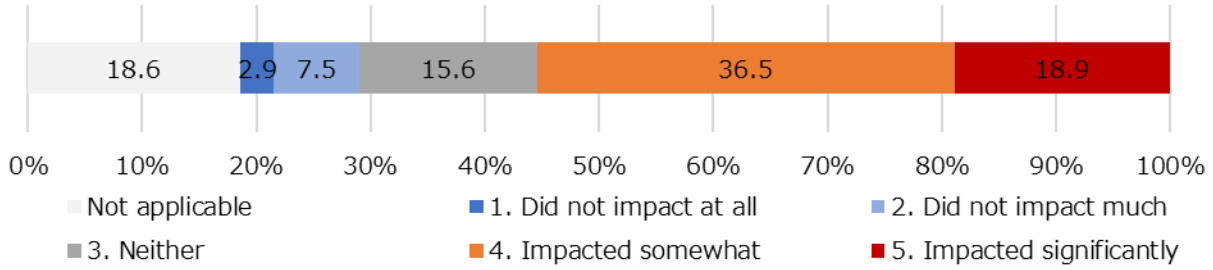
Q2-Q5-11

11. Difficulty of peer support and communication related to research (n=1,507)



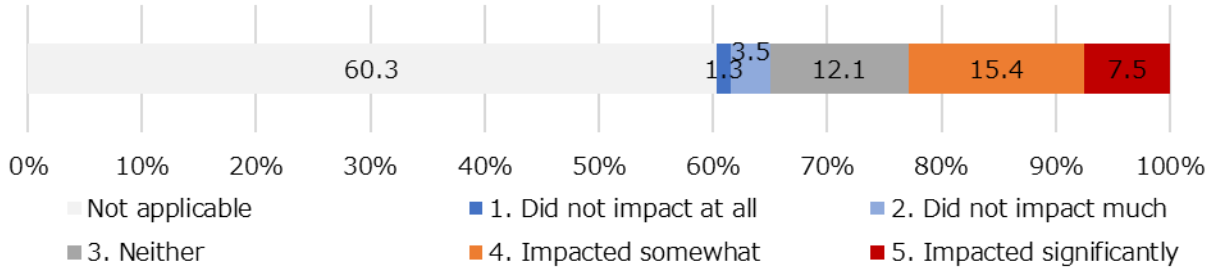
Q2-Q5-12

12. Slowdown in joint research with co-researchers (n=1,508)



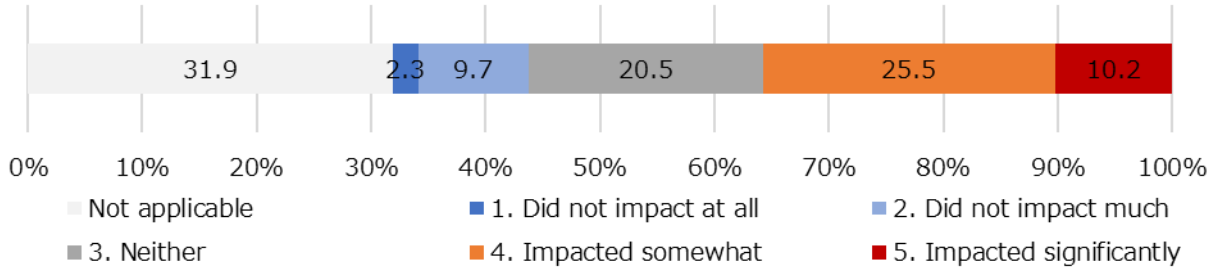
Q2-Q5-13

13. Slowdown in joint research with graduate students (n=1,507)



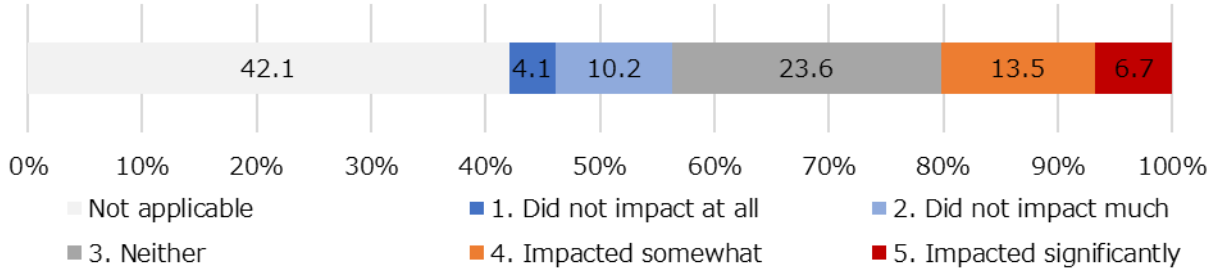
Q2-Q5-14

14. Increase in time for research supervision (n=1,507)



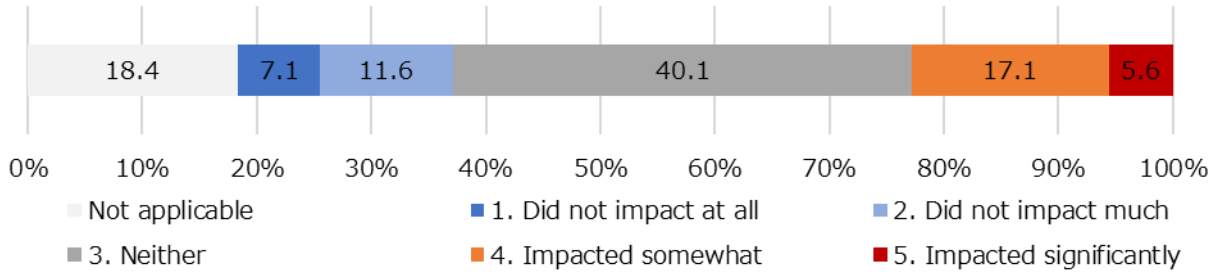
Q2-Q5-15

15. Delays in the review and publication processes of submitted manuscripts (Japanese/English) (n=1,507)



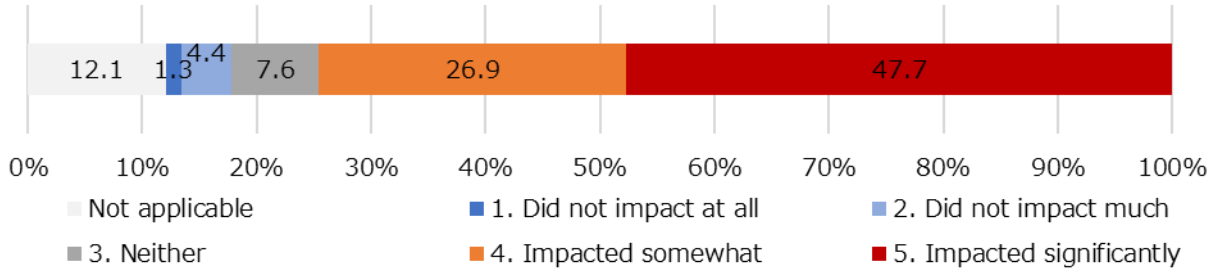
Q2-Q5-16

16. Guilt and conflicts in not being able to contribute to COVID-19 measures professionally (n=1,512)



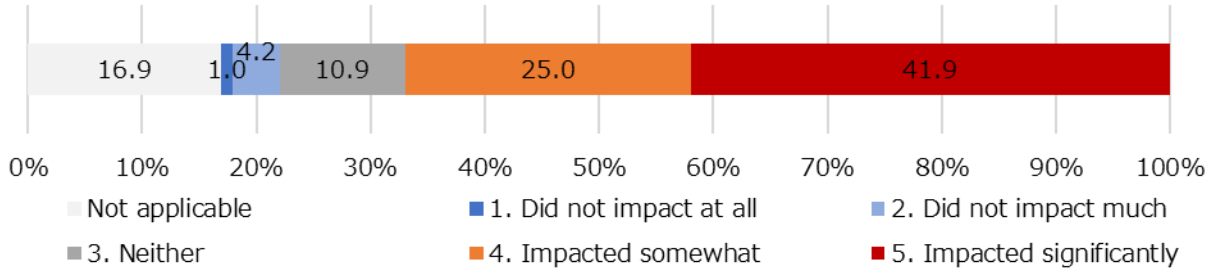
Q2-Q5-17

17. Increased time spent for lectures (including preparation and evaluation) (n=1,514)



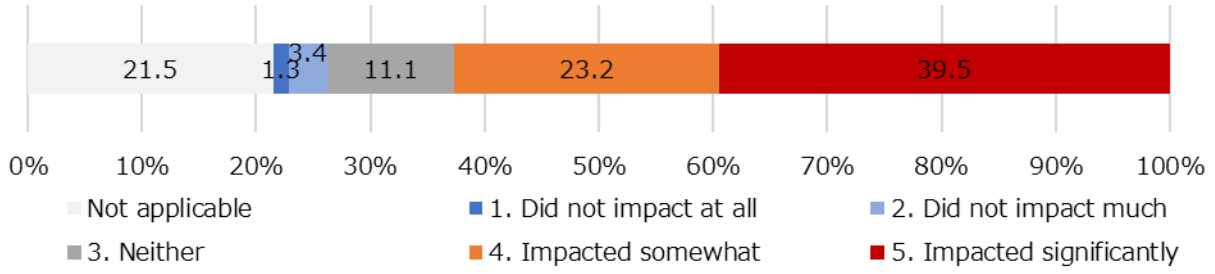
Q2-Q5-18

18. Increased time spent for seminars (including preparation and evaluation) (n=1,502)



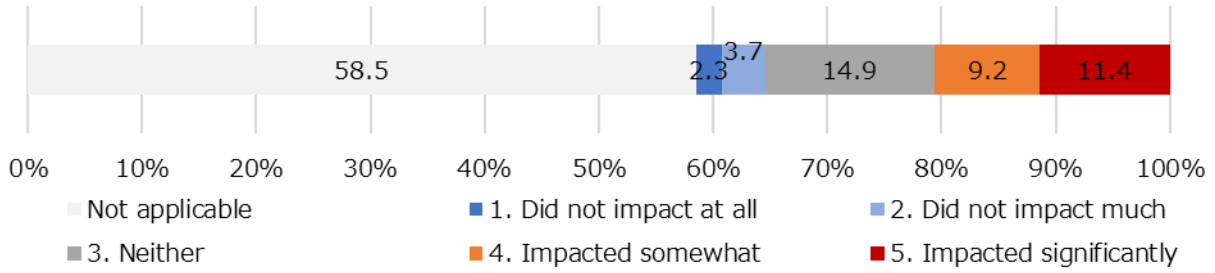
Q2-Q5-19

19. Increased time spent for practicum (including preparation and evaluation) (n=1,504)



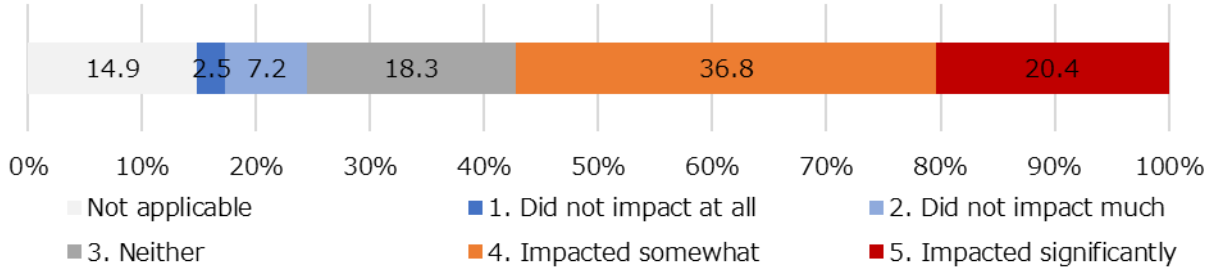
Q2-Q5-20

20. Increased time spent for clinical practice (n=1,498)



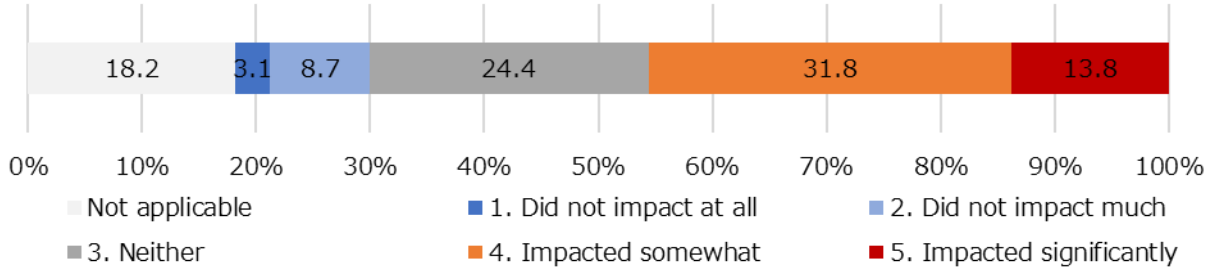
Q2-Q5-21

21. Increased time spent on the health management of students and staff (e.g., checking health status) (n=1,507)



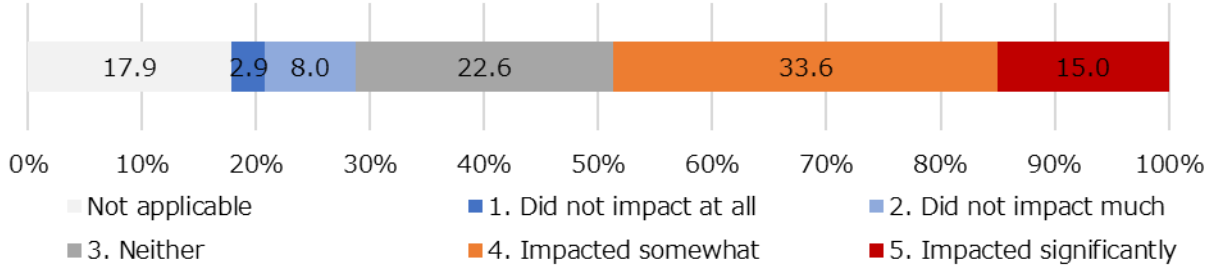
Q2-Q5-22

22. Increased time spent on supporting students and staff showing fear of infection (n=1,510)



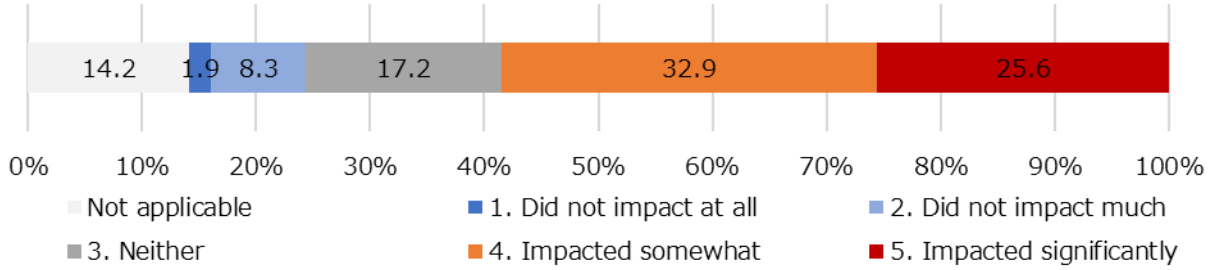
Q2-Q5-23

23. Increased time spent on counseling other students and staff (for employment, mental health, economic support) (n=1,511)



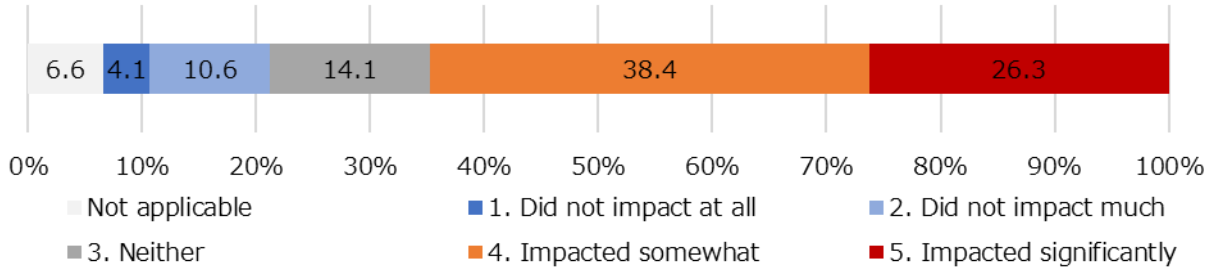
Q2-Q5-24

24. Increased time spent on management/administration (meetings, committee activities, open campus, career workshops) (n=1,509)



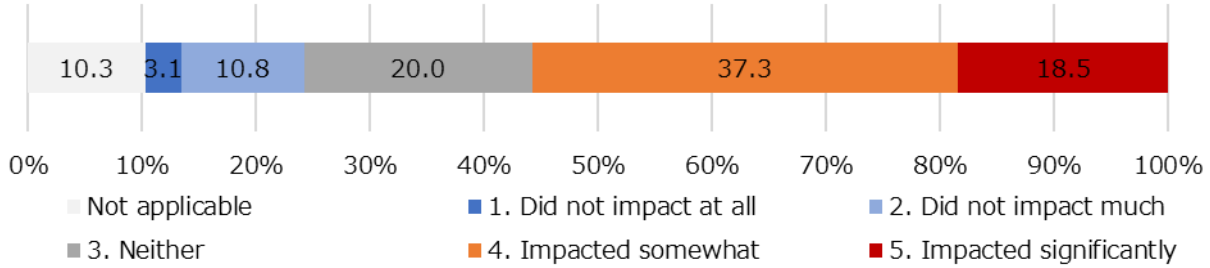
Q2-Q5-25

25. Increased time spent on learning information and communications technology (ICT) (n=1,507)



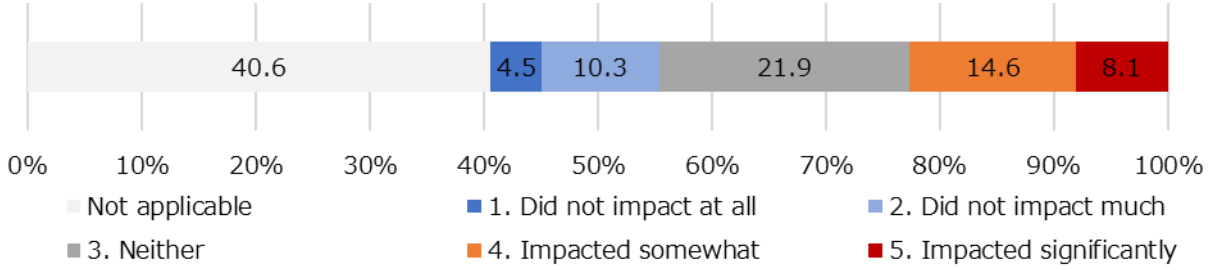
Q2-Q5-26

26. Increased time spent on ICT-related support for managers, colleagues, subordinates, and the organization (e.g., installation and support for using online meeting systems) (n=1,511)



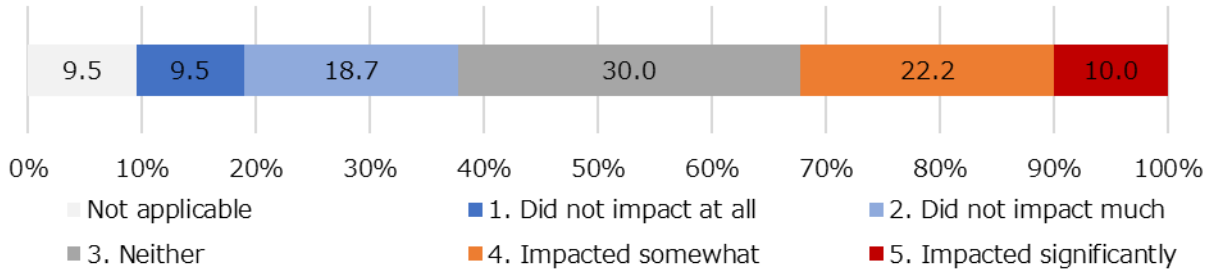
Q2-Q5-27

27. Increased time spent on social contributions related to COVID-19 (e.g., academic society committee activities, public lectures) (n=1,504)



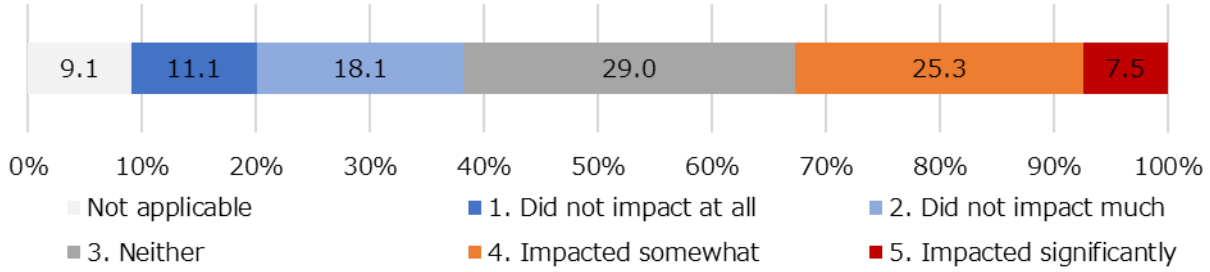
Q2-Q5-28

28. Increased time spent on housework related to COVID-19 (n=1,506)



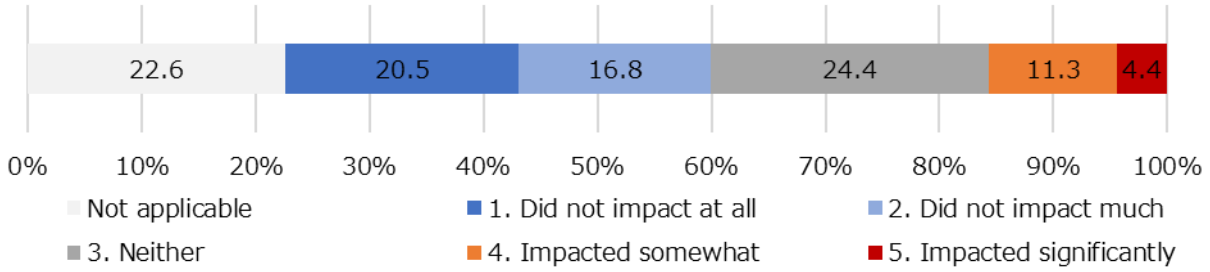
Q2-Q5-29

29. Increased time spent on infection prevention and health management related to the effects of COVID-19 in the family (n=1,511)



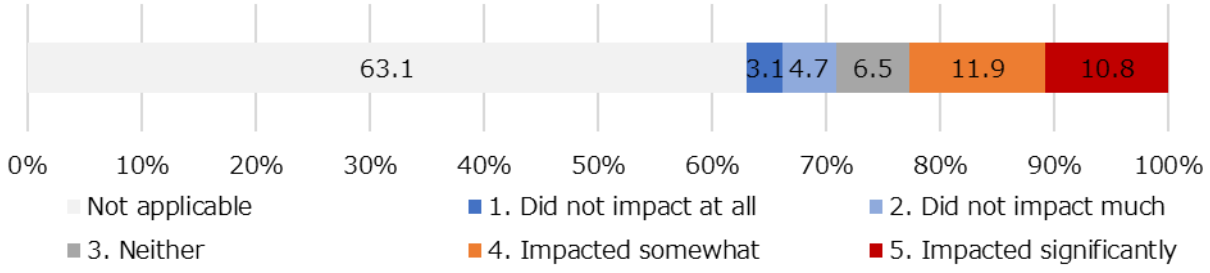
Q2-Q5-30

30. Internal and interpersonal conflicts in the family related to COVID-19 (n=1,508)



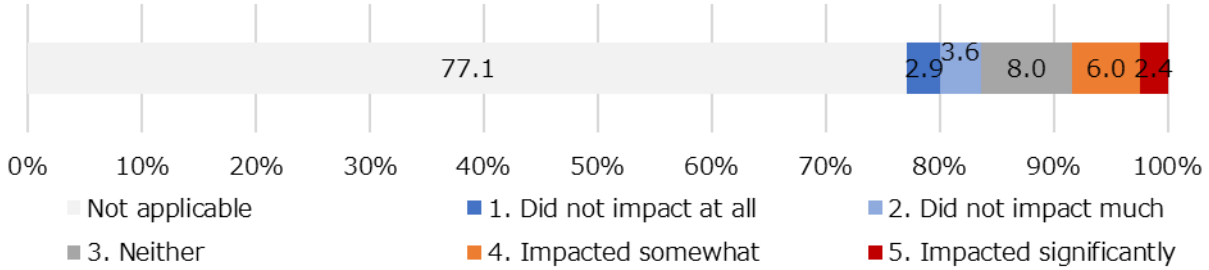
Q2-Q5-31

31. Increased time spent on childcare owing to COVID-19-related closures of daycares, kindergartens, schools, or restricted attendance of school (n=1,506)



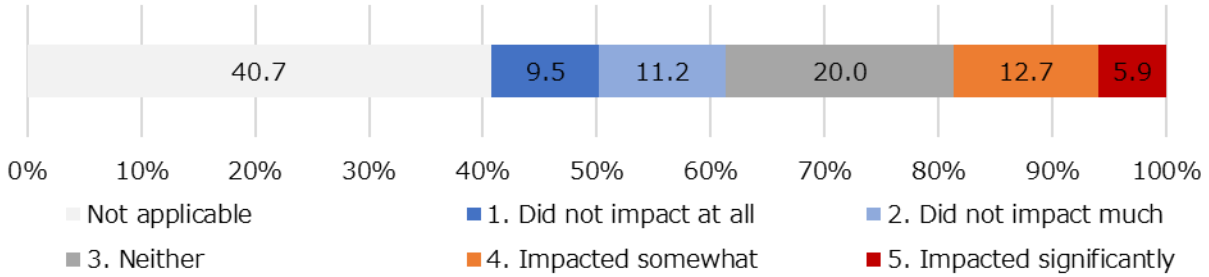
Q2-Q5-32

32. Increased time spent on care of parents or other elderlies related to COVID-19 (closures of day services and short stays) (n=1,508)



Q2-Q5-33

33. Guilt and conflicts in not being able to perform COVID-19 measures adequately for the housework, childcare, or care for elderlies/parents (e.g., measures to prevent infection in the home) (n=1,514)



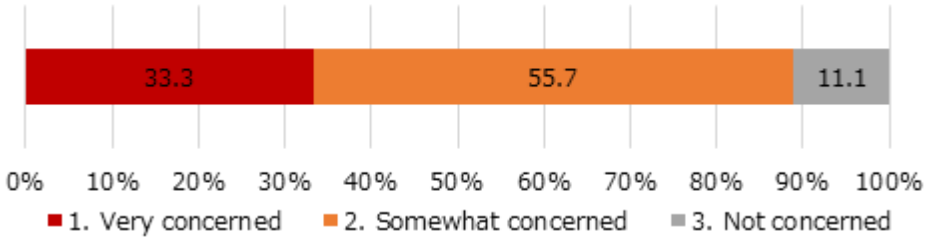
Q2-Q6

Q6. Please note any other factors that have impacted your research activities in the COVID-19 pandemic below.

Note: Answers to free-response questions are only available in the Japanese version.

Q2-Q7

Q7. Do you have concerns and anxieties about your own research activities in the COVID-19 pandemic? Please select the option that best describes your situation. (n=1,519)

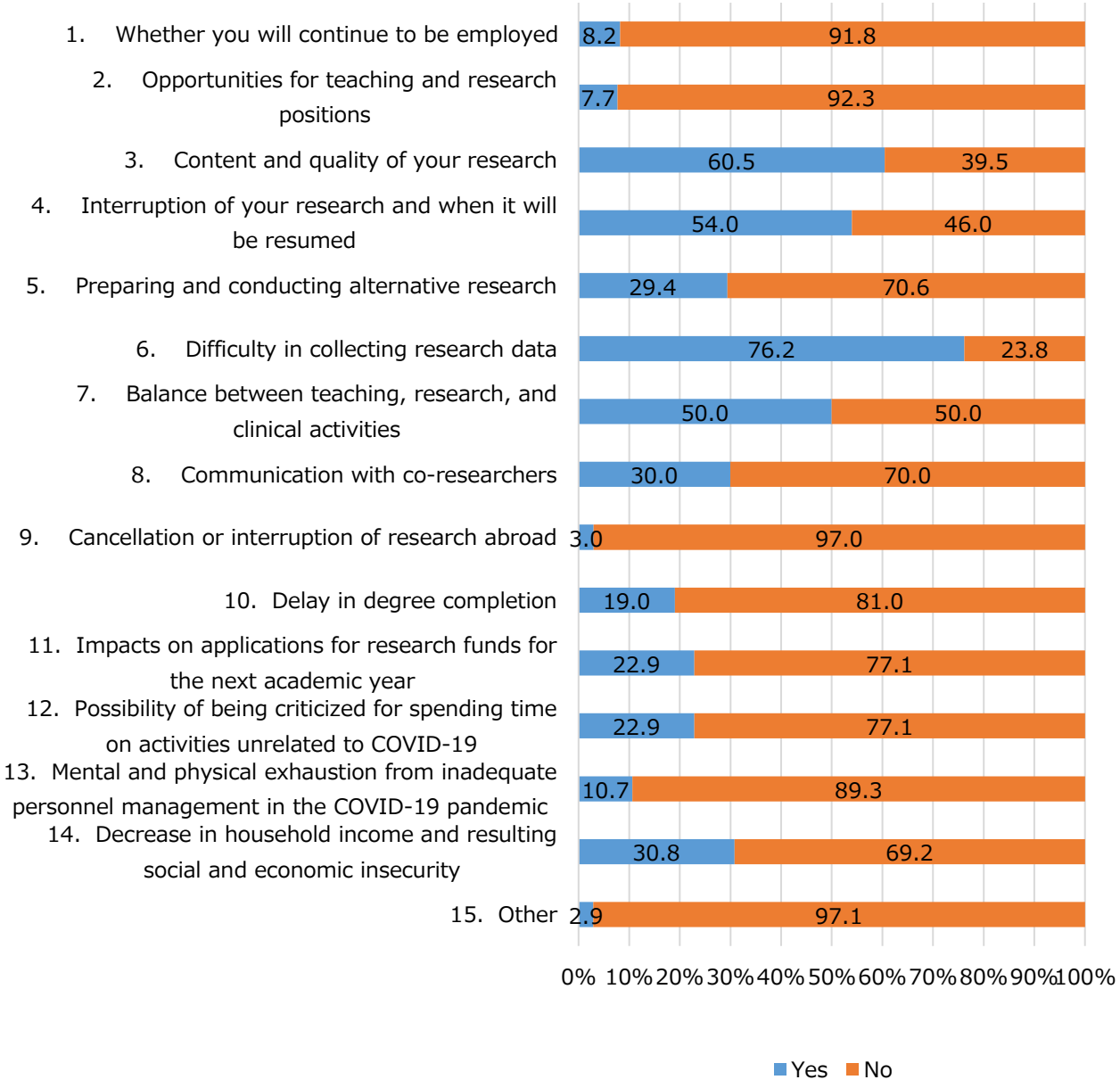


> Please answer the following if you selected “1. Very concerned” or “2. Somewhat concerned” above.

What are the specific concerns or anxieties that you have? (Multiple items can be selected.)

1. Whether you will continue to be employed

2. Opportunities for teaching and research positions
3. Content and quality of your research
4. Interruption of your research and when it will be resumed
5. Preparing and conducting alternative research
6. Difficulty in collecting research data
7. Balance between teaching, research, and clinical activities
8. Communication with co-researchers
9. Cancellation or interruption of research abroad
10. Delay in degree completion
11. Impacts on applications for research funds for the next academic year
12. Possibility of being criticized for spending time on activities unrelated to COVID-19
13. Mental and physical exhaustion from inadequate personnel management in the COVID-19 pandemic
14. Decrease in household income and resulting social and economic insecurity
15. Other



[If you selected “15. Other,” please specify below]

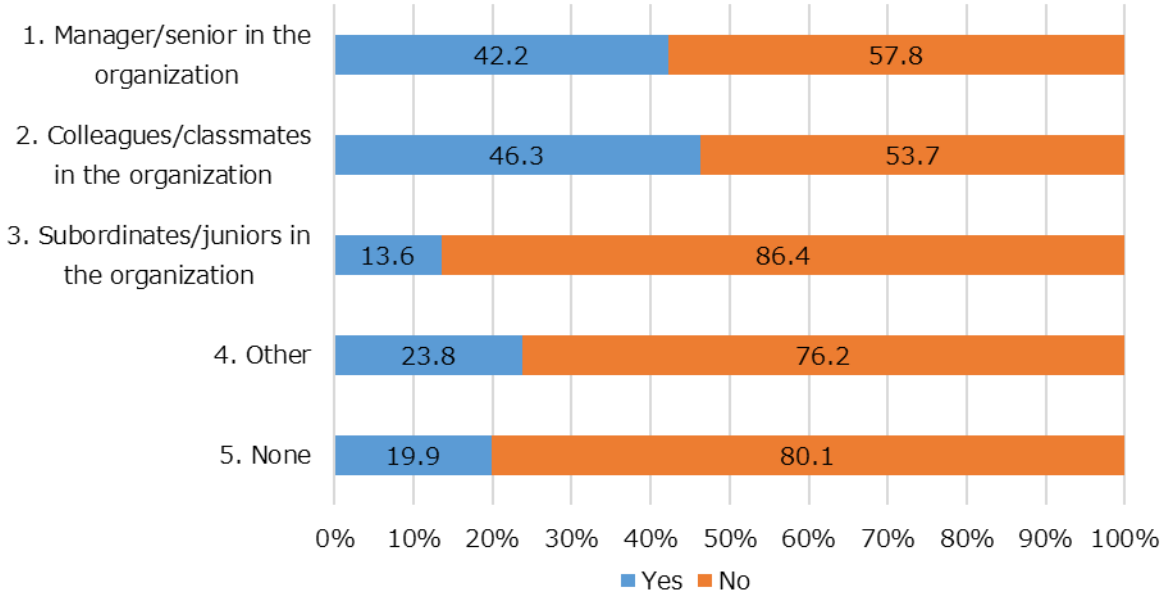
Note: Answers to free-response questions are only available in the Japanese version.

Q2-Q8

Q8. Do you have somebody that you can talk to about your research activities in the COVID-19 pandemic? Please select all that apply. (Multiple items can be selected.)

1. Manager/senior in the organization
2. Colleagues/classmates in the organization
3. Subordinates/juniors in the organization
4. Other

5. None



[If you selected "4. Other," please specify below]

Note: Answers to free-response questions are only available in the Japanese version.

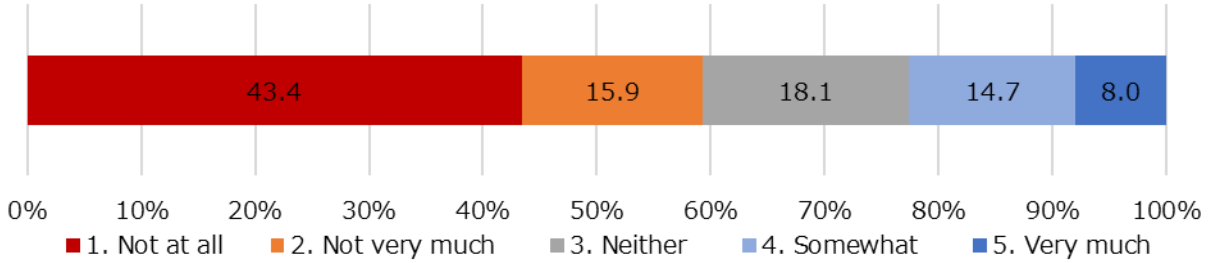
Q9. The following item is on positive changes that you might have experienced in your research activities in the COVID-19 pandemic. How much did you experience these changes? Please select the option that best describes your situation.

	1. Not at all	2. Not very much	3. Neither	4. Somewhat	5. Very much
1. Found more time for research owing to shortened commute times	1	2	3	4	5
2. Found more time for research from adjusting commute times (delayed or earlier commute)	1	2	3	4	5

3.	Found more time for research from having fewer in-person meetings	1	2	3	4	5
4.	Found more time for research from canceled or postponed meetings or business trips	1	2	3	4	5
5.	Built a new lifestyle rhythm	1	2	3	4	5
6.	Came up with new research ideas	1	2	3	4	5
7.	Explored and tried new research	1	2	3	4	5
8.	Increased opportunities to encounter researchers and findings from new areas	1	2	3	4	5
9.	Came up with ideas for joint research with researchers from new areas	1	2	3	4	5
10.	Improved the home environment for remote research activities	1	2	3	4	5
11.	Found more time for research by increasing efficiency for teaching activities remotely	1	2	3	4	5
12.	Use of ICT increased ease of communication between researchers in Japan	1	2	3	4	5
13.	Use of ICT increased ease of communication with researchers abroad	1	2	3	4	5
14.	Increased opportunities for remote research activities	1	2	3	4	5
15.	Increased opportunities for remote clinical practice	1	2	3	4	5
16.	Experienced the benefits of remote conferences and workshops	1	2	3	4	5
17.	Increased opportunities for peer support communication (online casual communication and parties between colleagues or graduate students)	1	2	3	4	5

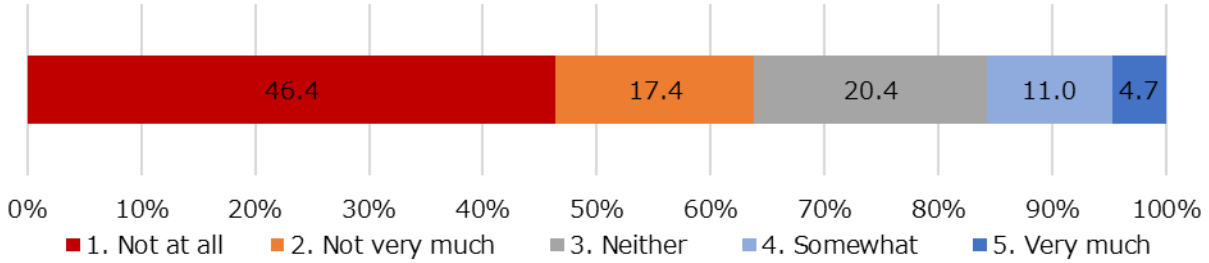
Q2-Q9-1

1. Found more time for research owing to shortened commute times (n=1,507)



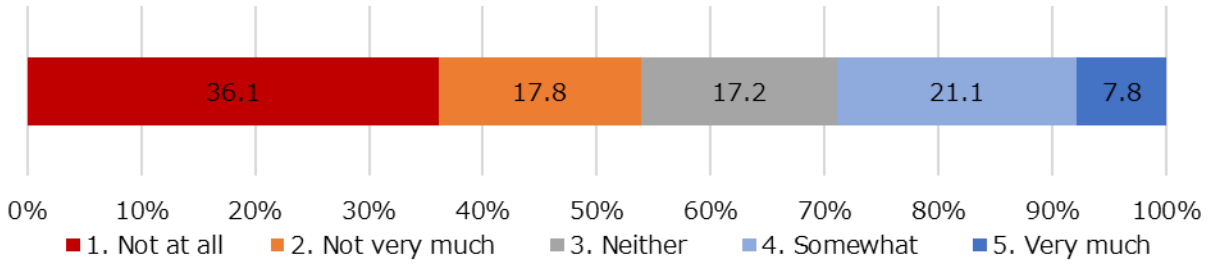
Q2-Q9-2

2. Found more time for research from adjusting commute times (delayed or earlier commute) (n=1,504)



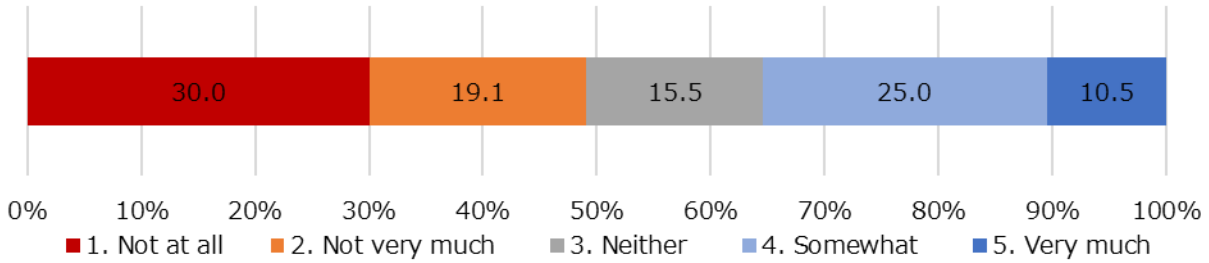
Q2-Q9-3

3. Found more time for research from having fewer in-person meetings (n=1,508)



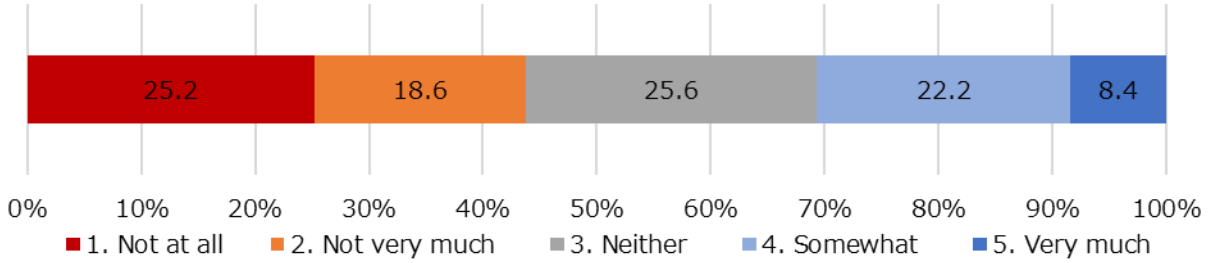
Q2-Q9-4

4. Found more time for research from canceled or postponed meetings or business trips (n=1,499)



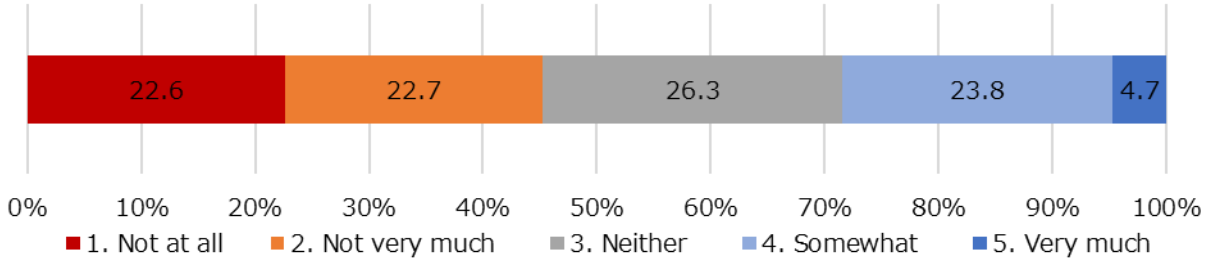
Q2-Q9-5

5. Built a new lifestyle rhythm (n=1,505)



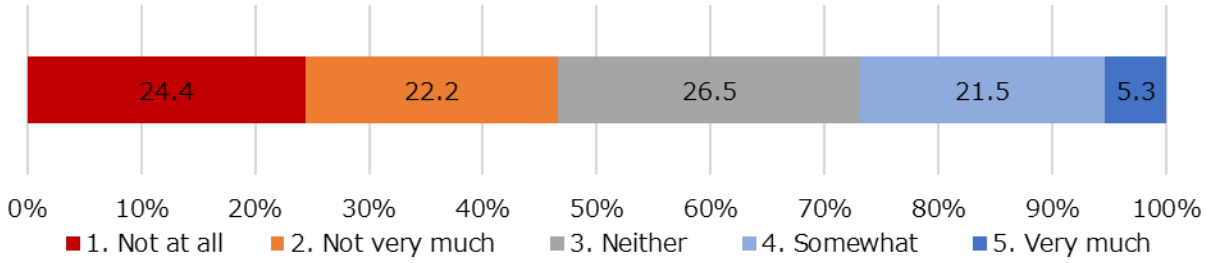
Q2-Q9-6

6. Came up with new research ideas (n=1,504)



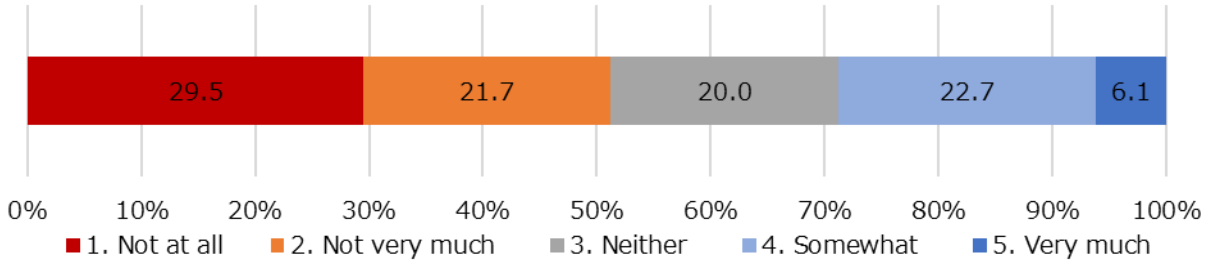
Q2-Q9-7

7. Explored and tried new research (n=1,497)



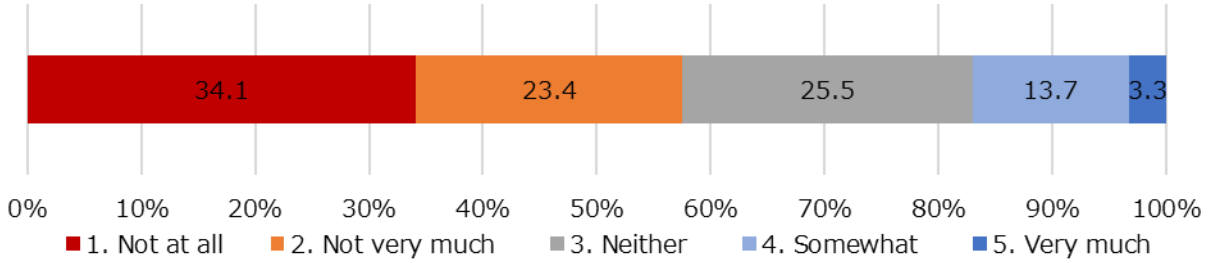
Q2-Q9-8

8. Increased opportunities to encounter researchers and findings from new areas (n=1,501)



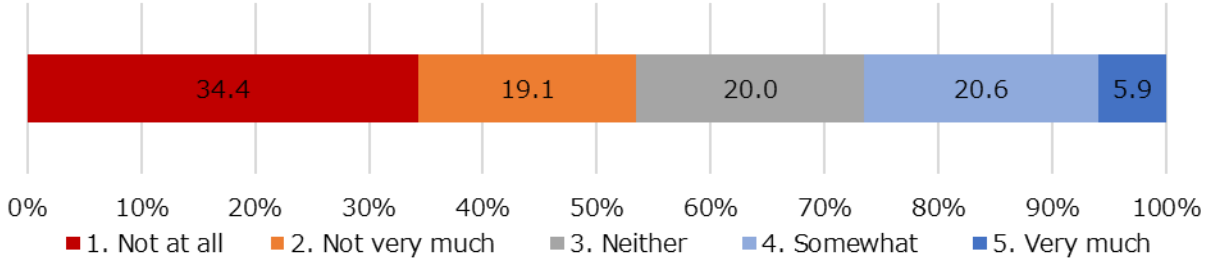
Q2-Q9-9

9. Came up with ideas for joint research with researchers from new areas (n=1,503)



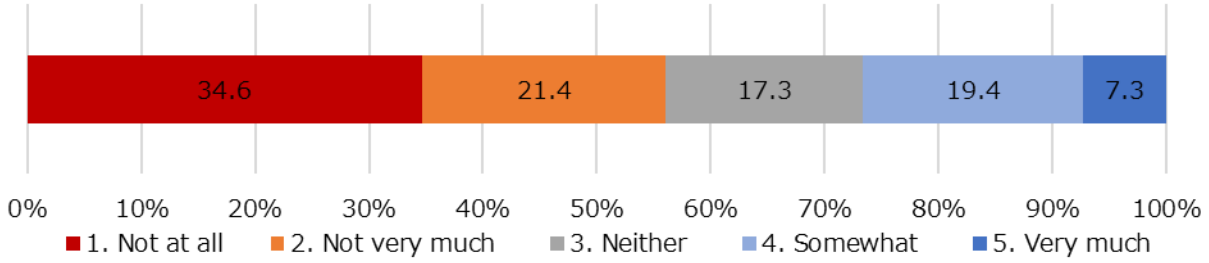
Q2-Q9-10

10. Improved the home environment for remote research activities (n=1,502)



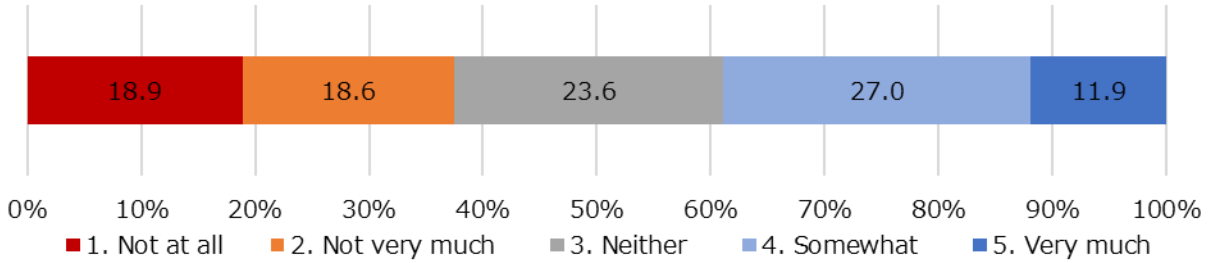
Q2-Q9-11

11. Found more time for research by increasing efficiency for teaching activities remotely (n=1,502)



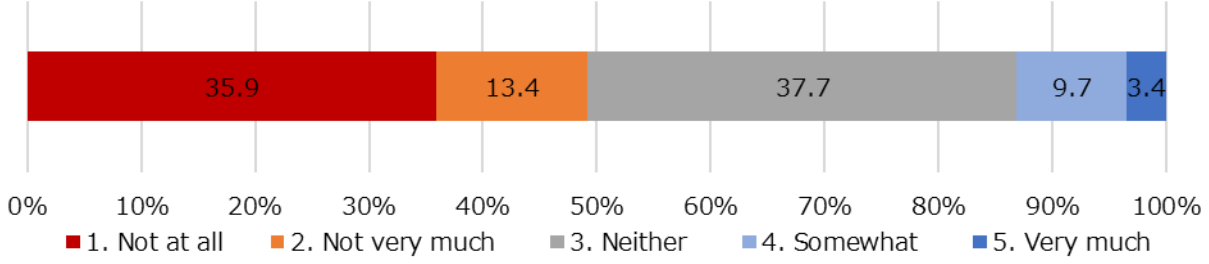
Q2-Q9-12

12. Use of ICT increased ease of communication between researchers in Japan (n=1,505)



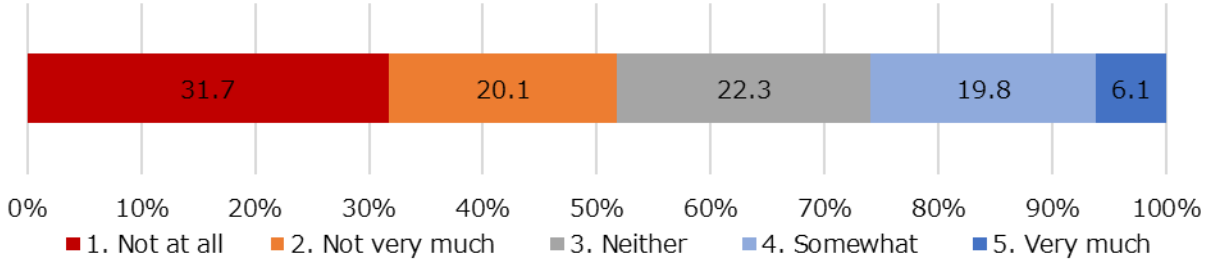
Q2-Q9-13

13. Use of ICT increased ease of communication with researchers abroad (n=1,497)



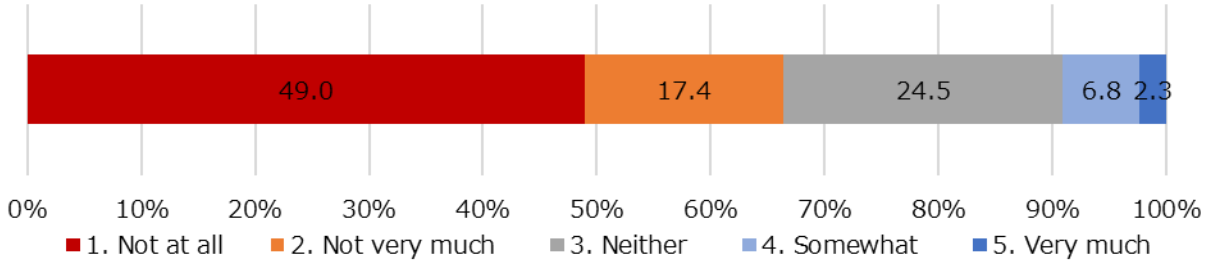
Q2-Q9-14

14. Increased opportunities for remote research activities (n=1,483)



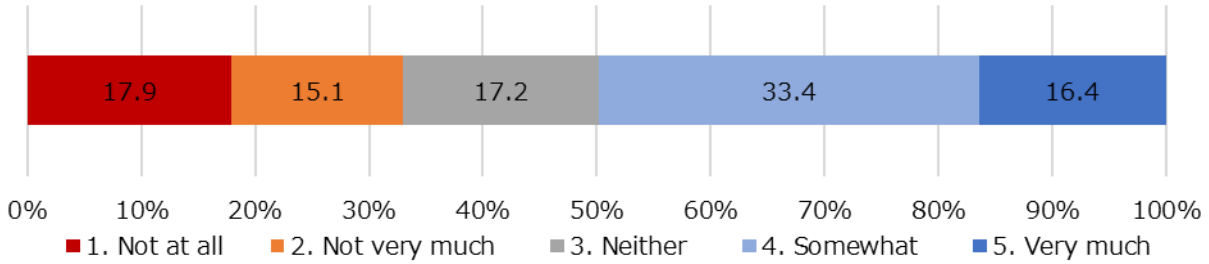
Q2-Q9-15

15. Increased opportunities for remote clinical practice (n=1,492)



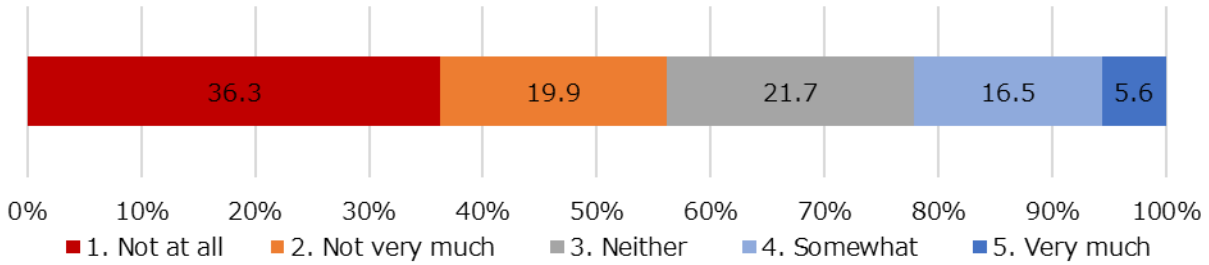
Q2-Q9-16

16. Experienced the benefits of remote conferences and workshops (n=1,499)



Q2-Q9-17

17. Increased opportunities for peer support communication (online casual communication and parties between colleagues or graduate students) (n=1,495)



Q2-Q10

Q10. Please specify any other positive changes to your research activities since entering the COVID-19 pandemic.

Note: Answers to free-response questions are only available in the Japanese version.

III. The following items are on the effective methods of support in the COVID-19 pandemic.

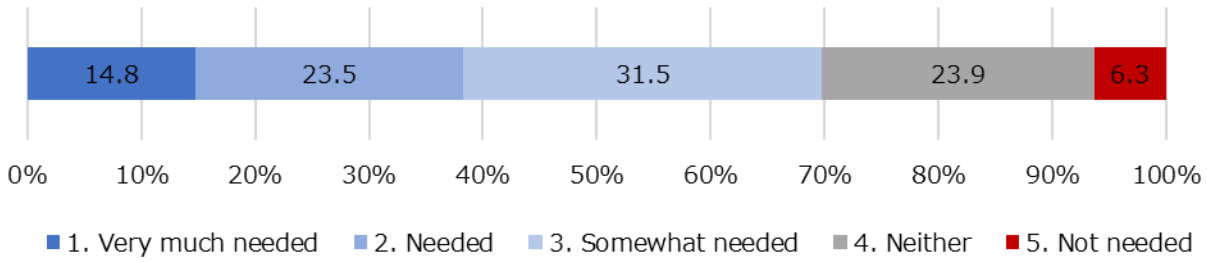
Q1. The JANS is discussing providing support related to research activities for members during the COVID-19 pandemic. What kind of support do you want? Please select the option that best describes your thoughts on the support that you need.

	1. Very much needed	2. Needed	3. Somewhat needed	4. Neither	5. Not needed
1. Research grant related to the COVID-19 pandemic	1	2	3	4	5
2. Financial assistance for people who cannot start or continue studies abroad owing to the COVID-19 pandemic	1	2	3	4	5
3. Cooperation for surveys by JANS members (requests and distribution of survey forms)	1	2	3	4	5
4. Making surveys conducted by JANS available as open-source data	1	2	3	4	5
5. Enriching online seminars and workshop opportunities	1	2	3	4	5
6. Enriching online opportunities for exchange and consultation between JANS members (forums, mailing lists, and private groups on social media)	1	2	3	4	5
7. Forming online journal clubs	1	2	3	4	5
8. Forming online research meetings	1	2	3	4	5
9. Building online systems for individual consultation related to research	1	2	3	4	5
10. Sharing cases of remotely and effectively conducted joint research	1	2	3	4	5
11. Sharing cases of successfully conducted research while working from home during the COVID-19 pandemic	1	2	3	4	5
12. Sharing cases of study management that effectively handled the impacts of the COVID-19 pandemic	1	2	3	4	5
13. Training on study methods that can be implemented during crises, including the COVID-19 pandemic	1	2	3	4	5

14. Training on effective teaching methods in the COVID-19 pandemic	1	2	3	4	5
15. Building networks to promote continuity between research and teaching, practice, and policy in situations of serious health problems, including the COVID-19 pandemic	1	2	3	4	5
16. Recommendations on research during the COVID-19 pandemic for organizations that members are affiliated with	1	2	3	4	5
17. Recommendations on education during the COVID-19 pandemic for organizations that members are affiliated with	1	2	3	4	5
18. Recommendations on working styles during the COVID-19 pandemic for organizations that members are affiliated with	1	2	3	4	5
19. Recommendations to promote ICT proficiency in educators for organizations that members are affiliated with (e.g., employment of ICT support staff)	1	2	3	4	5

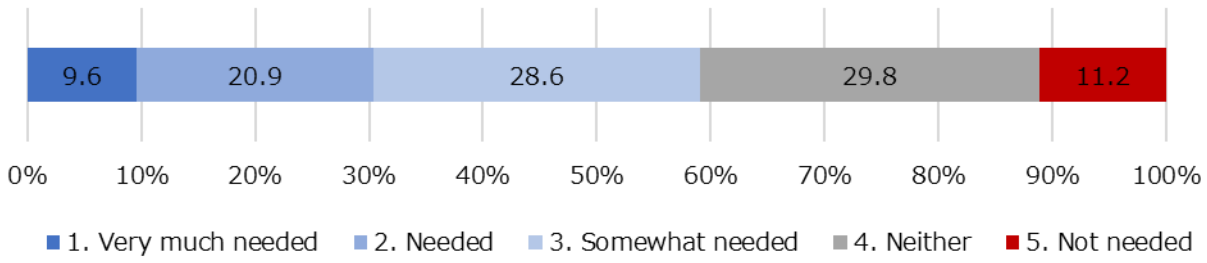
Q3-Q1-1

1. Research grant related to the COVID-19 pandemic (n=1,505)



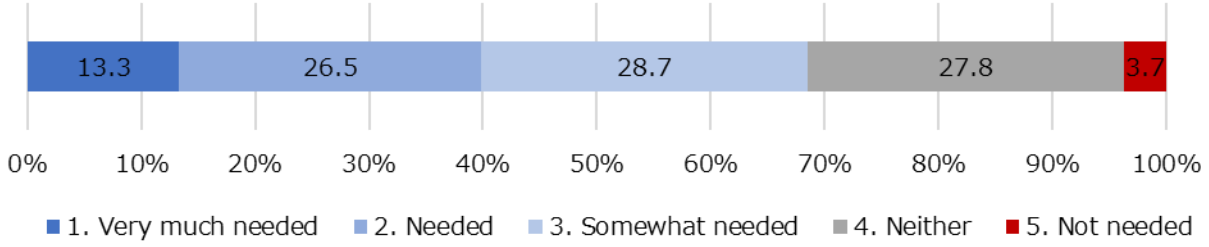
Q3-Q1-2

2. Financial assistance for people who cannot start or continue studies abroad owing to the COVID-19 pandemic (n=1,498)



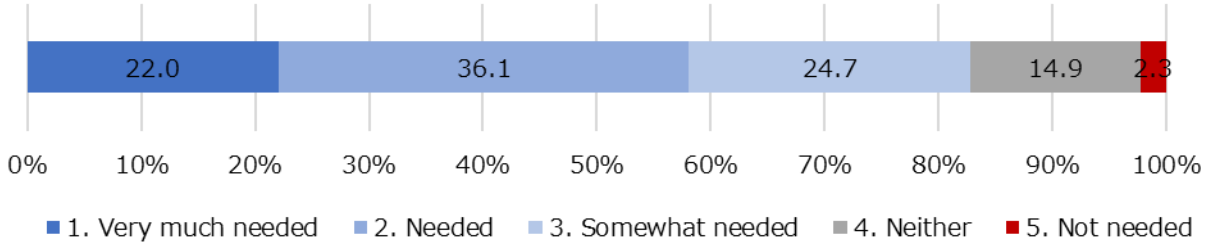
Q3-Q1-3

3. Cooperation for surveys by JANS members (requests and distribution of survey forms) (n=1,493)



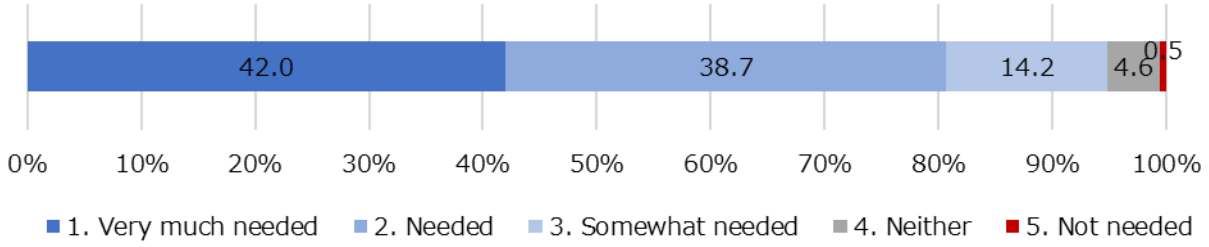
Q3-Q1-4

4. Making surveys conducted by JANS available as open-source data (n=1,504)



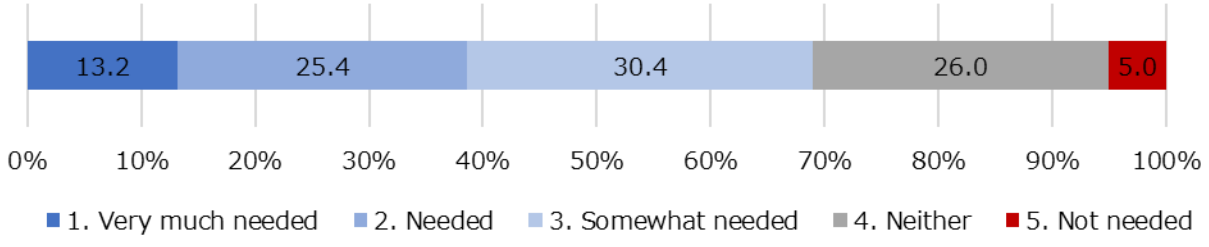
Q3-Q1-5

5. Enriching online seminars and workshop opportunities (n=1,498)



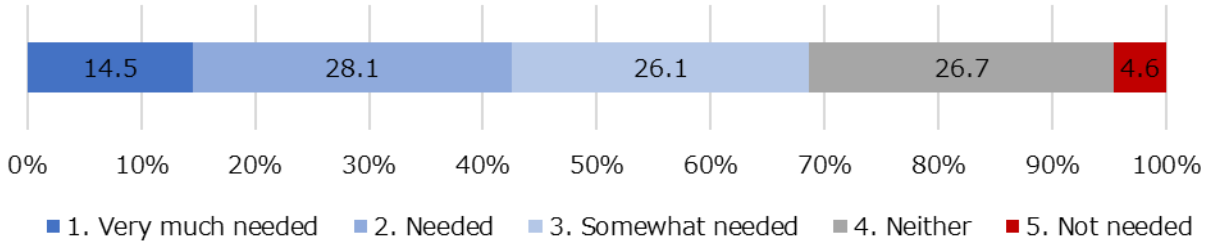
Q3-Q1-6

6. Enriching online opportunities for exchange and consultation between JANS members (forums, mailing lists, and private groups on social media) (n=1,496)



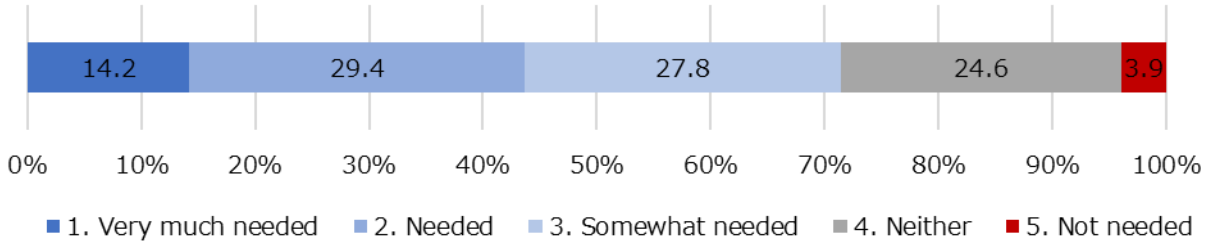
Q3-Q1-7

7. Forming online journal clubs (n=1,490)



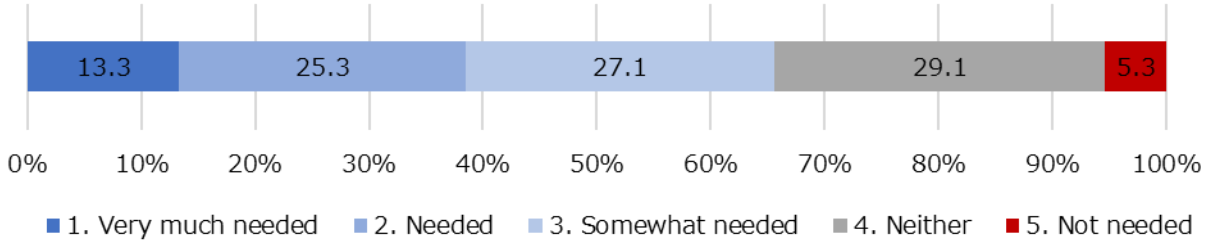
Q3-Q1-8

8. Forming online research meetings (n=1,498)



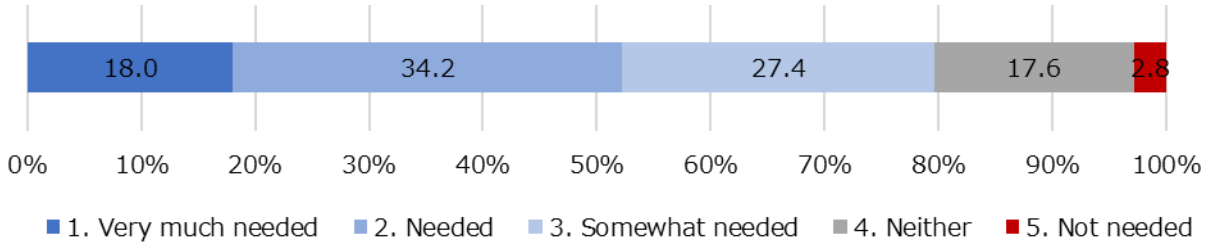
Q3-Q1-9

9. Building online systems for individual consultation related to research (n=1,501)



Q3-Q1-10

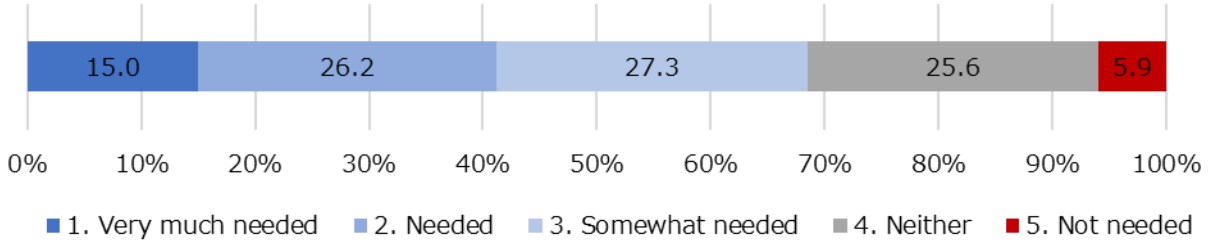
10. Sharing cases of remotely and effectively conducted joint research (n=1,491)



Q3-Q1-11

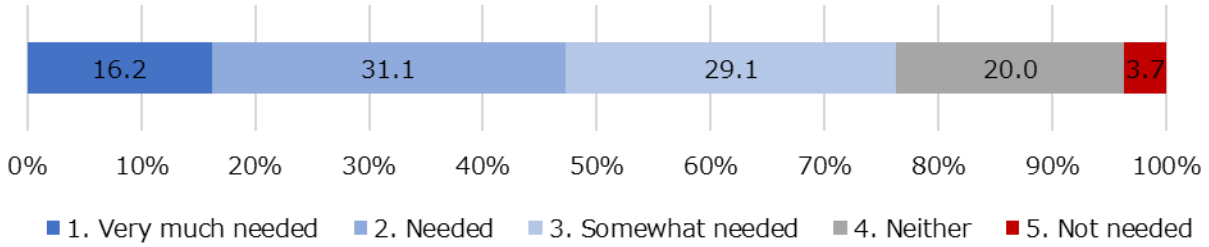
11. Sharing cases of successfully conducted research while working from home during the COVID-19

pandemic (n=1,492)



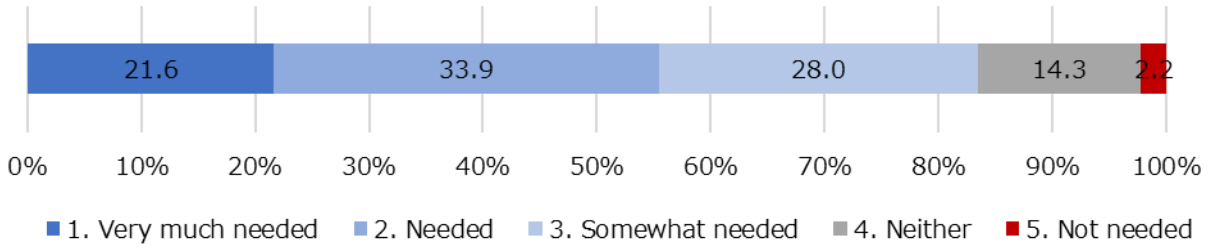
Q3-Q1-12

12. Sharing cases of study management that effectively handled the impacts of the COVID-19 pandemic (n=1,484)



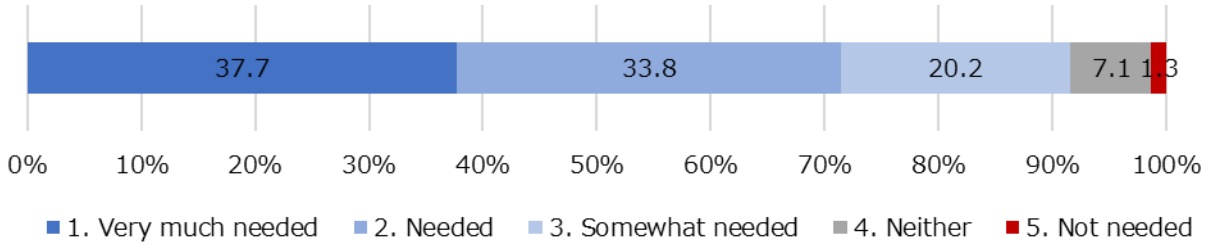
Q3-Q1-13

13. Training on study methods that can be implemented during crises, including the COVID-19 pandemic (n=1,486)



Q3-Q1-14

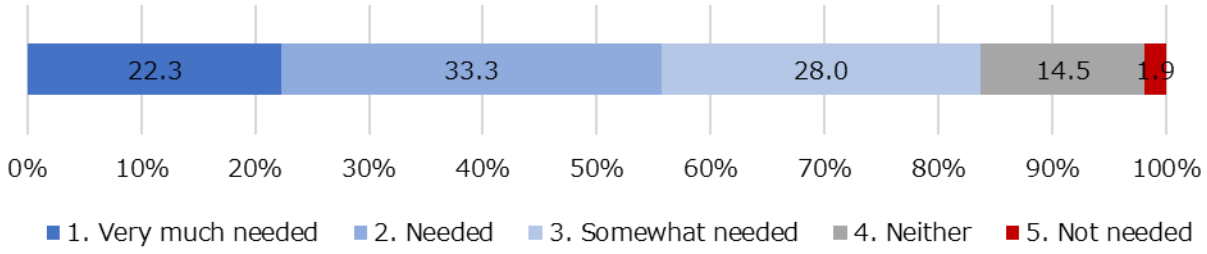
14. Training on effective teaching methods in the COVID-19 pandemic (n=1,494)



Q3-Q1-15

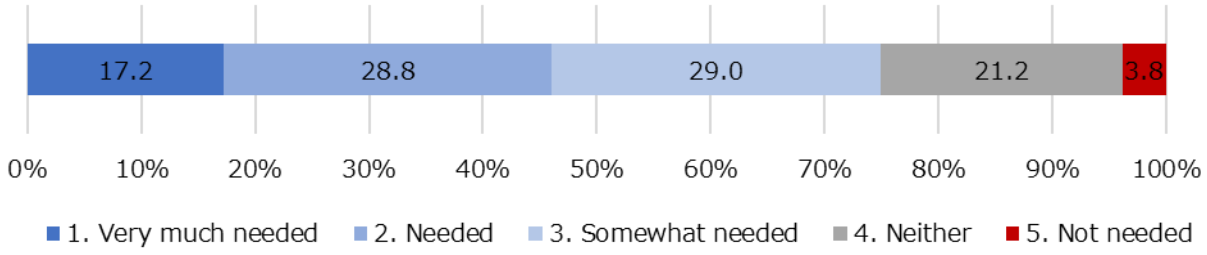
15. Building networks to promote continuity between research and teaching, practice, and policy in

situations of serious health problems, including the COVID-19 pandemic (n=1,495)



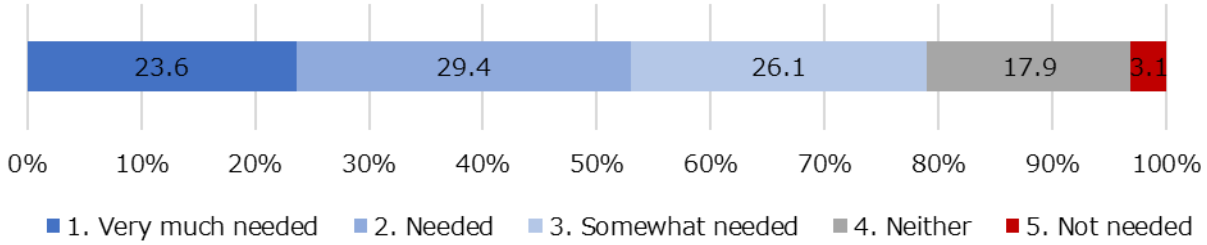
Q3-Q1-16

16. Recommendations on research during the COVID-19 pandemic for organizations that members are affiliated with (n=1,495)



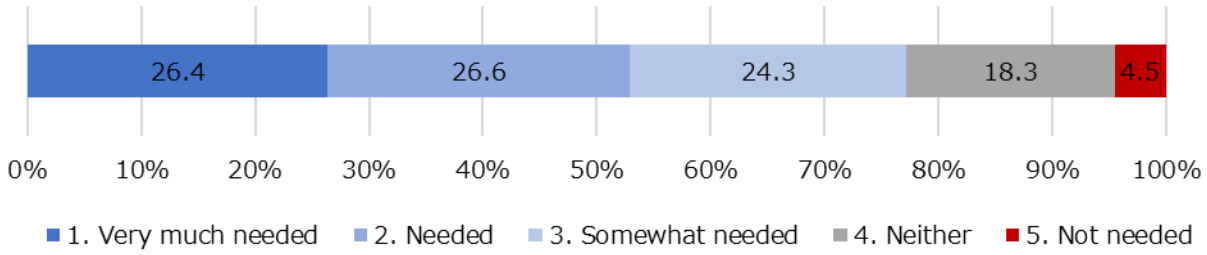
Q3-Q1-17

17. Recommendations on education during the COVID-19 pandemic for organizations that members are affiliated with (n=1,493)



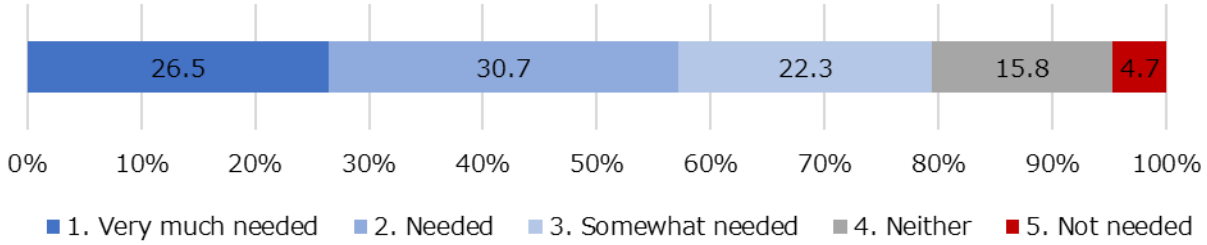
Q3-Q1-18

18. Recommendations on working styles during the COVID-19 pandemic for organizations that members are affiliated with (n=1,484)



Q3-Q1-19

19. Recommendations to promote ICT proficiency in educators for organizations that members are affiliated with (e.g., employment of ICT support staff) (n=1,492)



Q3-Q2

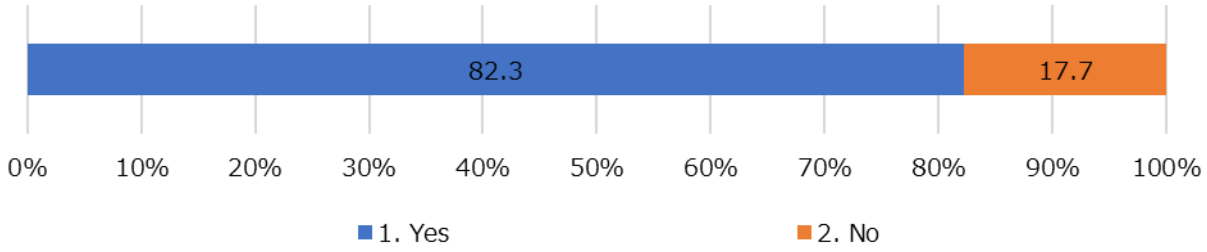
Q2. Please specify any ideas you have on methods that may be effective for research activity support for members in the COVID-19 pandemic that were not mentioned above.

Note: Answers to free-response questions are only available in the Japanese version.

IV. If you are a full-time employee at a nursing university, please answer the following on how you allocated your work hours during the COVID-19 pandemic.

Q4-Q1

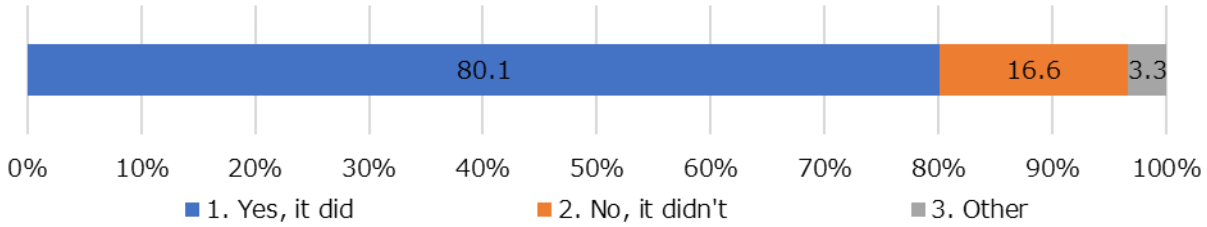
Q1. Are you currently a full-time employee at a nursing university? (n=1,496)



*If you answered “No,” please skip to “Item 5. Please answer on the progress of your research funded by KAKENHI (Grants-in-Aid for Scientific Research).”

Q4-Q2

Q2. Has your university implemented working from home or remote work in the previous three months (April to June 2020)? (n=1,266)



[If you selected “3. Other,” please specify below]

Note: Answers to free-response questions are only available in the Japanese version.

Q3. How have you allocated your work time in the previous three months (April to June 2020) for research, education, management and operation, and social responsibility activities? Please answer the following in percentages (%) so that they add up to a total of 100%.

問 4-Q3-1 - 問 4-Q3-6

* Mean values noted in parentheses (As these are means for various items, the total does not equal 100%)

* Calculated by adding only the data from respondents whose effort total equaled 100% (n = 1,171)

1. Research (literature search, surveys/experiments, and writing manuscripts/research supervision)	: (14.9) %
2. Teaching (lectures, practicum, seminars)	: (56.4) %
3. Management and administrations (meetings, committees in the university, and open campus days)	: (20.1) %
4. Social contributions (e.g., academic society committee activities, public lectures)	: (4.9) %
5. Clinical practice	: (2.4) %
6. Other	: (1.2) %

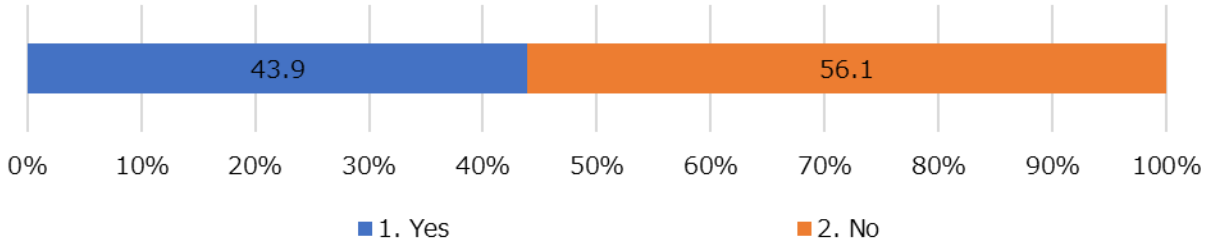
> Please specify below if you selected “6. Other.”

Note: Answers to free-response questions are only available in the Japanese version.

V. Please respond on the progress of your research funded by KAKENHI (Grants-in-Aid for Scientific Research).

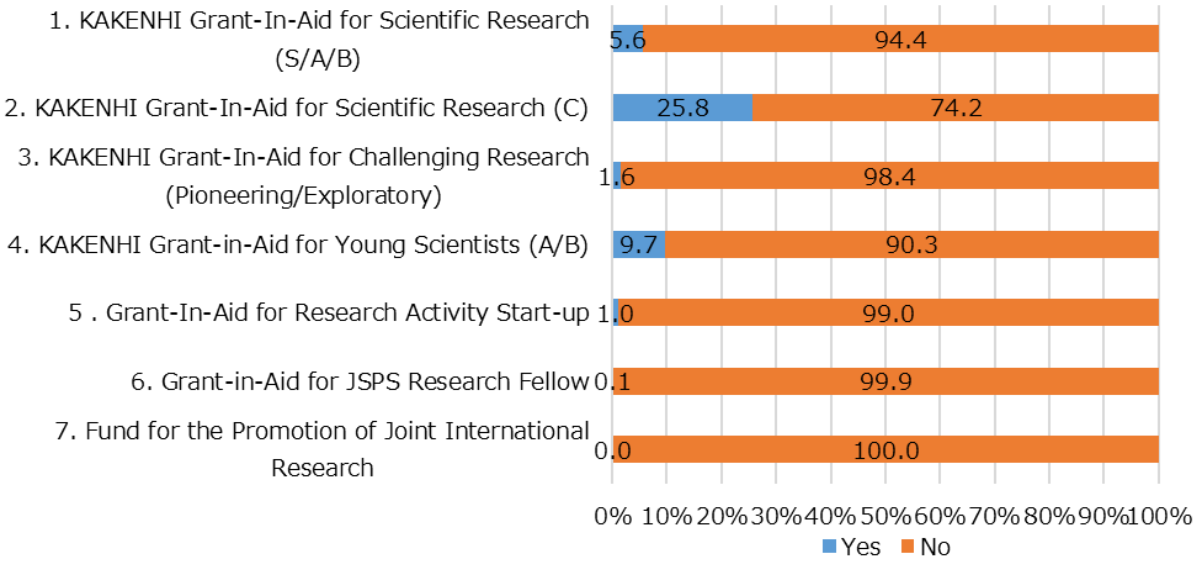
Q5-Q1

Q1. Have you received KAKENHI (Ministry of Education, Culture, Sports, Science and Technology/Japan Society for the Promotion of Science Grants-in-Aid for Scientific Research) as the principal investigator for the present fiscal year (FY 2020) (includes continued research project started in earlier years)? (n=1,428)



> If you selected “1. Yes,” please answer the following. As a principal investigator, which research categories have you won grants in? (Multiple items can be selected.)

1. KAKENHI Grant-In-Aid for Scientific Research (S/A/B)
2. KAKENHI Grant-In-Aid for Scientific Research (C)
3. KAKENHI Grant-In-Aid for Challenging Research (Pioneering/Exploratory)
4. KAKENHI Grant-in-Aid for Young Scientists (A/B)
5. Grant-In-Aid for Research Activity Start-up
6. Grant-in-Aid for JSPS Research Fellow
7. Fund for the Promotion of Joint International Research (Fostering Joint International Research (A/B)/International Activities Supporting Group/Home-Returning Researcher Development Research)
8. Other KAKENHI

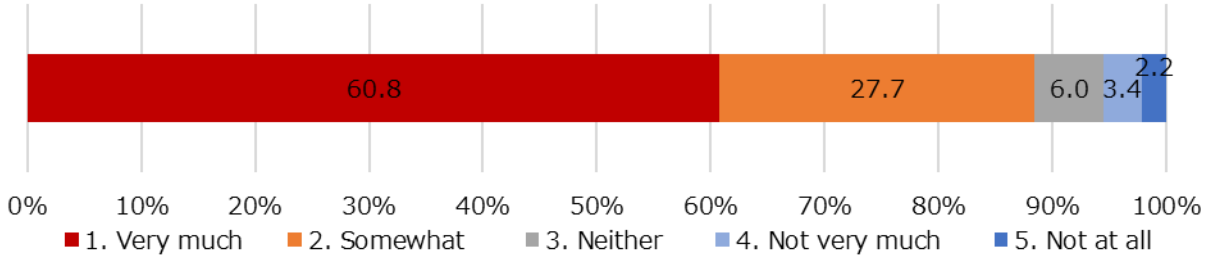


[Please specify if you selected “8. Other KAKENHI”]

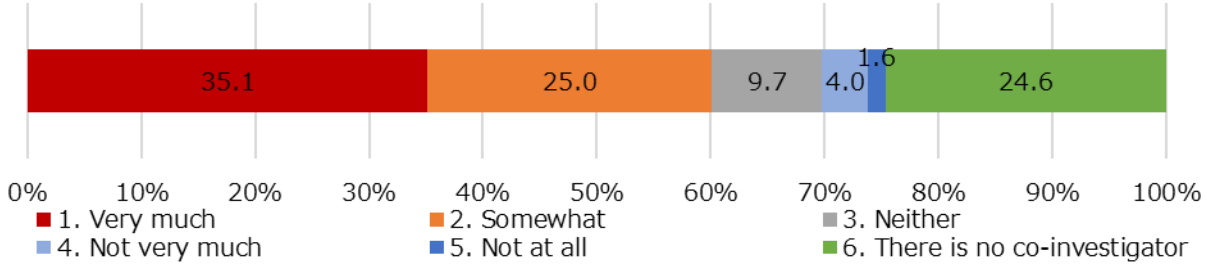
Note: Answers to free-response questions are only available in the Japanese version.

> If you selected “1. Yes” for Q1, please answer the following questions on that research. (If you are the principal investigator from multiple KAKENHI grants, please answer on the KAKENHI with the highest grant amount.) How was the execution of this year’s plan for the research, of which you are the principal

investigator, affected by the COVID-19 pandemic? Please select the option that best describes your situation. (n=650)

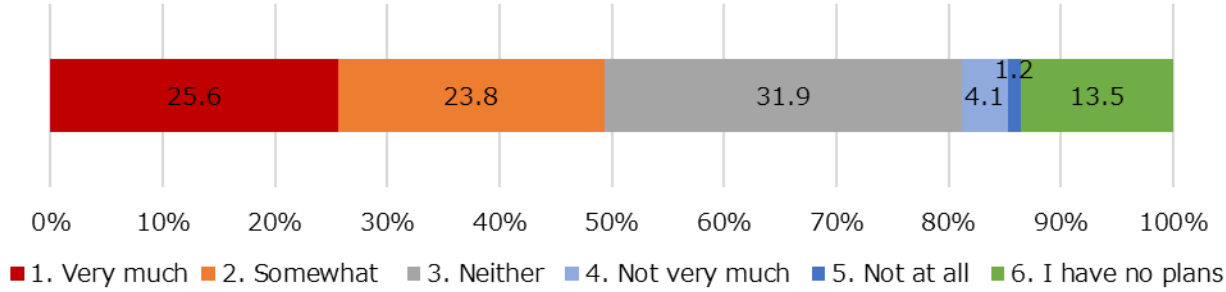


> Please continue if you answered “1. Yes” in Q.1. How was your co-investigator’s execution of the research plan for this year affected by the COVID-19 pandemic? Please select the option that best describes your situation. (n=629)



Q5-Q2

Q2. How much do you think the status of your research in the COVID-19 pandemic will affect new KAKENHI applications for the following academic year? Please select the option that best describes your situation. If you are planning to apply for multiple KAKENHI grants, please answer for the KAKENHI grant with the highest grant amount. (n=1,236)



> If you answered “1. Very much” or “2. Somewhat,” please describe the reasons.

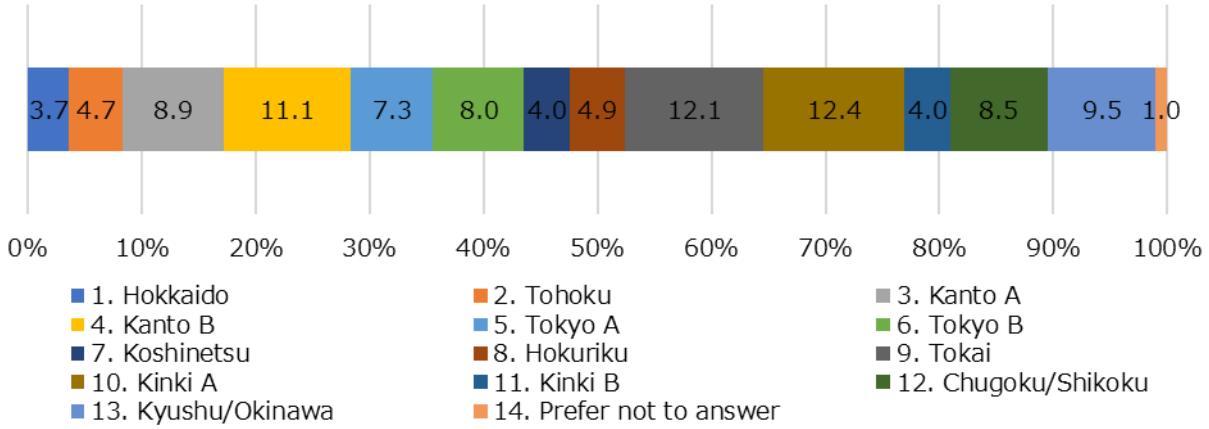
Note: Answers to free-response questions are only available in the Japanese version.

VI. This item is about yourself.

Q6-Q1

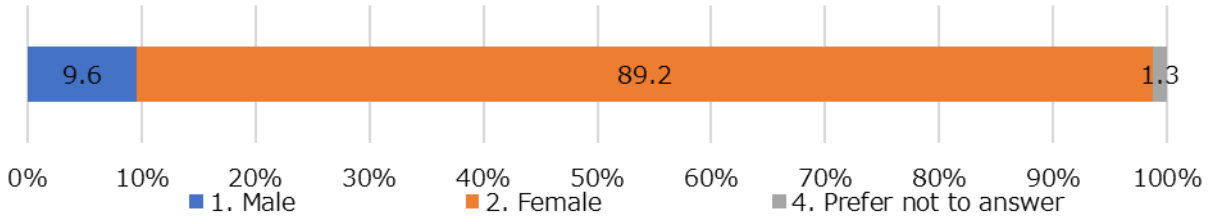
Q1. Please select the division of your membership (this refers to the mailing address you have registered). (n=1,453)

1. Hokkaido
2. Tohoku (Aomori, Iwate, Miyagi, Akita, Yamagata, Fukushima)
3. Kanto A (Ibaraki, Tochigi, Gunma, Saitama)
4. Kanto B (Chiba, Kanagawa)
5. Tokyo A (Chiyoda Ward, Chuo Ward, Minato Ward, Taito Ward, Bunkyo Ward, Kita Ward, Arakawa Ward, Adachi Ward, Katsushika Ward, Sumida Ward, Edogawa Ward, Koto Ward, Shinagawa Ward, Ota Ward, Tokyo islands)
6. Tokyo B (Shibuya Ward, Meguro Ward, Setagaya Ward, Shinjuku Ward, Nakano Ward, Suginami Ward, Toshima Ward, Itabashi Ward, Nerima Ward, Tama region)
7. Koshinetsu (Niigata, Nagano, Yamanashi)
8. Hokuriku (Toyama, Ishikawa, Fukui)
9. Tokai (Shizuoka, Aichi, Gifu, Mie)
10. Kinki A (Osaka, Hyogo)
11. Kinki B (Shiga, Kyoto, Nara, Wakayama)
12. Chugoku/Shikoku (Tottori, Shimane, Okayama, Hiroshima, Yamaguchi, Tokushima, Kagawa, Ehime, Kochi)
13. Kyushu/Okinawa (Fukuoka, Saga, Nagasaki, Kumamoto, Oita, Miyazaki, Kagoshima, Okinawa)
14. Prefer not to say



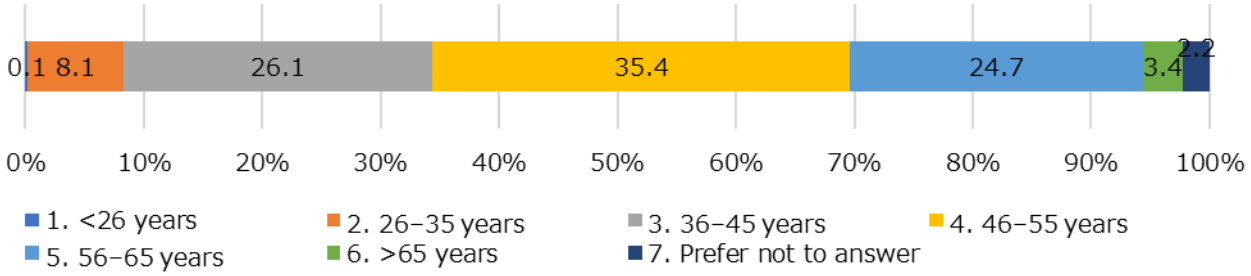
Q6-Q2

Q2. Please select your gender. (n=1,445)



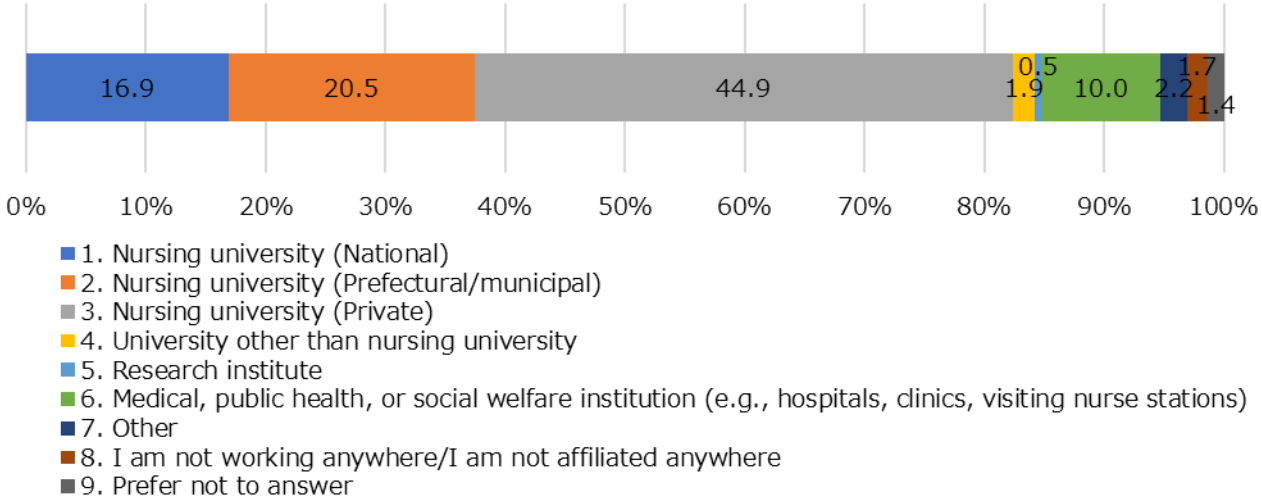
Q6-Q3

Q3. Please select your age. (n=1,454)



Q6-Q4

Q4. Please select your main workplace. (n=1,451)

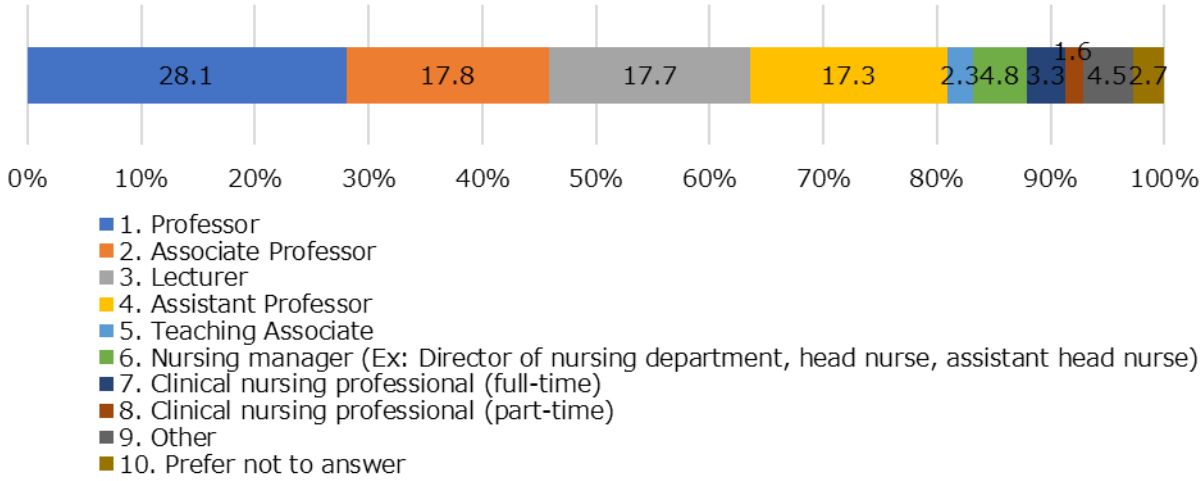


[Please specify below if you selected “7. Other.”]

Note: Answers to free-response questions are only available in the Japanese version.

Q6-Q5

Q5. Please select the option that best describes your position at your workplace. (n=1,438)

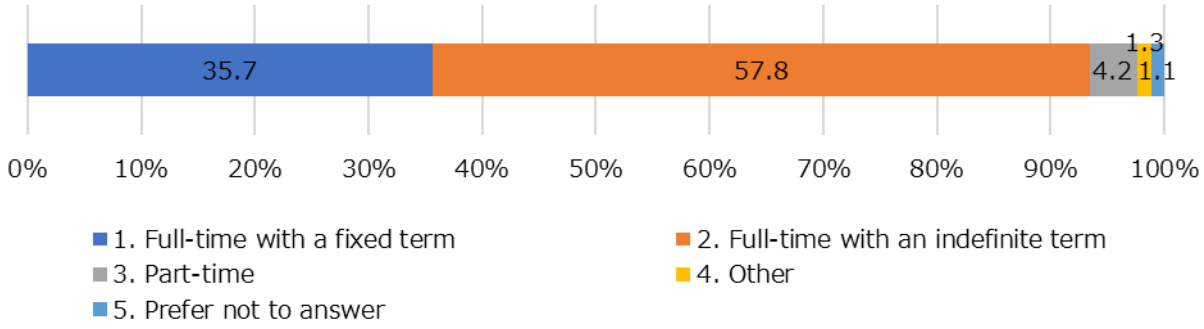


[Please specify below if you selected “9. Other.”]

Note: Answers to free-response questions are only available in the Japanese version.

Q6-Q6

Q6. Please describe your current employment type. (n=1,435)

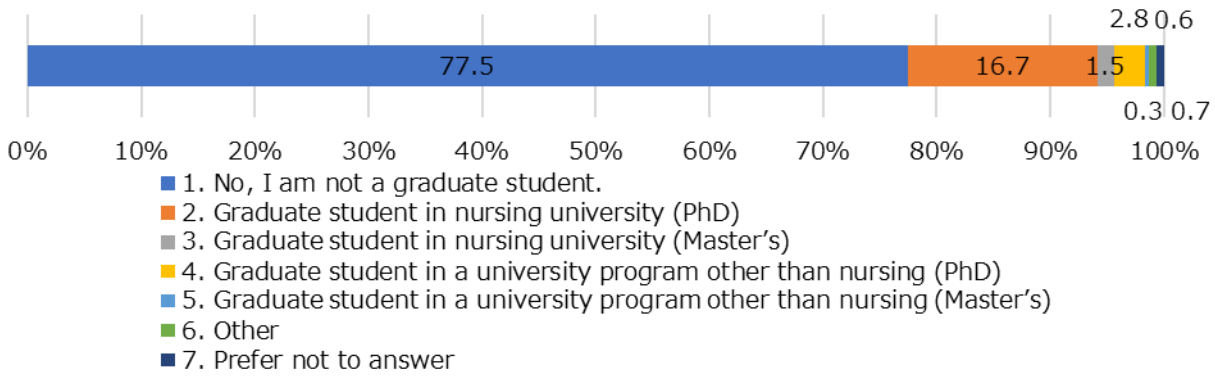


[Please specify below if you selected “4. Other.”]

Note: Answers to free-response questions are only available in the Japanese version.

Q6-Q7

Q7. Are you currently a graduate student? (n=1,435)

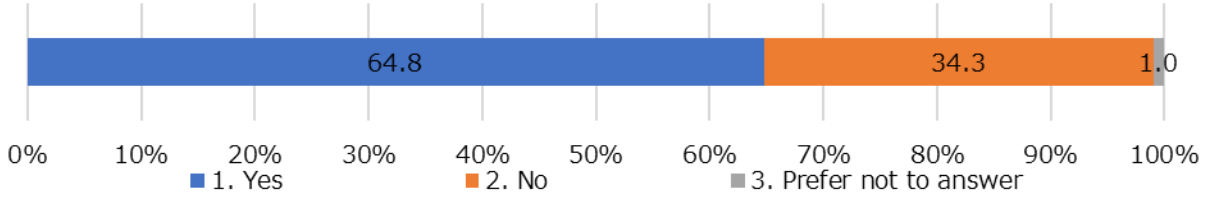


[Please specify below if you selected "6. Other."]

Note: Answers to free-response questions are only available in the Japanese version.

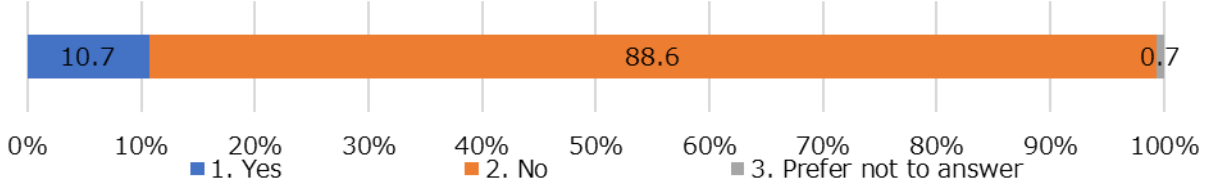
Q6-Q8

Q8. Was your region of residence (home) designated as a special alert area (Hokkaido, Ibaraki, Tokyo, Kanagawa, Saitama, Chiba, Ishikawa, Gifu, Aichi, Kyoto, Osaka, Hyogo, Fukuoka)? (n=1,450)



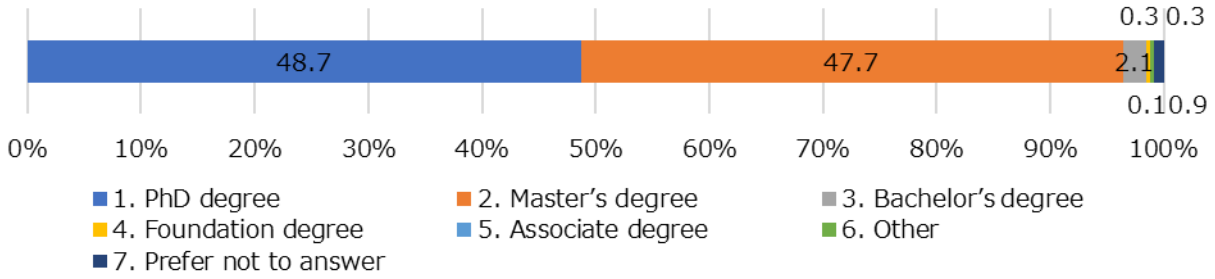
Q6-Q9

Q9. Did you get a new job, change your job, or leave (retire) from your job in March to June 2020? (n=1,450)



Q6-Q10

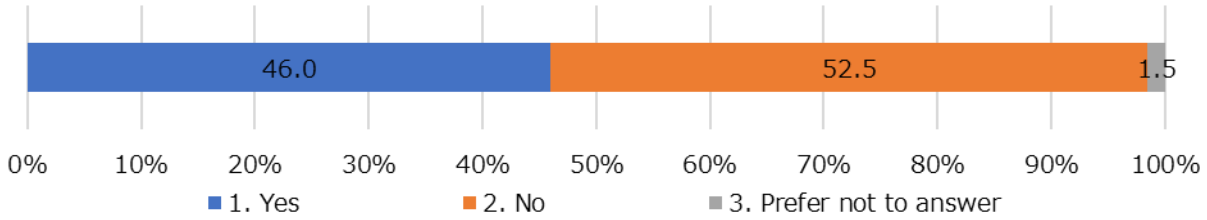
Q10. Please select the highest degree (that you obtained). (n=1,455)



[Please specify below if you selected "6. Other."]

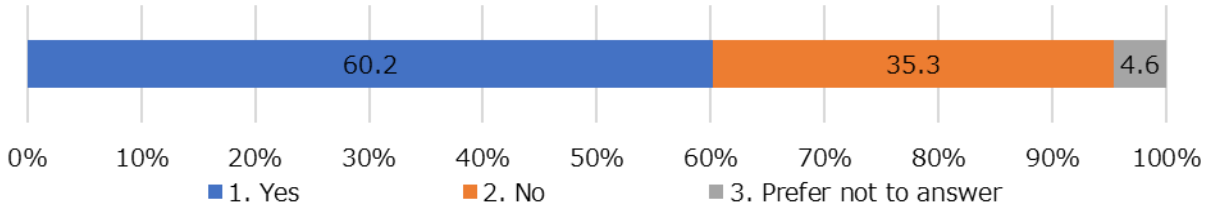
Note: Answers to free-response questions are only available in the Japanese version.

> Please answer if you selected "1. PhD." Are you a researcher within eight years of obtaining your PhD degree? (n=720)



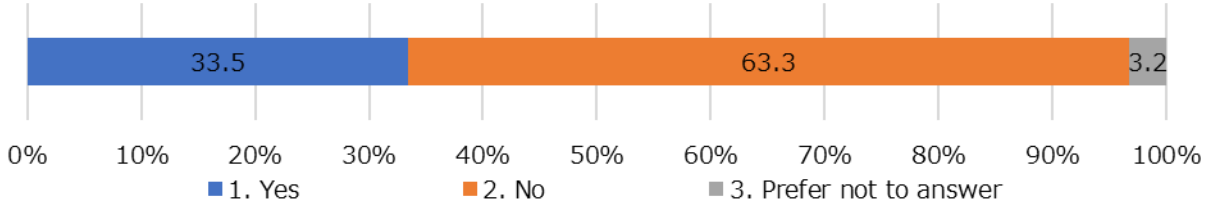
Q6-Q11

Q11. Do you currently have a partner or spouse living with you? (n=1,421)



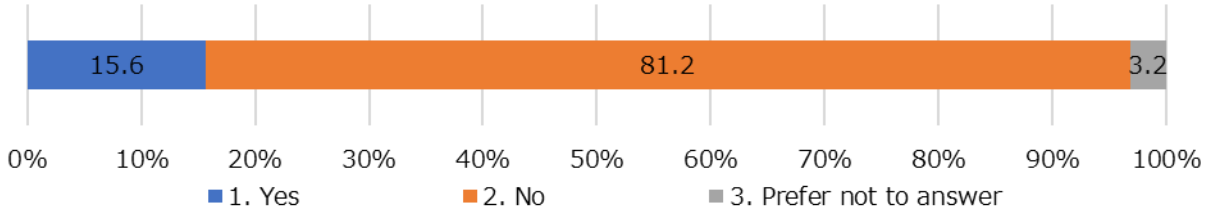
Q6-Q12

Q12. Are you currently raising children? (n=1,422)



Q6-Q13

Q13. Are you currently caring for elderly or other family members? (n=1,422)



Discussion

This study conducted a survey on the members of JANS on the impacts of the COVID-19 pandemic to provide valuable documentation of nursing researchers' situations regarding their research and teaching activities during the pandemic.

The COVID-19 pandemic has undoubtedly caused a great impact on the research activities of Japanese researchers in nursing, as 65.1% of members reported that the time they spent on research activities decreased somewhat or decreased very much, and 88.9% of members answered that they felt concerned and anxious about their research activities. Moreover, 69.8% of members responded that they spent more time on teaching compared with before the pandemic, and many members answered that they spent less time on researching and writing—activities which typically can be done remotely. These results contrasted those of the ResearchGate survey [1], revealing the unique challenges faced by nursing researchers in Japan.

Several points have been raised as factors that impact research activities, such as difficulty in securing means of transport for travel and business trips (76.3%), increased time spent on lectures (74.6%), difficulty in in-person contact with study participants (72.3%), and difficulty in entering facilities/institutions (70.0%), which suggest the difficulties of researchers engaged in clinical-based research activities. Meanwhile, positive changes have been observed with advancements in ICT. The benefits of remote conferences and workshops (49.8%), increased ease of communication with researchers abroad made possible by the use of ICT (38.9%), more time found for research from canceled or postponed meetings or business trips (35.4%), and new lifestyle rhythms (30.6%) all appeared to manifest the behavioral changes headed in the direction of building the "new normal."

What, then, can JANS do as its members are faced with difficult situations? Several requests were made for JANS, including online seminars and workshop opportunities (94.9%); training on effective teaching methods in the COVID-19 pandemic (91.6%); building of networks to promote continuity between research and teaching, practice and policy in situations of serious health problems, including the COVID-19 pandemic (83.7%); training on study methods that can be implemented during crises, including the COVID-19 pandemic (83.5%); and making surveys conducted by JANS on its members available as open-source data (82.8%). JANS has been placing emphasis on hosting online seminars and training opportunities, and it will continue to put increasing effort in this area in response to the results of this survey. Although it may be impossible to implement some of the services requested overnight, the survey is nonetheless a valuable document for investigating the support measures that members look for in JANS.

This work was a report of descriptive data and free-response answers of the participants; we did not break down data or account for various factors, such as affiliation to a university or age. Future studies should analyze the effects that the COVID-19 pandemic had on research activities in more detail. Inspired by the

large proportion of respondents who requested JANS to “make surveys conducted by JANS on its members available as open-source data” (82.8%), as mentioned above, we are investigating a framework for joint research with researchers who independently conduct the steps from analysis from a unique point of view to submitting the manuscript, and who will be publicly recruited. As the data were not collected on the premise that they will be made available as open-source data, the data cannot be made available as open-source data. Nevertheless, such a step could be deemed the first in considering the methods for the effective use of JANS-owned data by its members.

In conclusion, this study succeeded in gathering basic data for elucidating JANS members’ situation in the COVID-19 pandemic using a survey, to offer insight for future measures to be provided by JANS.

References

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