Gendered Impacts of COVID-19: Designing a COVID-19 Gender Impacts and Policy Responses Indicators Framework for Arctic Communities[1]

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The COVID-19 pandemic has had a devastating effect on Arctic communities. However, women have faced disproportionate negative impacts across key domains of gender equality. These include impacts in the political/public administration, economic, social, civic, and personal spheres. Most importantly, it is likely that the COVID-19 pandemic has deepened gender inequality for years to come.

As the potential COVID-19-driven gender inequality continues to unfold in the Arctic, it is critical to capture, measure, and assimilate available data and conduct just-in-time analysis to inform action to address COVID-19 pandemic gender impacts and gendered consequences. The existing gender analysis frameworks for the COVID-19 pandemic on gender impacts and gendered policy responses mainly focus on indicators at the national level. To narrow this knowledge gap, this paper presents the preliminary results of the science-driven academic exercise conducted by a diverse group of experts. It introduces a system of indicators organized within a framework that allows the analysis of available data at the regional and local levels.

The designed COVID-19 Gender Impacts and Policy Responses Indicators (COVID - GIPRI) Framework aims to provide a systematic way of analyzing the COVID-19 pandemic's gender impacts in conjunction with government and community responses across key gender equality domains. It will also evaluate their effectiveness over time. The COVID - GIPRI framework has primarily drawn on Western concepts of gender, and we recognize appropriate modifications are needed to incorporate Indigenous definitions to the greatest extent possible. The focus on Arctic women, rather than all genders, is

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conditioned by the lack of gender-specific data across the Arctic. However, the system of indicators developed by this project could be applied to other gender groups, in addition to women, should such data become available.

The COVID-19 Gender Impacts Index, which is develop using the COVID – GIPRI framework, can be used to inform decision-making, and program planning to accurately assess, improve, and monitor gender-oriented policies and practices.

Introduction

The first case of COVID-19 was recorded in the Arctic as early as February 2020, but the larger pandemic waves reached the Arctic regions later due to remoteness and relative isolation. The Arctic experienced at least four large waves of the pandemic, impacted mainly by the Delta (Fall of 2021) and Omicron (Winter of 2022) variants, which drastically increased the number of infections and deaths (Tiwari et al., 2022). Overall, by January 1, 2023, 2,677,457 positive COVID-19 cases and 29,492 deaths were recorded.

Overall, the COVID-19 pandemic has had devastating effects on Arctic communities (Petrov et al., 2020; Petrov et al., 2021a). Recent studies have demonstrated the scale of multifaceted challenges the Arctic communities have been experiencing during the COVID-19 pandemic. In general, it has exacerbated economic and socio-cultural vulnerabilities, food insecurity, and adverse mental and physical health issues among the residents across Arctic jurisdictions (Barik et al., 2022; Markova et al., 2021; Lemieux et al., 2020; Cook & Johannsdottir, 2021; Men & Tarasuk, 2021; Golubeva et al., 2022). The pandemic also brought great challenges for the government emergency response (Cook and Jóhannsdóttir, 2021; Hardarson & Kristinsson, 2022; Chhean et al., 2021).

The pandemic situation was particularly acute in remote Indigenous communities. Historically, Indigenous Peoples of the Arctic often faced considerable health and socioeconomic disparities compared to other populations. During the pandemic, Indigenous communities were confronted with numerous additional challenges, including public health system vulnerabilities, food insecurity as a result of undercut subsistence economy (Burki, 2021; Hathaway, 2021; Manson, 2021; Markova et al., 2021; Lemieux et al., 2020; Cook & Johannsdottir, 2021; Men & Tarasuk, 2021; Golubeva et al., 2022; etc.), and higher COVID-19 mortality and morbidity rates (Arrazola et al., 2020; Burki, 2021; Manson & Buchwald, 2021; Hatcher, 2020; Retter, 2020; Indigenous Russia, 2020).

Impacts and consequences of the pandemic differ not only from region to region (Arctic Council, 2020; Petrov et al., 2021b; Tiwari et al., 2022) and community to community, but also across genders. An increasing volume of gender-focused publications demonstrates that during the pandemic, women particularly tend to experience disproportionately negative impacts and consequences related to elevated unemployment, loss of income, and increased unpaid care (homework and child/elderly care) during stay-at-home orders (Hjálmsdóttir & Bjarnadóttir, 2021; Auðardóttir & Rúdólfsdóttir, 2021; Haney & Barber, 2022; ADLAWD, 2021), risks related to maternal and perinatal health (Engjom et al., 2021; Collin et al., 2020; Birkelund at al., 2023), more profound adverse effects on mental health and well-being (Halldorsdottir et al., 2021), increased rates of domestic violence and abuse (Nesset, 2021; Moffitt et al., 2022; Trudell & Whitmore, 2020), and are at a greater risk of contracting the COVID-19 infection, especially if employed in the health, social care, primary education and child care sectors (Lundgren et al.,

2023; Sigursteinsdottir et al., 2022; Smith, 2021). Not many studies addressed gender imbalances in decision-making processes in the Arctic countries; however, despite female political leadership being crucial in response to the pandemic, there is evidence that women were not equally involved in the pandemic-related decisions in some Arctic jurisdictions (Tyner & Jalalzai, 2022; Kwan et al., 2020), for instance, in most Arctic regions of Russia, Alaska, Greenland, etc.

As a result, an aggregated effect of the COVID-19 pandemic's negative impacts has deepened gender inequality in all spheres for years to come (Aton et al., 2020; Madgavkar et al., 2020; Azcona, 2021; Gentilini et al., 2020; Miliken et al., 2020; UNDP 2020a; UN Women, 2021; UNDP 2020b). Delays in immediate public policy actions to restore and advance gender parity not only can have a lasting effect on economic growth given drastically increased unpaid work, elevated unemployment, and additional pressure placed on female-dominated spheres of the economy during the pandemic, but also negatively influence the lives of women afterwards. This makes it crucially important to understand and analyze the COVID-19 gender impacts and gendered policy responses to identify good practices supporting gender equality and advancing the UN Sustainable Development Goals in the Arctic (Degai & Petrov, 2021; Retter, 2020).

Despite the evidence of widening gender disparities, significant data availability issues and knowledge gaps exist regarding COVID-19 impacts and implications for Arctic communities in general, Indigenous Peoples, and women specifically. Existing gender-oriented indices either do not have a COVID-19 perspective (for instance, The Global Gender Gap Report, UNDP Gender Empowerment Measure (GEM), UNESCO Gender Parity Index (GPI)), or non-gendered (for instance, COVITA UNI, COVID-19 policy response trackers as Oxford COVID-19 Government Response Tracker, World Bank Tracker of Subsidies and State Aid to mitigate COVID-19 Effects, OECD Coronavirus Country Policy Tracker, Kaiser Family Foundation tracker, COVID-19: Local Action Tracker, CoronaNet (Cheng et al., 2020), or primarily focus on indicators at the national level (for instance, UN Women COVID-19 Global Gender Response Tracker) and thus do not shed light on the outcomes of COVID-19 gender-oriented response actions at subnational (regional), municipal (city/town), and local (community) levels.

As the COVID-19-driven gender inequalities were aggravated in the Arctic, designing the COVID-19 Gender Impacts and Policy Responses Indicators (COVID - GIPRI) Framework is crucial. This framework is aimed to capture, measure, and assimilate available data and conduct analysis to inform action to address COVID-19 (post)pandemic gender impacts and gendered implications, as well as to determine the state and trajectory of gender equality change during and after the COVID-19 pandemic.

Methodology

This science-driven academic exercise was conducted by an expert group that included Indigenous and non-Indigenous women from different parts of the Arctic (Alaska, Russia, and Iceland) with expertise in gender studies led by the paper's authors. We developed a conceptual framework based on open discussions within this diverse group of experts in an effort to make the process as inclusive and transparent as possible. The collaboratively developed conceptual COVID-GIPRI framework has been presented at different academic venues and public policy forums, including Arctic Science Summit Week (Austria, 2023) and Arctic Circle Assembly (Iceland, 2022) to solicit and incorporate feedback from diverse Arctic audiences. This study capitalized on the Arctic

Council's *Gender Equality in the Arctic III* research initiative*,* an international collaborative project focusing on gender equality in the Arctic (https://arcticgenderequality.network/phase-3) and the Project "Understanding Gender Equality and Empowerment in the Arctic" (arcticgender.org).

This initial COVID-GIPRI framework is envisioned as a starting point of gendered analysis of the COVID-19 pandemic in the Arctic that can be modified or expanded based on community input as the research progresses to ensure that opportunities to transform and improve are planned and enacted.

Results: The COVID-GIPRI conceptual framework

Designing the integrated system of COVID-19 gender impacts and responses indicators specifically for Arctic communities is a crucial task given their unique features, particularly given the necessity for incorporating Indigenous perspectives and developing policy-relevant findings for the Indigenous communities. To evaluate gendered impacts and policy responses of the COVID-19 pandemic, the indicators are used as metrics to determine the state and the trajectory of change for a given phenomenon. To be useful, indicators must be measurable (quantitative indicators are usually preferred), based on data that are not too expensive to collect, responsive to change, relatively easy to get transformed into practically useful knowledge and actionable information, and presented in a manner that can be easily understood by decision-makers and the general public (Larsen et al. 2010; Larsen et al. 2015). Although it is difficult to develop indicators that comprehensively describe complex social processes (Hamilton & Lammers, 2011), they are helpful tools for assessing status and change in social systems and may be successfully utilized in informing policy decisions (Larsen et al., 2015).

The novelty of the COVID - GIPRI framework is the ability to identify and examine COVID-19 impacts indicators in conjunction with COVID-19 response indicators. Systematic information on gender-sensitive measures by national, subnational (regional), municipal (city/town), and local (community) governments and tribal councils provides a consistent way of tracking and understanding gendered response actions to COVID-19 across jurisdictions at different levels. Although data availability varies across Arctic regions and communities, indicators enable better understanding and evaluation of the current state of affairs in the Arctic gendered response to the COVID-19 pandemic and beyond.

As in many other gender studies, the focus on Arctic women rather than all genders, is conditioned by the lack of gender-specific data across the Arctic. It is essential to acknowledge that the official gender statistics across Arctic countries and regions are often not comparable, adequate, consistent, or readily available. It presents major challenges and limitations in completing data collection. Based on existing data, the gender analysis is limited to the traditional binary gender concept centered around biological sex. As a result, conducting comparisons only between two gender groups (men and women) produces an inaccurate representation of gender issues. This binary does not present a holistic view of gender and does not fully accommodate Indigenous perspectives on gender and gender equality (Williamson et al. 2021). However, the system of indicators could be applied to other gender groups, in addition to women, should such data become available. Also, the COVID-GIPRI theoretical framework is designed in a way that allows intersectionality (for instance, see Hankivsky, 2011) to be implicitly included.

In the Arctic regions with Indigenous populations, it is crucial to focus on Indigenous women residing in rural settings to account for a comprehensive view of COVID-19 impacts and responses distinct for Indigenous communities and those living outside their ancestral lands. To evaluate the COVID-19 gendered impacts on Indigenous women, it is vital to incorporate Indigenous concepts of gender and the communities' religious, cultural beliefs, and social practices in designing gendered policy responses. Notably, gender identity in diverse Indigenous communities is not necessarily confined to a binary category (woman/man), nor is it static; it may exist along a continuum and change over time (Williamson 2021). Although in this paper, pandemic impacts are primarily drawn on Western concepts of gender, in the future, it is important to internalize Indigenous definitions to the extent possible.

The COVID-19 gender impacts domains and indicators

As demonstrated by the growing volume of literature, the COVID-19 pandemic exacerbates previously existing gender inequalities worldwide (e.g., UN Women, 2021). Women experience a disproportionately negative impact that affects them in the key domains of gender equality: political/public administration, economic, social, civic, and personal (see Figure 1).

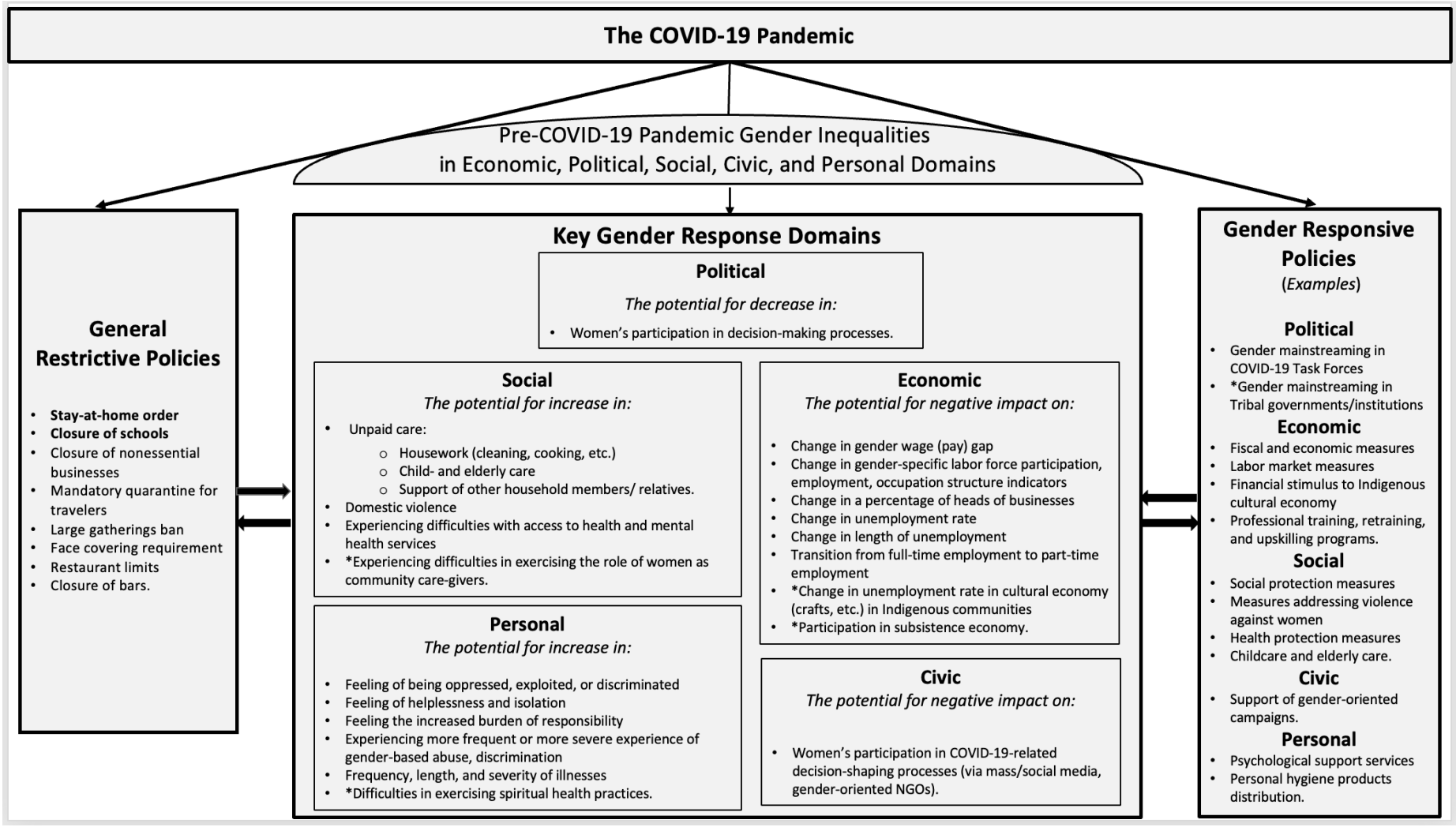
The COVID - GIPRI framework is an integrated system of indicators designed to comprehensively describe COVID-19 pandemic impacts and policy responses across aforementioned domains. In particular, it includes two types of policies relevant to the pandemic:

- *General restrictive policies* implemented by governments to prevent the spread of the virus and reduce mortality, and
- G*endered supportive policies,* that help sustain gender equality and equity by prioritizing measures targeting/prioritizing women (i.e., preventing gender-based violence, addressing unpaid work, etc.) or female-dominant sectors of the economy (Gentilini et al., 2020; Hale et al., 2021) and promoting economic security in COVID-19 crisis and recovery.

This COVID - GIPRI framework designed for the five domains of gender equality includes two types of indicators:

- *Structural indicators* associated with pre-COVID-19 conditions used to describe gender-related characteristics affecting gender equality, and
- *Change indicators* for describing the important processes that contribute to the COVID-19 pandemic's gender impacts and gendered responses and have a potential for affecting gender equality. Change indicators should be measured in comparison with the pre-pandemic period.

Using this overarching approach, the COVID - GIPRI framework presents a systematic way of analyzing government/community responses across all key five domains of gender equality



**Specifically designed to address potential needs of Indigenous women.*

Figure 1. The COVID-19 Gender Impacts Domains and Gender Responsive Policies: Analysis Framework

(1) Political/public administration domain: Although the situation with women's political participation and empowerment in the Arctic differs from place to place, gender inequality in the political and government institutions at all levels and in all spheres remains an issue across the Circumpolar North (Rozanova-Smith et al., 2021). Female leadership is crucial in crises like pandemics because women are expected to assume traditional roles as thoughtful caregivers and empathetic partners (Shanker, 2020). The COVID-19 pandemic has had an unexpected effect on the style of political leadership: it provided opportunities for women in leadership positions to effectively exercise their "protective femininity" in political leadership style (Brooks & Saad, 2020; Johnson & Williams, 2020; Taub, 2020; Subert, 2020) to mitigate negative COVID-19 impacts. However, existing studies demonstrate that women are neither prioritized nor targeted in COVID-19 policy measures nor are they fully included in decision-making and decision-shaping processes about COVID-19 (e.g., Gentilitni 2020; Fuhrman, 2020; Rajan et al., 2020; van Daalen et al. 2020).

In this regard, for the political domain, selected *political/public administration structural indicators* reflect women's participation and leadership in decision-making processes in administration departments/ministries, legislative committees, local communities councils, tribal councils and corporations as well as specifically established COVID-19 Task Forces[2] (e.g., a percentage of females in the city/local rural community / tribal COVID-19 Task Forces; female heads of relevant regional/national departments; percentage of women in the relevant legislative committees; percentage of women in the local rural Community Councils/Tribal Councils).

(2) Economic domain: Worldwide, pre-existing gender inequalities in the economic sphere leave women more vulnerable to COVID-19–related effects (UN Women, 2021). Persistent glass walls**,** i.e., horizontal professional clustering and segregation of women, reflected in unfair labor practices, self-selection towards lower-wage jobs and industries, bias and stereotyping ('male' and 'female' occupations), and gender-based discrimination by employers, contribute to the greater earning differential during the COVID-19 pandemic. Despite significant differences in levels of economic development and economic structures between the Circumpolar countries, even in most gender equal societies, the persistent trend of gender-based pay disparities remain (Boschini & Gunnarsson 2018; Oddsdóttir and Ágústsson, 2021). Even before the COVID-19 pandemic, the average gender wage gap was approximately 20% in favor of men in most Arctic jurisdictions (Rozanova Smith et al. 2021). The exception here is some Indigenous communities, where women are more involved in mixed economies, participating in non-subsistence economic activities to a greater extent, and thus earning larger and/or more stable wages (Kuokkanen, 2011; Quintal-Marineau & Wenzel, 2019). Arctic women are disproportionately represented in industries that declined the most during the pandemic: retail trade, hotel and tourist services, fashion (crafts)

[2] A COVID-19 Task Force is any institution (temporary or permanent) that was created by the national, regional, or local government to lead the response to the pandemic across any sector of public life (e.g., public health, economic recovery, enforcement). Based on the UNDP/UN Women methodology, COVID-19 Task Forces are divided into two main categories:

- *Decision-making Task Forces* that are typically composed of ministers, public health officials, or other high-level representatives across government (any task force with more than one government official is considered decision-making), and
- *Expert-advisory Task Forces* that are typically composed of academics, medical doctors or other public health experts from outside of government agencies.

industry, sports, and media (ADLAWD, 2021; Ashwin, 2006; Madgavkar et al., 2021; Novikova, 2016). While the female-dominant social care and healthcare sectors experienced a great demand in labor, it also exposed women to high COVID-related risks (Robertson & Gebeloff, 2020; Lundgren et al., 2023; Sigursteinsdottir et al., 2022; Smith, 2021). For example, in Alaska, women severely suffered from pandemic-related job losses and, in some cases, experienced difficulties in returning to the labor market (ADLAWD, 2021; Alon et al., 2020b). Overall, the current situation may have a long-term effect on gender equality by reducing women's lifetime earnings and hindering career progression (Alon et al. 2020a; Milliken et al. 2020).

To characterize and track changes in comparison with the pre-COVID-19 period, *economic change indicators* allow monitoring of changes in gender wage (pay) gap, change in unemployment rate for women, change in length of female unemployment, transition from full-time female employment to part-time female employment, etc.

(3) Social domain: Globally, during the COVID-19 pandemic, violence against women has increased, accompanied by the limited ability of justice institutions to effectively deliver services and provide access to justice (UN Women et al., 2020). In the Arctic, domestic violence and sexual assault are common in the lives of Indigenous women (Deer, 2018; Williams, 2021; Nesset et al., 2021; Moffitt et al., 2022; Trudell & Whitmore, 2020). Women, especially those living in remote rural communities, experience difficulties accessing physical and mental health services, reproductive health services, and prenatal and postnatal care (Kotlar, 2020; Stremple, 2021). Recent studies revealed that pre-existing gender disparities in the household division of labor have been drastically exaggerated and disproportionately affected women's well-being during lockdowns. Lockdowns increased hours of women's unpaid work at home as childcare, homeschooling, elderly care, and housework are primarily considered a part of the female domain (Barroso, 2021; Cohen & Krentz, 2020; Hjálmsdóttir & Bjarnadóttir, 2021; Miller, 2020). In the long-term, since many businesses use more flexible working practices after the pandemic (e.g., part-time and work from home), it might have a long-lasting effect on women, specifically when the work from home turns into 'the work of home' (Chattopadhyay, 2021).

For the social domain, included *social change indicators* are aimed at capturing changes in comparison with the pre-COVID-19 period (e.g., change in key female demographic characteristics; change in the number of acts of gendered violence/abuse; change in unpaid care (housework, child- and elderly care); change in access to health and mental health services for women, including reproductive health services, and prenatal and postnatal care).

(4) Civic (civil society) domain: Civil society plays a vital role in highlighting and shaping social and political milieus for all gender-sensitive measures that seek to address the COVID-19 pandemic impacts on women. Gender-oriented civic initiatives have a great potential to shape people's perceptions of the necessity of proactive gendered policy actions (Toh & Leonardelli, 2013). Affirmative action policies aimed at improving gender equality in all spheres and at all levels are often successfully implemented in cooperation with civil society actors channeled through mass/social media, gender-oriented NGOs campaigns, etc. Although no research is currently available on the ability of gender-oriented NGOs to promote and protect women's rights during the COVID-19 pandemic in the Arctic, there is a potential for a positive impact on Arctic women's participation in COVID-19-related decision-shaping processes through gender-oriented NGOs (UN Women, 2021).

For this domain, *civic structural indicators* reflect women's participation and leadership in mass/social media sector and decision-shaping processes (e.g., women in regional/local mass/social media leadership positions; women in regional/local gender-oriented NGOs leadership positions).

(5) Personal domain: Mainly as a result of stay-at-home orders and school closures, women are confronted with multifaceted challenges and higher burden of responsibilities that strengthen traditional gender stereotypes (Hjálmsdóttir & Bjarnadóttir, 2021; Auðardóttir & Rúdólfsdóttir, 2021; Haney & Barber, 2022) and increase women's stress (e.g., feelings of being oppressed, guilty, exploited, or discriminated, helpless and isolated) that negatively affect women's physical and mental health (e.g., Biroli et al., 2020; Bjarnadóttir, 2021; Prime et al., 2020; Halldorsdottir et al., 2021; Emelyanova, A., 2022).

P*ersonal change indicators* allow us to identify and track changes in comparison with the pre-COVID-19 period, e.g., increased feeling of being oppressed, exploited, or discriminated; increased feeling of helplessness and isolation; increase in frequency, length, and severity of illnesses (physical and mental health).

The series of policy-oriented indicators designed for Arctic communities (Table 2) are a valuable tool for utilizing a comprehensive approach when examining Arctic regions at various scales and domains and for contributing to identifying existing gaps in data necessary for gender-related policymaking.

Table 2. Examples of Possible Gender Responsive Policies Indicators

Gendered Response Domain	***Possible* Indicators of Gendered Response** Including, but not limited to:	**Comments**
Political --- Public Administration	Gender equality at COVID-19 Task Forces* at regional/local levels	Programs and actions that promote gender mainstreaming and gender equality (i.e., gender parity and women's meaningful participation in decision-making and decision-shaping processes).
	Gender equality at tribal governments/ institutions focusing on COVID-19 impacts.	Actions that promote gender mainstreaming and gender equality (i.e., gender parity and women's meaningful participation in decision-making and decision-shaping processes).
Economic	Fiscal, economic measures **	Target or prioritize women or female-dominated sectors of the economy.*
	Labor market measures**	Target or prioritize women or female-dominated sectors of the economy,* female-owned small businesses.
	Financial stimulus to Indigenous cultural economy***	Target or prioritize women in Indigenous communities (e.g., female entrepreneurs in craft production).

	Professional training, retraining, and upskilling programs	Target or prioritize women (e.g., quotas for training programs facilitating their return to the labor market, etc.). In comparison with pre-COVID-19 period.
Social	Social protection measures**	Target or prioritize women (e. g., cash transfers, food assistance that prioritize women/female-headed households as the main recipients; paid leave to care for dependents, compensating single mothers/parents for schools/childcare closures ("cash-for-care"), etc.).
	Violence against women measures**	Target or prioritize women (e.g., shelters, government funded access to rent supplement payments or private rent housing benefits for survivors of domestic violence, risk communication activities, hot lines, etc.; special response training programs for police, etc.)
	Health protection measures	Target or prioritize women (e.g., accessible and affordable mental health services, reproductive health services, prenatal and postnatal care, including transportation for pregnant women to hospitals, provision of the donor breast milk for parturient women, etc.). Particularly important for rural communities.
	Childcare and elderly care	Emergency or temporary childcare centers/ non-profit day-care centers operated by municipalities for the children of essential service providers (first responders, healthcare workers, transit workers, and other industries where a parent cannot stay home); school age childcare programs; strengthening services for populations with intense care needs (e.g., older persons, persons with disabilities).
Civic	Non-profit sector and gender-oriented campaigns	Address women-oriented COVID-19-driven impacts (e.g., promoting women's participation in decision-shaping processes via social media and mass media campaigns, social ads campaigns, etc.). Target or prioritize female-dominant non-profit sector (e.g., government's extra funding to civil society organizations, including NGOs working to combat violence against women, support public information campaigns to protect women's jobs, etc.).
Personal	Protection measures, including psychological support.	Target system of psychological support (i.e., accessible and affordable psychological support services).
	Personal women's needs.	Prioritizing personal women's needs (i.e., delivery of personal hygiene products to remote communities, etc.)

* Based on the UNDP/UN Women methodology, a sector can be classified as female-dominated when there is a 5-percentage point gap (favorable to women) between the share that the sector represents in female and male employment, or, alternatively, when for every man employed in the sector, there is at least 1.5 women.
** Based on the UNDP/UN Women methodology.
*** Specifically designed to address potential needs of Indigenous women.

Although centered around the current pandemic, this system of indicators makes a considerable contribution to gender-based research and generates new knowledge about gender inequalities across key domains in the Arctic. Climatic and environmental change, globalization and increased connectivity, urbanization, deforestation, and growing anthropogenic pressure are already contributing to a frequency of disease outbreaks that have been rising steadily over the past decade and may make future pandemics inevitable (see Allen et al., 2017; Neiderud, 2015; Samarasekera, 2021; Smith et al., 2014; Walsh et al., 2021; WHO, 2021; etc.).

In the future, the system of COVID–GIPRI can be used to contribute to developing the Arctic Community COVID-19 Gender Response Index. It can also serve as a foundation for short- and long-term monitoring systems for upcoming crises. Based on principles of interdisciplinary integration, this Index can implement a mixed-method study design (Creswell & Plano Clark, 2011), where quantitative and qualitative data are collected and analyzed sequentially, concurrently, and iteratively, and ultimately, that will allow aggregating various measures of the COVID-19 gender-oriented policy responses.

Conclusions

To better understand the complex issues pertaining to the COVID-19 pandemic in diverse Arctic regions, a COVID-GIPRI framework can be used as an instrumental tool to acquire valuable knowledge that allows the measurement of the COVID-19 pandemic's gender impacts in connection with general restrictive and gendered policy responses at different levels of governance across all key domains of gender equality – political/public administration, economic, social, civic, and personal.

Although linking policy responses and gender equality impacts is a highly challenging task, implementing a holistic approach for developing a comprehensive system of COVID-19 indicators allows for eliciting potential pieces of evidence of the policy impacts on selected gender equality domains. The COVID-GIPRI framework, with appropriate modifications, allows the integration of methods of intersectional analysis (Landrey, 2007; Risman, 2018). It can be effectively used in sex- and gender-based analysis (should such data on other genders become available), aimed at helping to understand how sex, gender (where available), age, race, ethnicity (primarily Indigenous/non-Indigenous), education, socioeconomic status, geography (including urban-rural dimension), immigration status, and other determinants contribute to COVID-19-related gender impacts. Furthermore, indicators reflecting stakeholders' interests and concerns may facilitate continuous improvement and motivate the implementation of gender equality and mainstreaming gender perspectives in government programs in the Arctic and beyond.

Based on the COVID-GIPRI framework, developed indices or composite indicators, often seen as a way to address the complexity of social processes, accompanied by relevant data, can be used to inform researchers, community members, and the public on existing gendered measures addressing COVID-19. Regularly updated, up-to-date indices can also be used for decision-making, and program planning to accurately assess, improve, and monitor gender-oriented policies and practices and evaluate their effectiveness over time. Identification of the most successful practices and possible COVID-19 gender-oriented policy response options may be particularly valuable for communities in the Circumpolar North in preparation for future pandemics and thus contributing to resilience in the Arctic.

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References

ADLAWD. (2021). Alaska Department of Labor and Workforce Development.

Allen, T., Murray, K. A., Zambrana-Torrelio, C., Morse, S., Rondinini, C., Di Marco, M., Breit, N., & Daszak, P. (2017). Global hotspots and correlates of emerging zoonotic diseases. *Nature Communications*, *8*(1). https://doi.org/10.1038/s41467-017-00923-8

Alon, T., Olmstead-Rumsey, J., Doepke, M., & Tertilt, M. (2020). *This Time It's Different: The Role of Women's Employment in a Pandemic Recession.* Working Paper No. 27660. National Bureau of Economic Research.

Alon, T., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020b). *The Impact of COVID-19 on Gender Equality*. https://doi.org/10.3386/w26947

Arctic Council . COVID-19 in the Arctic: briefing document for senior Arctic officials. 2020. Available from: https://oaarchive.arctic-council.org/handle/11374/2473

Arrazola, J., Masiello, M., Joshi, S., Dominguez, A., Poel, A., Wilkie, C., Bressler, J., McLaughlin, J., Kraszewski, J., Komatsu, K., Peterson Pompa, X., Jespersen, M., Richardson, G., Lehnertz, N., LeMaster, P., Rust, B., Keyser Metobo, A., Doman, B., Casey, D., Kumar, J., Rowell, A. L, Miller, T.K , Mannell, M., Naqvi, O., Wendelboe, A., Leman, R., Clayton, J. L., Barbeau, B., Rice, S. K., Rolland, S. J.H., Warren-Mears, V., Echo-Hawk, A., Apostolou, A., & Landen, M. (2020). COVID-19 Mortality Among American Indian and Alaska Native Persons - 14 States, January-June 2020. *MMWR. Morbidity and Mortality Weekly Report*, *69*(49), 1853–1856. https://doi.org/10.15585/mmwr.mm6949a3

Ashwin, S. (2006). *Adapting to Russia's new labor market: Gender and employment behavior.* Routledge.

Auðardóttir, A. M., & Rúdólfsdóttir, A. G. (2020). Chaos ruined the children's sleep, diet and behaviour: Gendered discourses on family life in pandemic times. *Gender, Work and Organization*, *28*(S1), 168–182. https://doi.org/10.1111/gwao.12519

Barik, J., Pal, I., Ghosh, T., Mukherjee, S., & Mukhopadhyay, A. (2022). COVID-19 pandemic in the Arctic and Subarctic. In *Elsevier eBooks* (pp. 143–156). https://doi.org/10.1016/b978-0-323-99277-0.00030-9

Barroso, A. (2021). *For American couples, gender gaps in sharing household responsibilities persist amid pandemic.* Pew Research Center. https://www.pewresearch.org/fact-tank/2021/01/25/for-american-couples-gender-gaps-in-sharing-household-responsibilities-persist-amid-pandemic/

Birkelund, K. S., Rasmussen, S. S., Schwank, S. E., Johnson, J., & Ghi, T. (2023). Impact of the COVID-19 pandemic on women's perinatal mental health and its association with personality traits: An observational study. *Acta Obstetricia Et Gynecologica Scandinavica*, *102*(3), 270–281. https://doi.org/10.1111/aogs.14525

Biroli, P., Bosworth, S.J., Giusta, M.D., Di Girolamo, A., Jaworska, S., & Vollen, J. (2020). *Family Life in Lockdown*. IZA Discussion Paper No. 13398. https://www.iza.org/publications/dp/13398/family-life-in-lockdown

Boschini, A., & Gunnarsson, K. (2018). Gendered trends in income inequality. *Nordic Economic Policy Review, 519*, 128–132.

Brooks, D. J., & Saad, L. (2020). Double Whammy: Why the Underrepresentation of Women among Workplace and Political Decision Makers Matters in Pandemic Times. *Politics & Gender*, *16*(4), 1110–1122. https://doi.org/10.1017/s1743923x20000628

Burki, T. K. (2021). COVID-19 among American Indians and Alaska Natives. *Lancet Infectious Diseases*, *21*(3), 325–326. https://doi.org/10.1016/s1473-3099(21)00083-9

Chattopadhyay, S. (2021). The Pandemic of Productivity. *Anthropology in Action*, *28*(1), 47–51. https://doi.org/10.3167/aia.2021.280109

Cheng, C., Barceló, J., Hartnett, A. S., Kubinec, R., & Messerschmidt, L. (2020). COVID-19 Government Response Event Dataset (CoronaNet v.1.0). *Nature Human Behaviour*, *4*(7), 756–768. https://doi.org/10.1038/s41562-020-0909-7

Chhean, E., DelFavero, M., Thoumi, A., Tewarson, H., Haldar, S., Hockenberry, S. (2021). A Case Study of Alaska's State and Tribal Nation Partnerships for COVID-19 Vaccination. Washington DC: National Academy of State Health Policy, Duke- Margolis Center for Health Policy, National Governors Association Center for Best Practices.

Cohen, P., & Hsu, T. (2020). Pandemic Could Scar a Generation of Working Mothers. *The New York Times*. June 03.

Collin, J., Byström, E., Carnahan, A., & Ahrne, M. (2020). Public Health Agency of Sweden's Brief Report: Pregnant and postpartum women with severe acute respiratory syndrome coronavirus 2 infection in intensive care in Sweden. *Acta Obstetricia Et Gynecologica Scandinavica*, *99*(7), 819–822. https://doi.org/10.1111/aogs.13901

Cook, D., & Johannsdottir, L. (2021). Impacts, Systemic Risk and National Response Measures Concerning COVID-19—The Island Case Studies of Iceland and Greenland. *Sustainability*, *13*(15), 8470. https://doi.org/10.3390/su13158470

COVITA. (2022). ARCTICenter COVID-19 tracker. University of Northern Iowa. https://arcticcovid.uni.edu/

Creswell, J.W. and Plano Clark, V.L. (2011). *Designing and Conducting Mixed Methods Research*. 2nd Edition, Sage Publications, Los Angeles.

Deer, S. (2018). NATIVE PEOPLE AND VIOLENT CRIME. *Du Bois Review*, *15*(1), 89–106. https://doi.org/10.1017/s1742058x18000012

Degai, T., & Petrov, A. V. (2021). Rethinking Arctic sustainable development agenda through indigenizing UN sustainable development goals. *International Journal of Sustainable Development and World Ecology*, *28*(6), 518–523. https://doi.org/10.1080/13504509.2020.1868608

Emelyanova, A. (2022). The Arctic Region and Its Inhabitants. In *Arctic One Health: Challenges for Northern Animals and People* (pp. 3-20). Cham: Springer International Publishing.

Engjom, H., Aabakke, A. J., Klungsøyr, K., Svanvik, T., Äyräs, O., Jonasdottir, E., Thurn, L., Jones, E. H. G., Pettersson, K., Nyfløt, L. T., Al-Zirqi, I., Vangen, S., Juliusson, P. B., Källén, K., Gissler, M., & Krebs, L. (2021). COVID-19 in pregnancy—characteristics and outcomes of pregnant women admitted to hospital because of SARS-CoV-2 infection in the Nordic countries. *Acta Obstetricia Et Gynecologica Scandinavica*, *100*(9), 1611–1619. https://doi.org/10.1111/aogs.14160

Fuhrman, S., & Rhodes, F. (2020). *Where are the Women? The Conspicuous Absence of Women in COVID-19 Response Teams and Plans, and Why We Need Them*. Report. CARE (Cooperative for Assistance and Relief Everywhere). https://insights.careinternational.org.uk/publications/why-we-need-women-in-covid-19-response-teams-and-plans

Gentilini, U., Almenfi, M., Orton, I. & Dale, P. (2020). *Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures*. "Living paper" version 12 (11 December 2020). World Bank, Washington, DC. https://openknowledge.worldbank.org/bitstream/handle/10986/33635/Social- Protection-and-Jobs-Responses-to-COVID-19-A-Real-Time-Review-of-Country-Measures-December-11-2020.pdf?sequence=23&isAllowed=y

Golubeva, E. N., Emelyanova, A., Kharkova, O. A., Rautio, A., & Soloviev, A. (2022). Caregiving of Older Persons during the COVID-19 Pandemic in the Russian Arctic Province: Challenges and Practice. *International Journal of Environmental Research and Public Health*, *19*(5), 2775. https://doi.org/10.3390/ijerph19052775

Hale, T., Anania, J., Angrist, N., Boby, T., Cameron-Blake, E., Ellen, L., Goldszmidt, R., Hallas, L., Kira, B., Luciano, M., Majumdar, S., Nagesh, R., Petherick, A., Phillips, T., Tatlow, H., Webster, S., Wood, A., Zhang, Y. (2021). *Variation in Government Responses to COVID-19*. Blavatnik School of Government Working Paper. www.bsg.ox.ac.uk/covidtracker

Halldorsdottir, T., Thorisdottir, I. E., Meyers, C. C. A., Asgeirsdottir, B. B., Kristjansson, A. L., Valdimarsdottir, H. B., Allegrante, J. P., & Sigfusdottir, I. D. (2021). Adolescent well-being amid the COVID-19 pandemic: Are girls struggling more than boys? *JCPP Advances*, e12027. https://doi.org/10.1111/jcv2.12027

Hamilton, L. C., & Lammers, R. B. (2011). Linking pan-Arctic human and physical data. *Polar Geography*, *34*(1–2), 107–123. https://doi.org/10.1080/1088937x.2011.591962

Haney, T. J., & Barber, K. (2022). The extreme gendering of COVID−19: Household tasks and division of labour satisfaction during the pandemic. *Canadian Review of Sociology/Revue Canadienne De Sociologie*, *59*(S1), 26–47. https://doi.org/10.1111/cars.12391

Hankivsky, O., & Cormier, R. (2011). Intersectionality and Public Policy: Some Lessons from Existing Models. *Political Research Quarterly*, *64*(1), 217–229. https://doi.org/10.1177/1065912910376385

Hardarson, Ó.T. and Kristinsson, G.H. (2022), Iceland: Political Developments and Data in 2021. *European Journal of Political Research Political Data Yearbook, 61*, 214–224. https://doi-org.proxygw.wrlc.org/10.1111/2047-8852.12354

Hatcher, S. M., Agnew-Brune, C., Anderson, M., Zambrano, L. D., Rose, C. E., Jim, M. A., Baugher, A., Liu, G. S., Patel, S. V., Evans, M. E., Pindyck, T., Dubray, C. L., Rainey, J. J., Chen, J., Sadowski, C., Winglee, K., Penman-Aguilar, A., Dixit, A., Claw, E., . . . McCollum, J. (2020). COVID-19 Among American Indian and Alaska Native Persons — 23 States, January 31–July 3, 2020. *Morbidity and Mortality Weekly Report*, *69*(34), 1166–1169. https://doi.org/10.15585/mmwr.mm6934e1

Hathaway, E. D. (2020). American Indian and Alaska Native People: Social Vulnerability and COVID-19. *Journal of Rural Health*, *37*(1), 256–259. https://doi.org/10.1111/jrh.12505

Hjálmsdóttir, A., & Bjarnadóttir, V. S. (2020). "I have turned into a foreman here at home": Families and work–life balance in times of COVID-19 in a gender equality paradise. *Gender, Work and Organization*, *28*(1), 268–283. https://doi.org/10.1111/gwao.12552

Indigenous Russia. (2020). The COVID 19 impact on indigenous peoples of the Russian Arctic, Siberia, and the Far East. Report. https://indigenous-russia.com/archives/6552

Johnson, C., & Williams, B. (2020). Gender and Political Leadership in a Time of COVID. *Politics & Gender, 16*(4), 943-950. doi:10.1017/S1743923X2000029X

Kotlar, B., Gerson, E., Petrillo, S., Langer, A., & Tiemeier, H. (2021). The impact of the COVID-19 pandemic on maternal and perinatal health: a scoping review. *Reproductive Health*, *18*(1). https://doi.org/10.1186/s12978-021-01070-6

Kuokkanen, R. (2011). Indigenous economies, theories of subsistence, and women: Exploring the social economy model for Indigenous governance. *American Indian Quarterly, 35*, 215–240.

Kwan, V., Cheung, J. C., & Kong, J. W. (2020). Women's Leadership in the COVID-19 Pandemic. *Political Insight*, *11*(4), 13–15. https://doi.org/10.1177/2041905820978834Larsen, J. N., Schweitzer, P., & Fondahl, G. (Eds.). (2010). Arctic social indicators – A follow up to the Arctic Human Development Report (TemaNord: 521). Copenhagen: Nordic Council of Ministers.

Larsen, J. N., Schweitzer, P., & Petrov, A. (Eds.). (2015). Arctic Social Indicators: ASI II: Implementation (TemaNord: 2014:568). Copenhagen: Nordic Council of Ministers.

Lemieux, T., Milligan, K., Schirle, T., & Skuterud, M. (2020). Initial Impacts of the COVID-19 Pandemic on the Canadian Labour Market. *Canadian Public Policy-analyse De Politiques*, *46*(S1), S55–S65. https://doi.org/10.3138/cpp.2020-049

Lundgren, G., Bengtsson, M., & Liebenhagen, A. (2022). Swedish emergency nurses' experiences of the preconditions for the safe collection of blood culture in the emergency department during the COVID -19 pandemic. *Nursing Open*, *10*(3), 1619–1628. https://doi.org/10.1002/nop2.1416

Madgavkar, A., White, O., Krishnan, M., Mahajan, D., & Azcue, X. (2020). *COVID-19 and gender equality: Countering the regressive effects.* New York: McKinsey & Company, Inc.

Manson, S. M., & Buchwald, D. (2021). Bringing Light to the Darkness: COVID-19 and Survivance of American Indians and Alaska Natives. *Health Equity*, *5*(1), 59–63. https://doi.org/10.1089/heq.2020.0123

Markova, V. N., Alekseeva, K., Neustroeva, A. N., & Potravnaya, E. V. (2021). Analysis and Forecast of the Poverty Rate in the Arctic Zone of the Republic of Sakha (Yakutia). *Studies on Russian Economic Development*, *32*(4), 415–423. https://doi.org/10.1134/s1075700721040109

Men, F., & Tarasuk, V. (2021). Food Insecurity amid the COVID-19 Pandemic: Food Charity, Government Assistance, and Employment. *Canadian Public Policy-analyse De Politiques*, *47*(2), 202–230. https://doi.org/10.3138/cpp.2021-001

Miller, C. C. (2020). Nearly Half of Men Say They Do Most of the Home Schooling. 3 Percent of Women Agree. *New York Times*. May 6. https://www.nytimes.com/2020/05/06/upshot/pandemic-chores-homeschooling-gender.html

Milliken, F.J., Kneeland, M.K., & Flynn, E. (2020). Implications of the COVID-19 Pandemic for Gender Equity Issues at Work. *Journal of Management Studies* 57, 1767-1772. https://doi.org/10.1111/joms.12628

Moffitt, P., Aujla, W., Giesbrecht, C. J., Grant, I., & Straatman, A. (2020). Intimate Partner Violence and COVID-19 in Rural, Remote, and Northern Canada: Relationship, Vulnerability and Risk. *Journal of Family Violence*, *37*(5), 775–786. https://doi.org/10.1007/s10896-020-00212-x

Neiderud, C. (2015). How urbanization affects the epidemiology of emerging infectious diseases. *Infection Ecology & Epidemiology*, *5*(1), 27060. https://doi.org/10.3402/iee.v5.27060

Nesset, M. B., Gudde, C. B., Mentzoni, G. E., & Palmstierna, T. (2021). Intimate partner violence during COVID-19 lockdown in Norway: the increase of police reports. *BMC Public Health*, *21*(1). https://doi.org/10.1186/s12889-021-12408-x

Novikova, S. S. (2016). Social state and gender equality in modern Russia. *Contemporary Problems of Social Work, 2*(3), 72–78.

Oddsdóttir, E. and Ágústsson, H. (Eds) (2021). *Pan-Arctic Report, Gender Equality in the Arctic.* Iceland's Arctic Council Chairmanship, Arctic Council Sustainable Development Working Group, Icelandic Arctic Cooperation Network, Icelandic Directorate for Equality, Stefansson Arctic Institute.

Oddsdóttir, E. E., Ágústsson, H. Ó., Svensson, E., Gjørv, G. H., Kendall, S., Smieszek, M., Prior, T., Hayfield, E. A., Williamson, K. J., Rozanova-Smith, M., Petrov, A. V., & Williams, V. K. (2021). Gender Equality for a Thriving, Sustainable Arctic. *Sustainability*, *13*(19), 10825. https://doi.org/10.3390/su131910825

Petrov, A. V., Welford, M. R., Golosov, N. S., DeGroote, J., Devlin, M., Degai, T., & Savelyev, A. (2021). Lessons on COVID-19 from Indigenous and remote communities of the Arctic. *Nature Medicine*, *27*(9), 1491–1492. https://doi.org/10.1038/s41591-021-01473-9

Petrov, A. V., Welford, M. R., Golosov, N. S., DeGroote, J., Devlin, M., Degai, T., & Savelyev, A. (2021a). The "second wave" of the COVID-19 pandemic in the Arctic: regional and temporal dynamics. *International Journal of Circumpolar Health*, *80*(1). https://doi.org/10.1080/22423982.2021.1925446

Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, *75*(5), 631–643. https://doi.org/10.1037/amp0000660

Quintal-Marineau, M., & Wenzel, G. (2019). Men hunt, women share: Gender and contemporary Inuit subsistence relations, in *Towards a broader view of hunter gatherer sharing*, ed. N. Lavi & D. E. Friesem, pp. 203–212. McDonald Institute Monographs Series.

Rajan, D., Koch, K., Rohrer, K., Bajnoczki, C., Socha, A., Voss, M., Nicod, M., Ridde, V., & Koonin, J. (2020). Governance of the Covid-19 response: a call for more inclusive and transparent decision-making. *BMJ Global Health*, *5*(5), e002655. https://doi.org/10.1136/bmjgh-2020-002655

Retter, G.-B. (2020). Indigenous Peoples and COVID-19: Challenges to achieving SDGs. Arctic (Inuit Nunaat and Sapmi). Regional Report. Indigenous Peoples Major Group. https://www.indigenouspeoples-sdg.org/index.php/english/all-resources/ipmg-position-papers-and-publications/ipmg-reports/national-regional-reports/184-indigenous-peoples-and-covid-19-challenges-to-achieving-the-sdgs-arctic-inuit-nunaat-and-sapmi/file

Robertson, C., & Gebeloff, R. (2020). 'How millions of women became the most essential workers in America'. *The New York Times*. April 18. https://www.nytimes.com/2020/04/18/us/coronavirus-women-essential-workers.html

Rozanova Smith, M., Petrov, A., Korkina Williams, V., Absalonsen, J., Alty, R., Arnfjord, S., Apok, C., Biscaye, E., Black., J., Carothers, C., Chapman, Y., Fusco, S., Gaini, F., Hayfield, E. A., Logadottir, H., Joona, T., Karlsdóttir, A., Kimmel, M., Larocque, B., Lempiäinen, K., Mack, L. M., Michaels, S., Mills, S., Naskali, P., Nielsen, S. S.., Olsvig, I., Osipova, M., Poturaeva, A., Povoroznyuk, O., Quintal Marineau, M., Þrastardóttirv, B., Vinokurova, L., Zamyatina, N., Zanotti, L. (2021). Gender Empowerment and Fate Control, in *Pan-Arctic Report, Gender Equality in the Arctic*, ed. E.E. Oddsdóttir & H. O. Ágústsson, pp. 224-267. Iceland's Arctic Council Chairmanship, Arctic Council Sustainable Development Working Group, Icelandic Arctic Cooperation Network, Icelandic Directorate for Equality, Stefansson Arctic Institute.

Samarasekera U. (2021). CEPI prepares for future pandemics and epidemics. *The Lancet. Infectious diseases*, *21*(5), 608. https://doi.org/10.1016/S1473-3099(21)00216-4

Shanker, P. (2020). Sympathy and Empathy in the Time of Coronavirus. *National Review*. April 8. https://www.nationalreview.com/2020/04/coronavirus-crisis-america-needs-sympathy-empathy/#slide-1

Sigursteinsdóttir, H., & Rafnsdóttir, G. L. (2022). The Well-Being of Primary School Teachers during COVID-19. *International Journal of Environmental Research and Public Health*, *19*(18), 11177. https://doi.org/10.3390/ijerph191811177

Smith, J. A. (2021). From "nobody's clapping for us" to "bad moms": COVID-19 and the circle of childcare in Canada. *Gender, Work and Organization*, *29*(1), 353–367. https://doi.org/10.1111/gwao.12758

Smith, K., Goldberg, M. J., Rosenthal, S. R., Carlson, L. R., Chen, J., Chen, C., & Ramachandran, S. (2014). Global rise in human infectious disease outbreaks. *Journal of the Royal Society Interface*, *11*(101), 20140950. https://doi.org/10.1098/rsif.2014.0950

Stremple, C. (2021). To protect her community, St. Paul mom isolated for 10 weeks before having twins in Anchorage. *KTOO Public Media.* February 7, 2021. https://www.ktoo.org/2021/02/07/to-protect-her-community-st-paul-mom-isolated-for-10-weeks-before-having-twins-in-anchorage/

Subert, M. (2020). A gender-sensitive approach to U.S. crisis communication for COVID-19 and beyond. *Journal of Contingencies and Crisis Management*, *28*(4), 487–489. https://doi.org/10.1111/1468-5973.12325

Taub, A. (2020). "Why Are Nations Led by Women Doing Better?" *New York Times*. May 15. https://www.nytimes.com/2020/05/15/world/coronavirus-women-leaders.html

Tiwari, S., Petrov, A. V., Devlin, M., Welford, M. R., Golosov, N. S., DeGroote, J., Degai, T., & Ksenofontov, S. M. (2022b). The second year of pandemic in the Arctic: examining spatiotemporal dynamics of the COVID-19 "Delta wave" in Arctic regions in 2021. *International Journal of Circumpolar Health*, *81*(1). https://doi.org/10.1080/22423982.2022.2109562

Toh, S. M., & Leonardelli, G. J. (2013). Cultural Constraints on the Emergence of Women Leaders. *Organizational Dynamics*, *42*(3), 191–197. https://doi.org/10.1016/j.orgdyn.2013.06.004

Trudell, A. L., & Whitmore, E. (2020). Pandemic Meets Pandemic: Understanding the Impacts of COVID-19 on Gender-Based Violence Services and Survivors in Canada. Retrieved October 23, 2020, https://endingviolencecanada.org/wp-content/uploads/2020/08/FINAL.pdf

Tyner, K., & Jalalzai, F. (2022). Women prime ministers and COVID-19: Within-case examinations of New Zealand and Iceland. *Politics and Policy*, *50*(6), 1076–1095. https://doi.org/10.1111/polp.12511

UN Women. (2021). *COVID-19 and women's rights organizations: Bridging response gaps and demanding a more just future.* Poilicy brief 20. United Nations Entity for Gender Equality and the Empowerment of Women. https://www.unwomen.org/en/digital-library/publications/2021/03/policy-brief-covid-19-and-womens-rights-organizations

Van Daalen, K. R., Bajnoczki, C., Chowdhury, M., Dada, S., Khorsand, P., Socha, A., Lal, A., Jung, L. L., Alqodmani, L., Torres, I., Ouédraogo, S., Mahmud, A. J., Dhatt, R., Phelan, A., & Rajan, D. (2020). Symptoms of a broken system: the gender gaps in COVID-19 decision-making. *BMJ Global Health*, *5*(10), e003549. https://doi.org/10.1136/bmjgh-2020-003549

Walsh, M., Sawleshwarkar, S., Hossain, S., & Mor, S. M. (2020). Whence the next pandemic? The intersecting global geography of the animal-human interface, poor health systems and air transit centrality reveals conduits for high-impact spillover. *One Health*, *11*, 100177. https://doi.org/10.1016/j.onehlt.2020.100177

Walsh, M., Sawleshwarkar, S., Hossain, S., & Mor, S. M. (2020b). Whence the next pandemic? The intersecting global geography of the animal-human interface, poor health systems and air transit

centrality reveals conduits for high-impact spillover. *One Health*, *11*, 100177. https://doi.org/10.1016/j.onehlt.2020.100177

WHO. (2021). *Ending this pandemic, preventing the next: building together a healthier, safer and fairer world.* Seventy-fourth World Health Assembly. 24 May – 1 June 2021. https://www.who.int/about/governance/world-health-assembly/seventy-fourth-world-health-assembly

Williamson, K. J., Fusco, S., Gladii, A., Johansen, T. M.W., Seabrook Kendall, S.S., Kjærgaard, S. L., Larocque, B., Michaels, S., Scarpa, F., Sigurðardóttir, S., Adóttir, S. S., Þorvaldsdóttir, K. B., & Þrastardóttir, B. (2021). Gender Empowerment and Fate Control, in *Pan-Arctic Report, Gender Equality in the Arctic*, ed. E.E. Oddsdóttir & H. O. Ágústsson. Iceland's Arctic Council Chairmanship, Arctic Council Sustainable Development Working Group, Icelandic Arctic Cooperation Network, Icelandic Directorate for Equality, Stefansson Arctic Institute.

Williamson, L., Harwell, T. S., Koch, T. A., Anderson, S. E., Scott, M. K., Murphy, J. D., Holzman, G. S., & Tesfai, H. F. (2021). COVID-19 Incidence and Mortality Among American Indian/Alaska Native and White Persons — Montana, March 13–November 30, 2020. *Morbidity and Mortality Weekly Report*, *70*(14), 510–513. https://doi.org/10.15585/mmwr.mm7014a2