What if Data Sharing Was a Collaborative Decision?

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SCAN FOR POSTER AND INFOGRAPHICS

Aim and Method

Data sharing is a cornerstone of Open Science but is surrounded by ethical and methodological challenges (Munafò et al., 2017).

Informed consent should go beyond mere authorization, ensuring participants fully understand the implications of data sharing before agreeing (Miller et al., 2011).

Despite growing awareness, researchers largely retain control over the extent of participant involvement in data-sharing decisions.

What factors are related to participants' decisions to share their data in the context of open science?

We performed a **multinomial logistic regression** model using R, to investigate which **demographic characteristics** (gender, age, and employment status) and **data collection variables** (study and compensation) related to data-sharing decisions across four studies where participants completed **infographics** designed to help them better understand the meaning and implications of their choices.
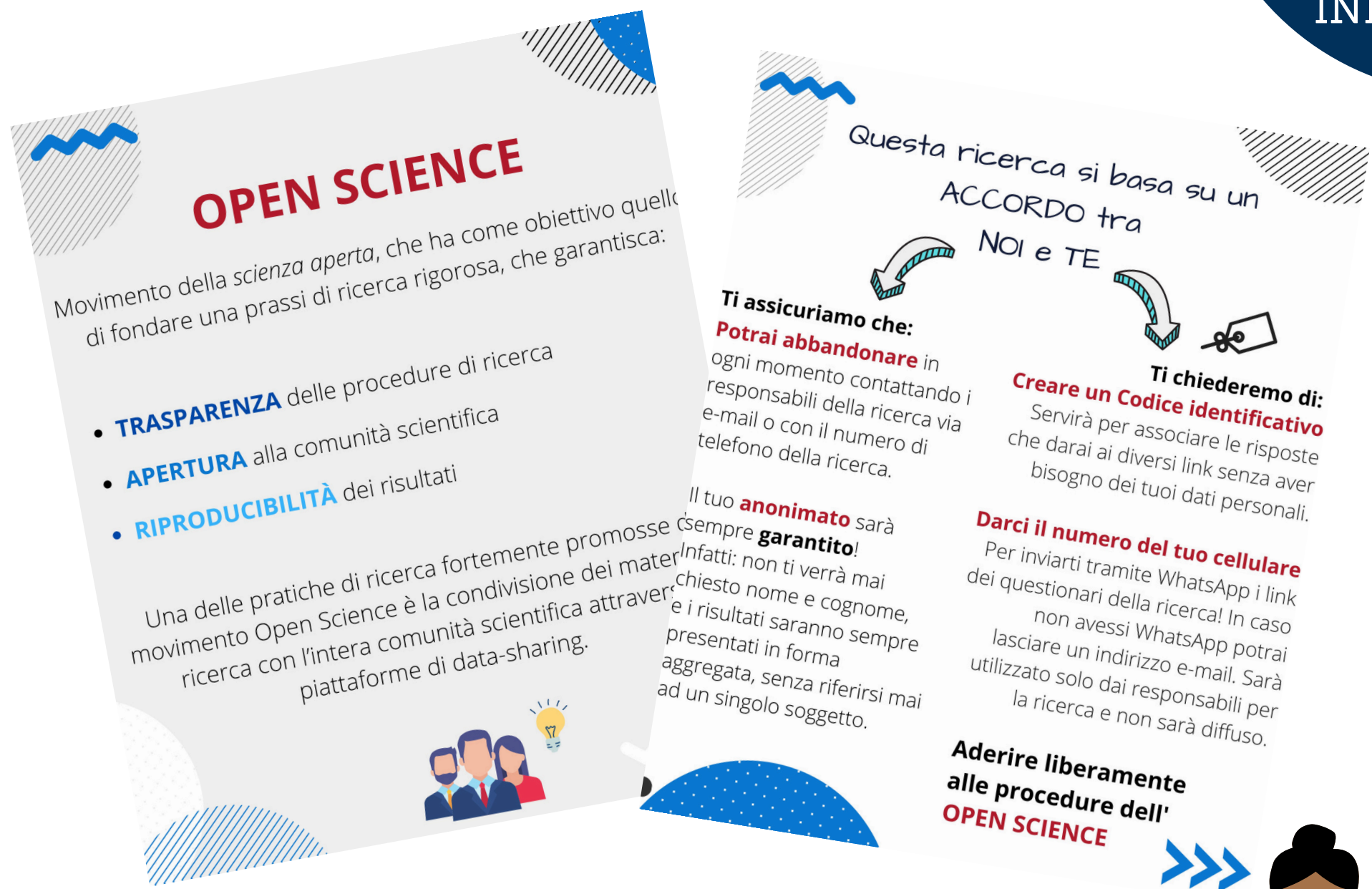
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MORE DETAILS AT OSF

	People who accessed the online survey (N)	People who completed the questionnaire regarding their rights as participant (%,N)	People who declared that they have read, understood, and are aware of their rights (%,N)	People who gave consent to participate (%,N)	People who gave consent to participate and to share their data (%,N)
GIOVANI&COVID • 2020-2021 • intensive longitudinal	**845**	55,7%, 471	51.6%, 436	51.4%, 434	82.7%, **359**
CHATGPT&TAM • 2023 • cross-sectional	**615**	81.3%, 500	80.2%, 493	79.0%, 486	99.6%, **484**
SCIENTIFICREASONING2 (SRS1) • 2024 • cross-sectional	**626**	72%, 451	67.6%, 423	67.1%, 420	98.3%, **413**
SCIENTIFICREASONING2 (SRS2) • 2024-2025 • cross-sectional	**2298**	96.3%, 2214	92.4%, 2123	91.8%, 2109	97.9%, **2062**

Results

By combining participants who gave consent to participate and completed demographic information across the four studie (N = **1295**), we conducted a multinomial logistic regression (p > .001; McFadden's R^2 = 0.346) to identify the factors that predicted participants' likelihood of sharing their data.

Predictor		Coef.	Std. Err.	p-val.	OR [CI Lower – CI Upper]
Study					
Giovani&Covid	ChatGPT&TAM	19.64	1824.90	.991	3.37×10^8 [0.00 - ∞]
	SRS1	3.11	0.55	< **.001**	22.47 [7.63 - 66.16] ←
	SRS2	37.43	2000.82	.985	1.80×10^{16} [.00 - ∞]
Reward					
None	Monetary	-16.79	1824.90	.993	5.13×10^{-8} [.00 - ∞]
Employment status					
Student	Worker	-.24	.30	.419	.78 [.43 - 1.42]
	Other	15.83	1415.90	.991	7.46×10^6 [.00 - ∞]
Gender					
Male	Female	.20	0.30	.518	1.22 [.67 - 2.21]
Age		-.05	0.02	**.016**	.95 [.91 - .99] ←

Discussion

- **Younger participants** are more likely to share their data. This aligns with past research showing younger people, familiar with social media, are more open to data sharing, while older individuals tend to be more cautious (Armantier et al., 2024).
- Participants in the *Giovani&Covid* were less likely to share data than those in the *SRS1*. The lower data-sharing rate may be due to:
1. Regarding the *Giovani&Covid*:
   - **Higher burden** due to the research design (T0 - daily diary - T1);
   - A rigorous **rights-confirmation process**, which required participants to answer correctly to comprehension questions about data sharing and their rights before giving consent to participate;
   - The **historical context**: In 2021, there was a strong debate about the credibility and trust in science.
2. Regarding the *SRS1*, a "**trust factor**": most of participants were researchers' personal contacts.

This study was **not originally designed with these objectives in mind**, the data collection was not intended for a research on open science!

OPEN QUESTIONS

- How can we ensure that participants genuinely comprehend the informed consent process and data-sharing procedures? Future research could investigate the **effects of actively involving participants** in consent and open science practices.

- Does creating infographics and raising awareness of participants' rights improve **data quality** or shape **perceptions of scientific research**? Future studies could evaluate **changes** in participants' views by surveying them before and after completion.

Armantier, O., Doerr, S., Frost, J., Fuster, A., & Shue, K. (2024). Nothing to hide? Gender and age differences in willingness to share data (Swiss Finance Institute Research Paper No. 24-99). SSRN. https://doi.org/10.2139/ssrn.4808467
Miller, F. G., & Wertheimer, A. (2011). The fair transaction model of informed consent: an alternative to autonomous authorization. Kennedy Institute of Ethics journal, 21(3), 201–218. https://doi.org/10.1353/ken.2011.0013
Munafò, M., Nosek, B., Bishop, D. et al. A manifesto for reproducible science. Nat Hum Behav 1, 0021 (2017). https://doi.org/10.1038/s41562-016-0021