

Digital Horizons: Transforming Early Childhood Intervention from Global Trends to German Practices

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Content

- Digitality as reality
- State of the art
- Online-survey: Germany
- Discussion

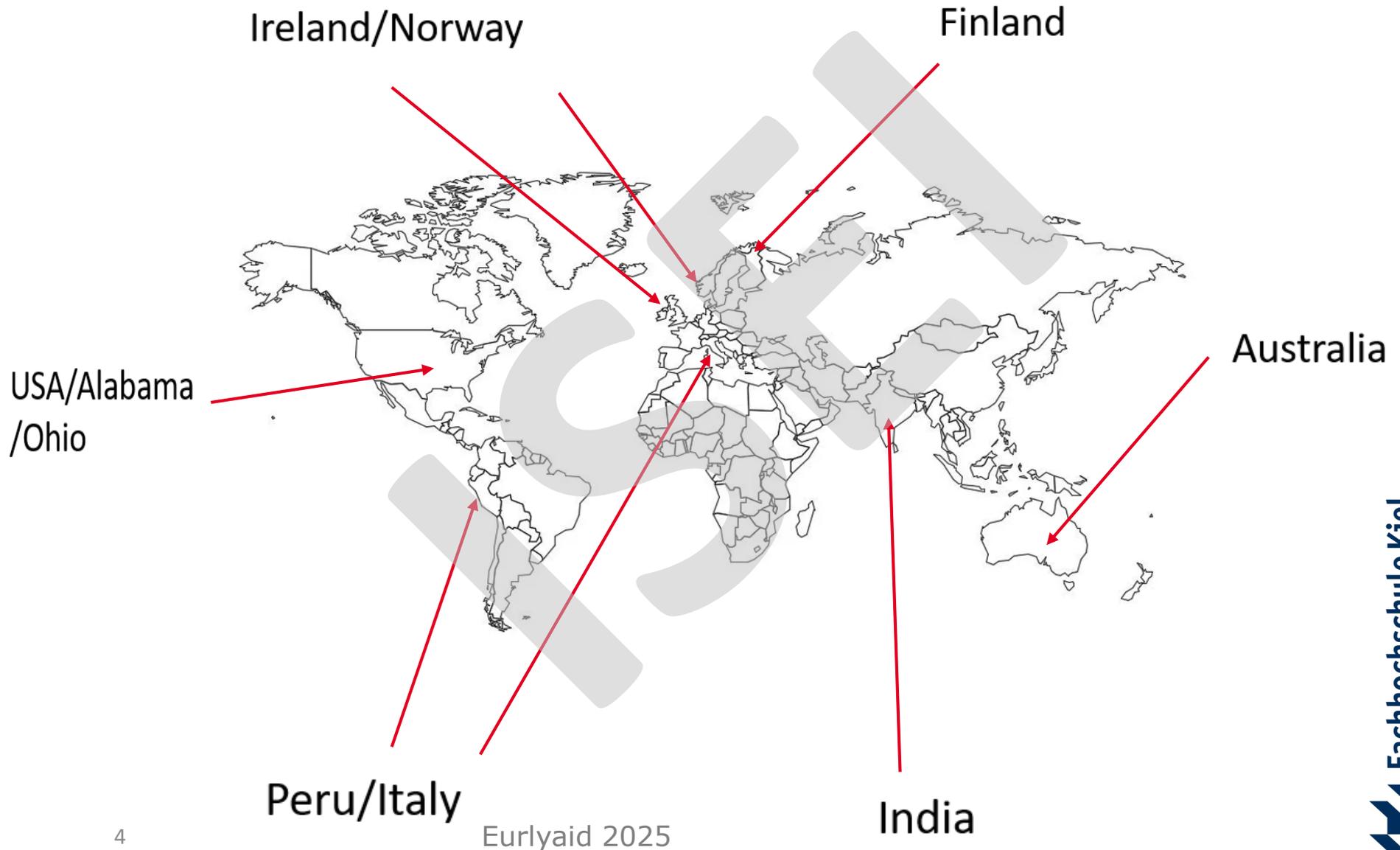


Digitality as reality

- Prenatal googling (Lev 2013)
- Momfluencer/Kidfluencer (Menzel 2024; Digón-Regueiro & Sánchez-Blanco 2024)
- miniKIM study (MPFS 2023)
- ...

Given the flood of digital information available to parents of young children, how can professionals in early childhood intervention remain an authentic and accessible source of reliable information?

State of the art: global trends



Global trends



Aguilar et al. (2018):

Evidence of the effectiveness of web-based training for parents of three- to nine-year-old children with traumatic brain injury in promoting executive functions



Tomeny et al. (2025):

Feasibility of remote coaching for ECI professionals in mobile ECI for families with young children under three years of age with ASD. Results include: Remote coaching is a professional method that can be implemented at the community level to support ECI professionals in their work.

Global Trends



Cimino et al. (2022): Effectiveness of an online intervention for 24-month-old children with eating problems, improvement in the quality of mother-child interaction, and reduction in psychopathological symptoms in mothers (including anxiety and depression)

Global trends



Sourander et al. (2018): Effects of an internet-based training program for parents of four-year-old children with oppositional behavior, instructional videos, weekly telephone conversations with therapists, behavioral changes in children were examined using the CBCL, follow-up after two years showed stable positive behavioral changes

Rissanen et al. (2024): Investigation of the cost-effectiveness of digital parenting training for parents with young children exhibiting behavioral problems. Overall, it was not found that digital intervention resulted in cost savings compared to non-digital intervention.

Global trends



Bharat et al. (2023): Review of the benefits of mHealth apps in supporting parents of children with autism spectrum disorder in everyday life; parents rated the benefits of the apps as similarly positive as personal support from specialists, while also noting cost savings and promotion of desired changes in the child

Global trends



OECD/Wyeth et al. (2023): Use of digital technologies to support children with disabilities, systematic review of assistive technologies for children with disabilities, examples of the use of digital tools, emphasis on training and continuing education for professionals who use the tools together with the children

Fleming et al. (2021): Effectiveness of an online training program on parent-child interaction for parents of children (aged 1½–4 years) with behavioral problems, significant improvements in children's behavioral problems and parent-child interaction, high parental satisfaction with the intervention

Global trends



Ferguson et al. (2022): Impact of a digital platform for parents of children with autism spectrum disorders: access to relevant information for parents through use of the platform, better informed, increased self-efficacy, exchange with other parents, and social support



Medin et al. (2024): The digital information platform “Nutrition Now” provides parents and professionals who work with children aged 0 to 2 years with reliable, easily accessible, and up-to-date recommendations on infant nutrition.

Digitality as reality (in Germany)

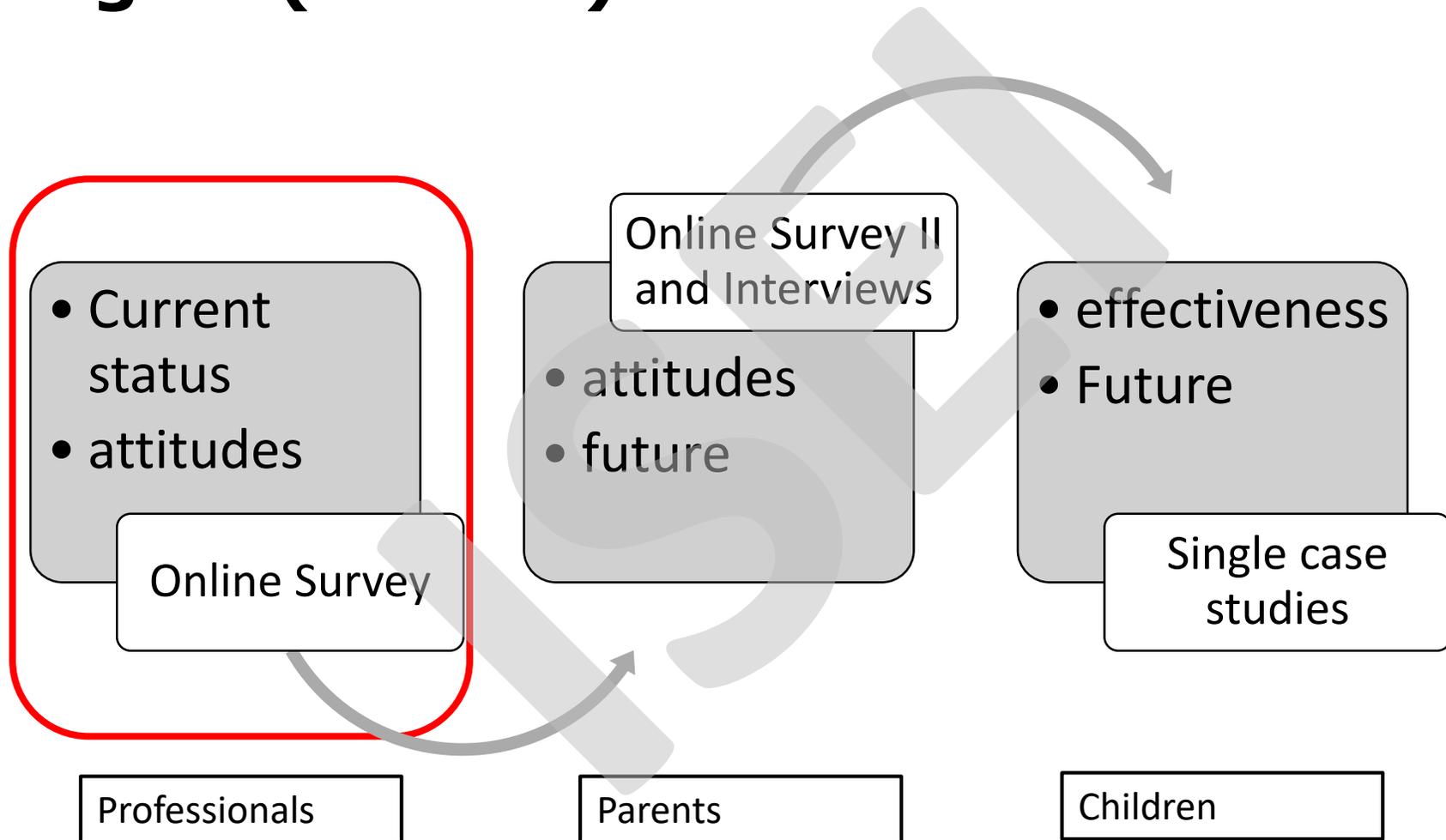
- Around every fifth child at the age of 2-3 years has personal access to a laptop for children
- 98% of all households with small children have access to internet
- 95% of these households dispose at least one smartphone
- 28% of all children between 4-5 years have personal access to a tablet

(MPFS 2023, 6ff)

Aims of DigiFF

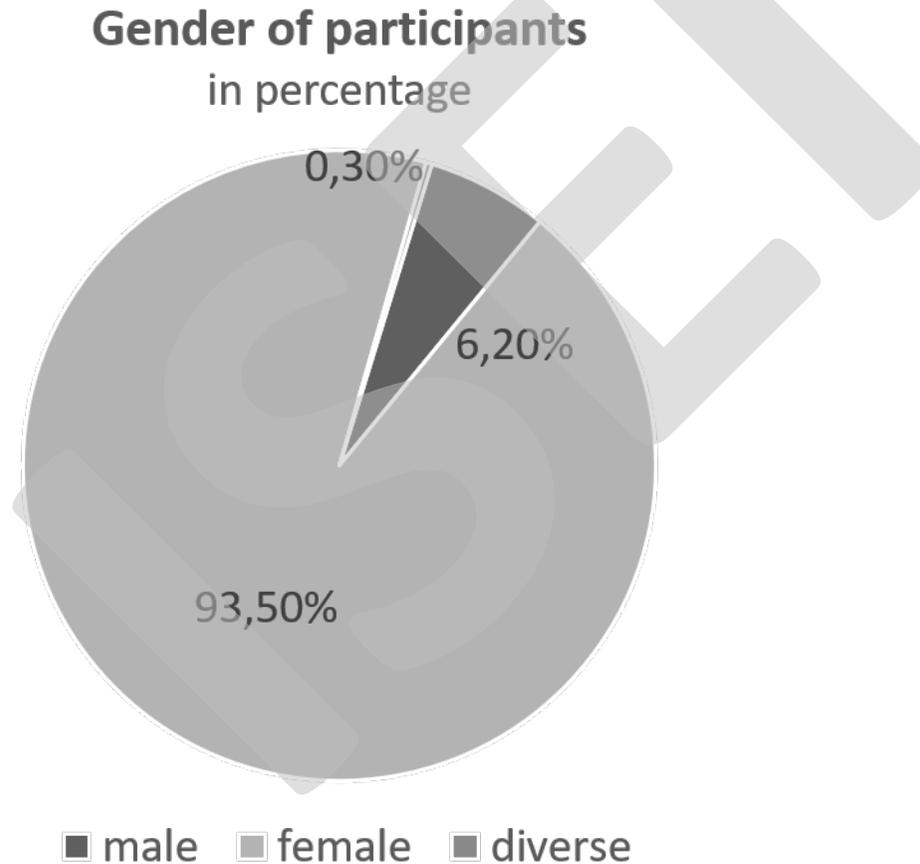
1. Analysis of existing digital methods and offerings
2. Investigation of the acceptance and needs of digital-supported intervention from the perspective of professionals and parents
3. Reviewing the effectiveness of digital-supported intervention
4. Development of possible targeted future use of digital-supported intervention in ECI

DigiFF (2022-?)

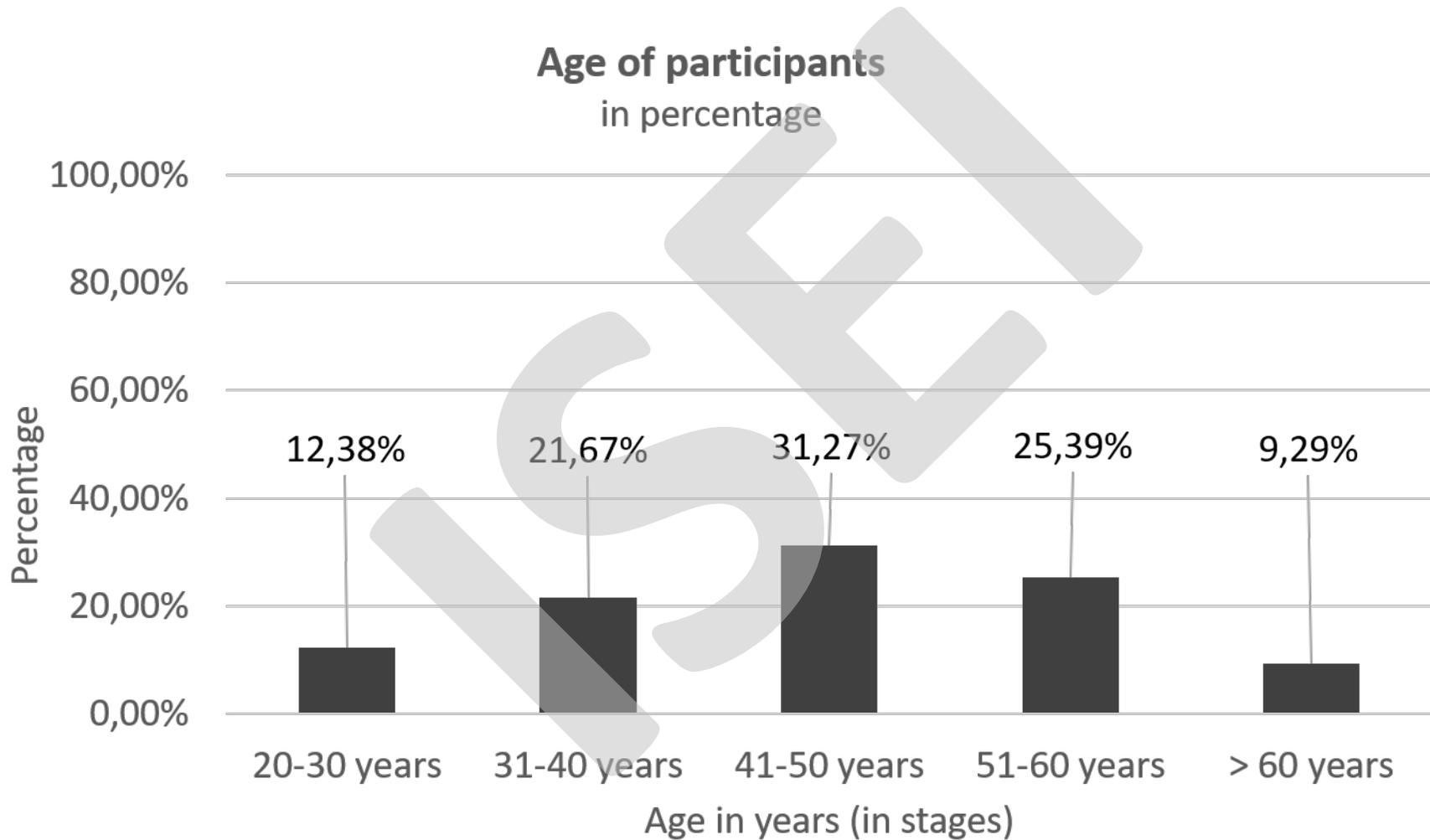


Pilot study: Online Survey (2022)

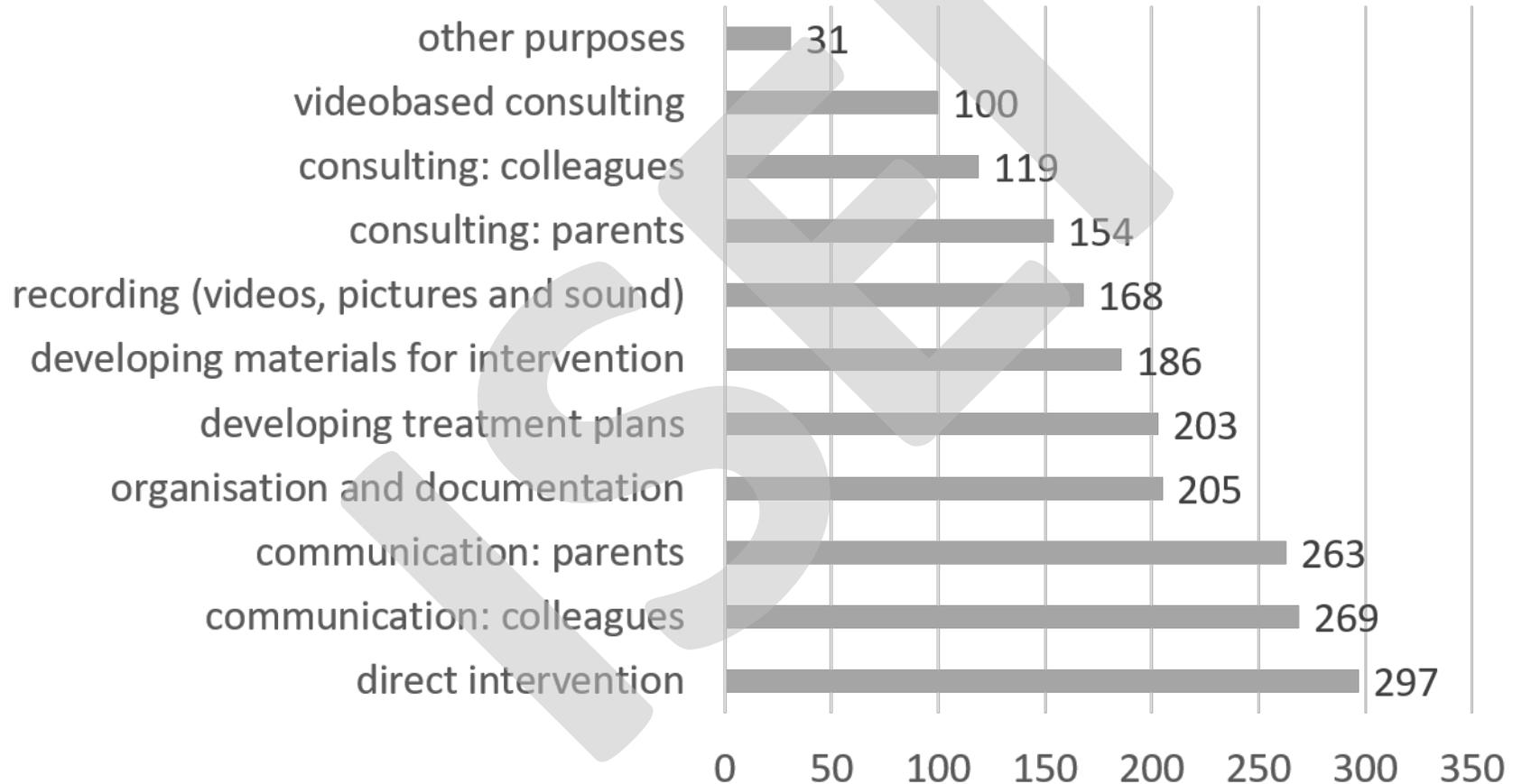
participants: 323 (professionals in ECI)



Results: sociodemographic information

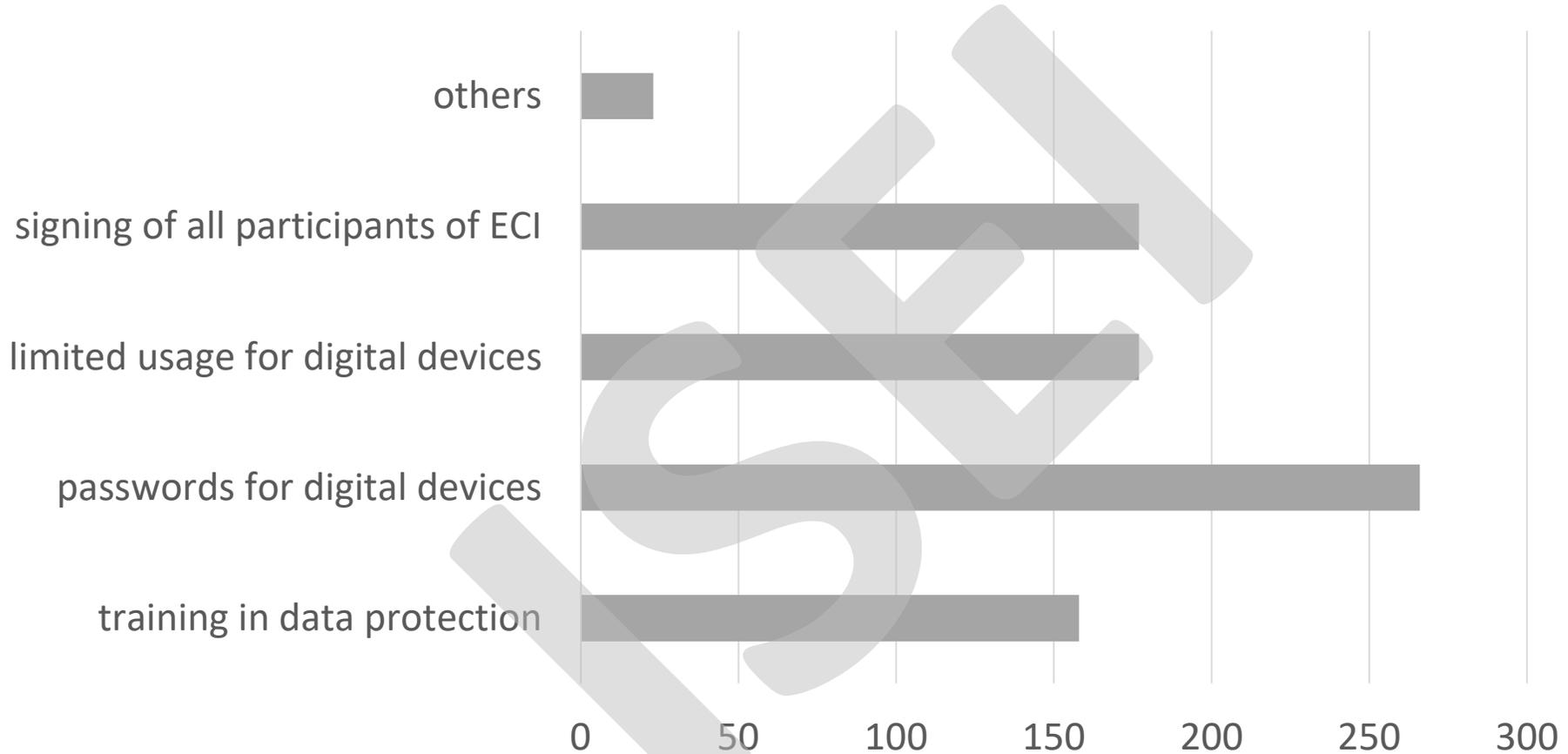


purpose of using mobile devices in ECI



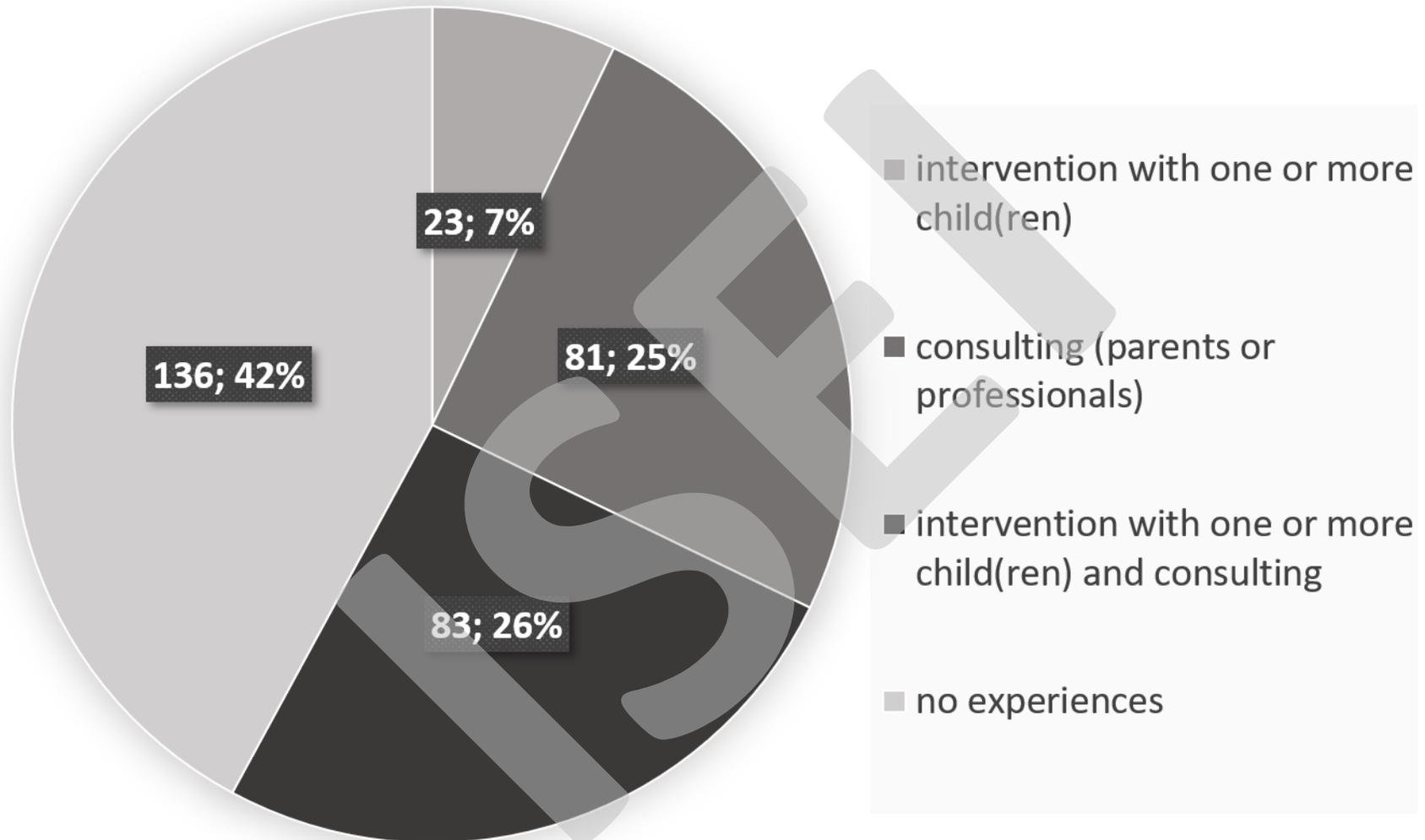
Results in absolute numbers, multiple mention possible, n=323

precautions concerning data protection



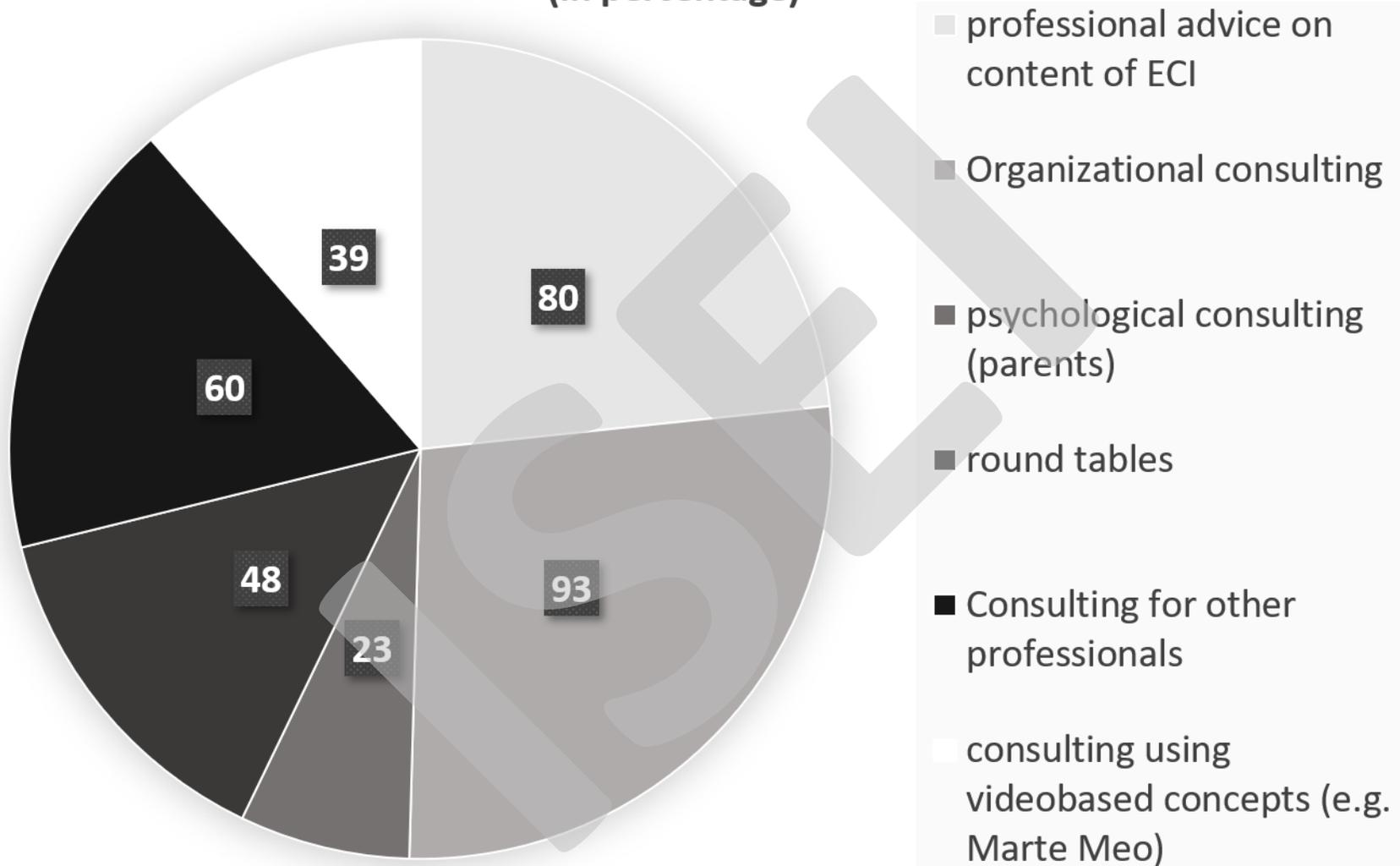
Results in absolute numbers, multiple mention possible, n=323

experiences of participants using digital devices in ECI/consulting



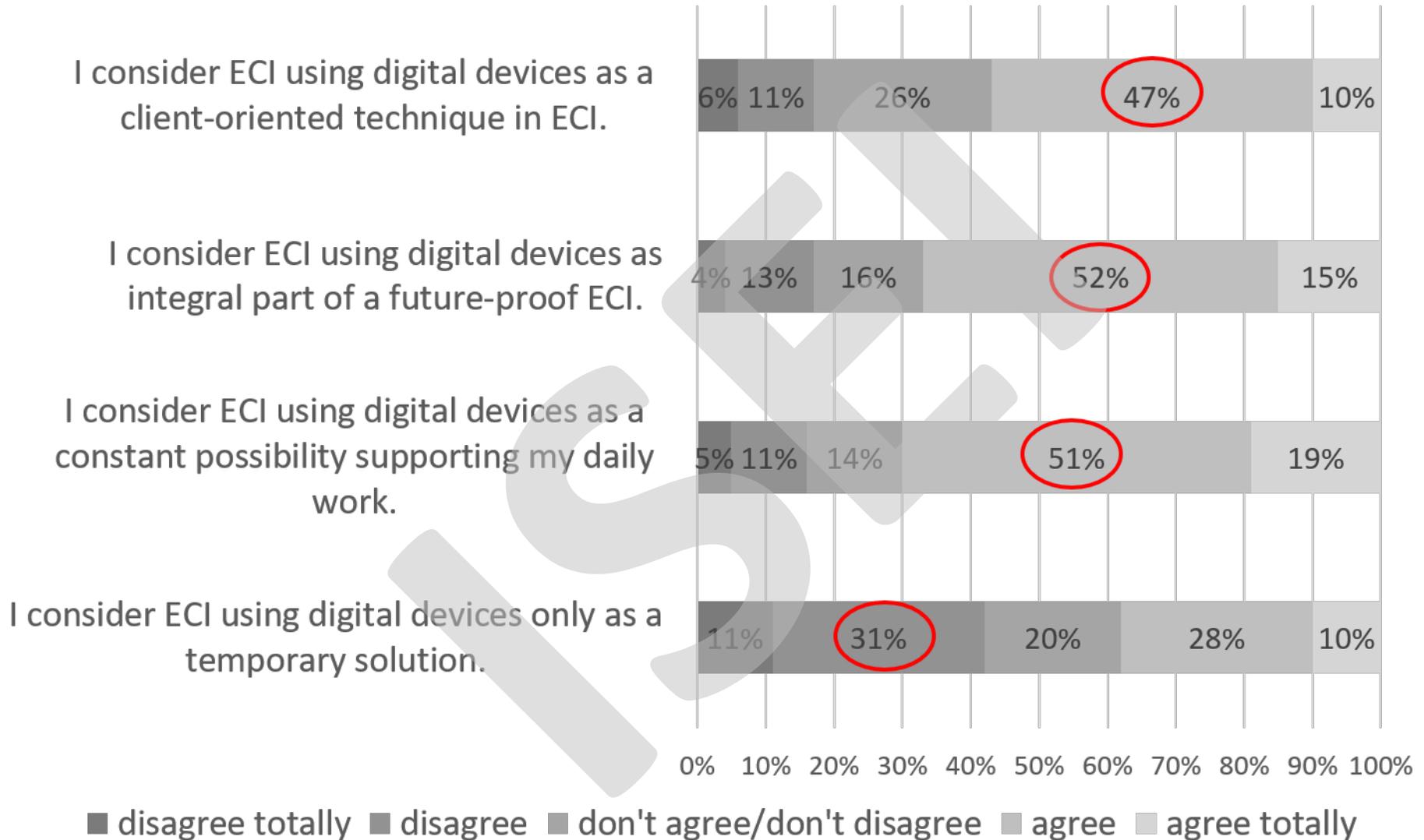
Results in absolute numbers and percentage, n=323

Kind of consulting, participants practice with digital devices (in percentage)



Results in absolute numbers, multiple mention possible, n=164

Attitudes of participants n = 323



Conclusion of Results

Ambivalence in acceptance

Uncertainties in data protection

Primary use: consulting

Discussion

- What are your experiences with digitality in ECI?
- What are next steps to implement the usage of digital devices in ECI practice facing the results?
- What can be global initiatives to establish concepts and methods based on digitality in ECI?

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Thank you for your attention!



Resources

Aguilar, J. M., Cassedy, A. E., Shultz, E. L., Kirkwood, M. W., Stancin, T., Yeates, K. O., Taylor, H. G. & Wade, S. L. (2018): A Comparison of 2 Online Parent Skills Training Interventions for Early Childhood Brain Injury: Improvements in Internalizing and Executive Function Behaviors. *Journal of Head Trauma Rehabilitation* 34(2), 65-76, doi: 10.1097/HTR.0000000000000443

Alam, M., Hickie, I. B., Poulsen, A., Ekambareshwar, M., Loblay, V., Crouse, J., Hindmarsh, G., Song, Y. J. C., Yoon, A., Cha, G., Wilson, C., Sweeney-Nash, M., Troy, J., LaMonica, H. M. (2023): Parenting app to support socio-emotional and cognitive development in early childhood: iterative codesign learnings from nine low-income and middle-income countries. *BMJ open*, 13: e071232, <https://doi.org/10.1136/bmjopen-2022-071232>

Aßmann, S. & Ricken, N. (Hrsg.) (2023). *Bildung und Digitalität. Analysen – Diskurse – Perspektiven*. Springer: Wiesbaden, <https://doi.org/10.1007/978-3-658-30766-0>

Bharat, R., Uzaina, U., Yadav, T., Niranjana, S., Kurade, P. (2023): mHealth Apps Delivering Early Intervention to Support Parents of Children With Autism Spectrum Disorder: A Scoping Review. *Indian pediatrics*, 60, 224–230

BMFSFJ (Bundesministerium für Familie, Senioren, Frauen und Jugend) (2016): *Gutes Familienleben in der digitalen Gesellschaft*. iRights.Lab: Berlin. In: <https://www.bmfsfj.de/resource/blob/108988/9ce19aa6a7399daea6dbdbe591651257/gutes-familienleben-in-der-digitalen-gesellschaft-data.pdf>, 5.4. 2024

Cimino, S., Almenara, C. A. & Cerniglia, L. (2022): A Study on Online Intervention for Early Childhood Eating Disorders during COVID-19. *International Journal of Environmental Research and Public Health* 19(6), 3696. doi: 10.3390/ijerph19063696

Digón-Regueiro, P., & Sánchez-Blanco, C. (2024). Children negotiating meanings in kidfluencers' channels. *Journal of Media Literacy Education*, 16(3), 1-15. <https://doi.org/10.23860/JMLE-2024-16-3-1>

Fatehi, F., Samadbeik, M. & Kazemi, A. (2020). What is Digital Health? Review of Definitions. *Stud Health Technol Inform.* 23(275), 67-71. doi: 10.3233/SHTI200696. PMID: 33227742.

Resources

Fleming, G. E., Kohlhoff, J., Morgan, S., Turnell, A., Maiuolo, M., Kimonis, E. R. (2021): An Effectiveness Open Trial of Internet-Delivered Parent Training for Young Children With Conduct Problems Living in Regional and Rural Australia. *Behaviour Therapy* 52, 110--123, <http://dx.doi.org/10.1016/j.beth.2020.03.001>

Høiby, N. (2021): Pandemics: past, present, future: That is like choosing between cholera and plague. *APMIS* 129(7), 352-371, doi: 10.1111/apm.13098

Lev, E. (2013). Prenatal Googling: Online Information Seeking by Israeli Women during Pregnancy. *International Review of Social Research*, 3 (2), 69-87. <https://doi.org/10.1515/irsr-2013-0011>

Livingstone, S., Mascheroni, G., Staksrud, E. (2017): European research on children's internet use: assessing the past and anticipating the future. *New Media and Society* 20, 1103 – 1122, <https://doi.org/10.1177/1461444816685930>

Macsenaere, M. (2024)(Hg.). *Künstliche Intelligenz in der Kinder- und Jugendhilfe*. Ernst Reinhardt

Medin, A. C., Vik, F. N., Helle, C., Helland, et al. (2024): Scaling up evidence-based digital early life nutrition interventions in a county setting: an implementation trial – protocol for Phase 2 of the Nutrition Now project. *Front. Public Health* 11:1326787, <https://doi.org/10.3389/fpubh.2023.1326787>

Menzel, T.-M. (2024). Instagram als Ratgebermedium am Beispiel der Momfluencerinnen. Oder: „keiner muss sich durch Bücher wälzen“. In: Sauerbrey, U., Großkopf, S. & Ott, C. (Hrsg.). *Empirische Ratgeberforschung* Forschungszugänge und Befunde zu Produktion, Angebot und Inanspruchnahme ratgeberhafter Medien. Klinkhardt: Bad Heilbrunn, 71-81, doi.org/10.35468/6097-06

Meskó, B., Drobni, Z., Bényei, É., Gergely, B. & Gyórfy, Z. (2017). Digital health is a cultural transformation of traditional healthcare. *Mhealth*, 3(38), doi: 10.21037/mhealth.2017.08.07

Resources

- MPFS (Medienpädagogischer Forschungsverbund Südwest (2023). miniKim Studie 2023. Kleinkinder und Medien. Basisuntersuchung zum Medienumgang 2- bis 5-jähriger in Deutschland. Verfügbar unter: https://www.mpfs.de/fileadmin/files/Studien/miniKIM/2023/miniKIM2023_web.pdf (08.07.2024)
- Odone, A., Buttigieg, S., Ricciardi, W., Azzopardi-Muscat, N., Staines, A. (2019): Public health digitalization in Europe EUPHA vision, action and role in digital public health. doi:10.1093/eurpub/ckz161
- Rissanen, E., Kuvaja-Köllner, V., & Kankaanpää, E. (2024). Cost-Effectiveness of Digital Preventive Parent Training for Early Childhood Disruptive Behaviour. *The journal of mental health policy and economics*, 27(3), 85–98.
- Simon, L., Kühl, J. (2023): Interdisziplinäre Zusammenarbeit und inklusive Frühförderung. Kohlhammer, Stuttgart, <https://doi.org/10.17433/978-3-17-034431-0>
- Sourander, A., McGrath, P. J., Ristkari, T., Cunningham, C., Huttunen, J., Hinkka-Yli-Salomäki, S., Kurki, M. & Lingley-Pottie, P. (2018): Two-Year Follow-Up of Internet and Telephone Assisted Parent Training for Disruptive Behavior at Age 4. *Journal of the American Academy of Child & Adolescent Psychiatry* 57(9), 658-668, <https://doi.org/10.1016/j.jaac.2018.07.001>
- Tomeny, K. R., Tomeny, T. S., & McWilliam, R. A. (2024). Feasibility of Remote Coaching With Early Interventionists: NDBI Strategies in Part C. *Topics in Early Childhood Special Education*, 44(4), 290-302. <https://doi.org/10.1177/02711214241245267>
- Vismara, L. A., McCormick, C. E. B., Wagner, A. L., Monlux, K. (2016): Telehealth for expanding the reach of early autism training to parents. *Autism Research and Treatment* 2016, 1 – 10, <https://doi.org/10.1155/2012/121878>
- Wyeth, P., Kervin, L., Danby, S., Day, N., Darmansjah, A. (2023): Digital technologies to support young children with special needs in early childhood education and care: A literature review. *OECD Education Working Papers No. 294*, doi: 10.1787/34f9d9e8-en