New Socio-Psychological Interactions in the Digital Environment[1]

Ivanka Davcheva

Plovdiv University "Paisii Hilendarski", Faculty of Pedagogy, Department of Psychology, Bulgaria, Plovdiv

Abstract: The accelerating digitalization of contemporary societies has transformed not only modes of communication but also the very nature of social-psychological interactions. Digital platforms, virtual communities, and artificial intelligence-driven agents now constitute primary spaces of social exchange, raising important questions about identity formation, interpersonal trust, and emotional regulation online. This paper proposes several hypotheses concerning the ways in which digital environments reconfigure social presence, empathy, and group belonging. Methodologically, the study outlines a mixed-methods approach that combines experimental design, survey research, and qualitative content analysis to examine patterns of digital interaction. By situating these questions within the broader framework of socio-psychological theory, the paper aims to contribute to a deeper understanding of the evolving dynamics of human relationships in technologically mediated contexts.

Keywords: digital environment · socio-psychological interactions · identity · empathy · methodology

Introduction

The emergence of advanced digital technologies has profoundly reshaped human communication and interaction. Social networks, online forums, and immersive platforms have become central arenas for the construction of identity and the negotiation of social relationships. Unlike traditional face-to-face interactions, digital communication is mediated by algorithms, interfaces, and often anonymized participation, creating both opportunities and risks for individuals and communities.

The psychological consequences of this shift are complex. On the one hand, digital environments expand access to information, foster transnational connections, and provide new forms of support and belonging. On the other hand, they may increase social isolation, encourage superficial exchanges, and blur the boundaries between reality and virtuality. These dynamics make it necessary to revisit classical socio-psychological concepts such as social presence, empathy, conformity, and group identity, now reframed within the context of online interactions.

The present article has two main objectives: (1) to articulate hypotheses regarding the socio-psychological effects of digital interactions, and (2) to propose methodological pathways for empirically investigating these hypotheses. By doing so, the study seeks to contribute to the interdisciplinary field of digital psychology, offering insights relevant to both academic research and practical applications in education, healthcare, and organizational contexts.

Theoretical Background

In Bulgarian scholarship, the study of socio-psychological interactions in the digital environment has gained increasing attention over the past decade. Researchers approach the topic from psychology, pedagogy, sociology, and media studies, providing insights into both opportunities and challenges of digitally mediated communication.

One central theme concerns digital identity and self-expression. Ivanov (2018) and Peycheva (2020) argue that social networks have become primary spaces for identity construction, allowing individuals to experiment with roles and self-presentation. However, these forms of online identity are often fragmented and unstable, shaped by algorithmic visibility and the constant pressures of public exposure.

A second line of inquiry addresses empathy and interpersonal relationships online. Mihaylova (2019) emphasizes that the reduction of nonverbal cues in virtual communication can hinder authentic empathy. At the same time, digital environments enable new forms of "cyber-empathy," particularly in online support groups where emotional exchange is facilitated through text, images, and shared narratives.

Another important dimension concerns social belonging and group dynamics. Stoyanova and Todorov (2021) describe digital communities as novel arenas of collective identity, which simultaneously foster inclusiveness and polarization. While such communities can provide a sense of belonging, they can also reinforce "echo chambers," limiting exposure to diverse perspectives.

The impact of digitalization on psychological well-being is further analyzed by Georgieva (2022), who finds that excessive online engagement is associated with higher levels of anxiety and social withdrawal. Nevertheless, when used in moderation, digital platforms serve as valuable resources for learning, support, and socialization.

Finally, Dimitrova (2020) highlights the cultural specificity of the Bulgarian digital landscape, characterized by strong reliance on social media (particularly Facebook), high youth participation in online communities, and simultaneous skepticism toward digital media as trustworthy sources of information. These cultural dynamics influence trust, legitimacy, and psychological mechanisms of online interaction in the Bulgarian context.

Taken together, these studies demonstrate that the digital environment in Bulgaria mirrors global patterns of socio-psychological transformation while also reflecting unique cultural conditions. They provide a foundation for formulating hypotheses about how digital communication reshapes identity, empathy, group belonging, and psychological well-being, both in Bulgaria and in broader comparative contexts.

Methodological Approaches in Bulgarian Research

Bulgarian scholars investigating socio-psychological interactions in the digital environment employ a variety of methodological approaches, reflecting both qualitative and quantitative traditions.

Survey research has been a dominant method. Ivanov (2018) conducted large-scale questionnaires among university students to explore patterns of online identity construction. Similarly, Peycheva (2020) applied structured surveys to analyze self-presentation strategies on Facebook, emphasizing generational differences in digital identity management.

Qualitative interviews and focus groups are also widely used. Mihaylova (2019) relied on semi-structured interviews with young adults to capture their perceptions of empathy and emotional connectedness online. This approach allowed for in-depth understanding of how individuals interpret the absence of nonverbal cues and compensate through textual or visual expressions.

Case studies of online communities represent another methodological choice. Stoyanova and Todorov (2021) conducted content analysis of Bulgarian digital forums, identifying mechanisms of group identity formation, collective belonging, and echo-chamber dynamics. Their mixed-methods design combined discourse analysis with basic statistical measures of user engagement.

Finally, mixed-method approaches are evident in the study of psychological well-being in the digital context. Georgieva (2022) integrated quantitative survey data with qualitative diary methods to assess the effects of online activity on anxiety, social withdrawal, and perceived support. Similarly, Dimitrova (2020) combined statistical indicators of media usage with ethnographic observation of youth communities, offering a culturally grounded account of digital trust and legitimacy.

Finally, Vodennicharski (2020) provides a unique historical and communication-oriented perspective by tracing the roots of strategic public communication to ancient civilizations. Through **documentary and comparative-historical analysis**, he demonstrates how rhetoric, symbolic artifacts, and early forms of persuasion served as precursors to modern digital interactions. Although his work is not directly focused on contemporary online platforms, it offers an essential framework for understanding the deep cultural and psychological mechanisms of influence that persist in today's digital communication.

Taken together, these studies demonstrate that the digital environment in Bulgaria mirrors global patterns of socio-psychological transformation while also reflecting unique cultural conditions. They provide a foundation for formulating hypotheses about how digital communication reshapes identity, empathy, group belonging, and psychological well-being, both in Bulgaria and in broader comparative contexts. in order to examine the proposed hypotheses on socio-psychological interactions in the digital environment, the study will adopt a mixed-methods research design that combines standardized psychological instruments, organizational diagnostics, and statistical modeling. This approach is informed by previous Bulgarian research on personality, leadership, and organizational culture (Lazarova & Mitevska, 2023), which has demonstrated the value of integrating individual-level and contextual measures.

At the **individual level**, personality traits will be assessed using the **Mini-IPIP Big Five inventory** (Donnellan, Oswald, Baird, & Lucas, 2006). Emotional and interpersonal dynamics will be further explored through scales measuring empathy and trust, while self-reported indicators of psychological well-being will provide data for testing H2 and H4.

At the **group and organizational level**, instruments such as the **Multifactor Leadership Questionnaire** (Bass & Avolio) and **Hofstede's cultural dimensions framework** will be adapted to digital settings to capture leadership patterns, communication norms, and cultural orientations in online communities. The **Competing Values Framework** (Cameron & Quinn) and the **FOCUS method** will also be applied to investigate the structural and value orientations of digital groups, relevant for testing the group belonging hypothesis (H3).

For the analysis of **conflict management and interaction styles**, the **Rahim Organizational Conflict Inventory** will be employed, complemented by Radoslavova's scale of job satisfaction and instruments developed by Velichkov, Petkov, and Radoslavova for environmental perception and social adaptation. These tools will be adapted to the digital context to assess how online users negotiate tensions, adapt to community norms, and experience satisfaction in virtual environments.

Quantitative analyses will include factor analysis to validate measurement structures, ANOVA to test group differences, and mediation/moderation modeling to explore the mechanisms linking digital engagement to identity, empathy, belonging, and well-being. **Qualitative data** will be collected through open-ended survey items and discourse analysis of online interactions, allowing for triangulation and richer interpretation of the findings.

This methodological framework thus integrates established psychological and organizational tools with new applications in the digital domain. It ensures that the hypotheses can be tested rigorously while remaining sensitive to the cultural and social specificities of the Bulgarian and international contexts.

The methodological foundations for studying socio-psychological interactions in the digital environment can be enriched by insights from two complementary Bulgarian contributions: the organizational and leadership focus of Lazarova and Mitevska (2023), and the psychodiagnostic toolkit developed by Velichkov and Radoslavova (2005).

Lazarova and Mitevska (2023) emphasize the integration of **organizational and individual-level measures**, applying instruments such as the Mini-IPIP for personality traits (Donnellan et al., 2006), the Multifactor Leadership Questionnaire (Bass & Avolio), Hofstede's cultural dimensions, Cameron and Quinn's Competing Values Framework, and the FOCUS method. Their methodological approach also includes **conflict assessment tools** (Rahim), job satisfaction scales (Radoslavova), and statistical analyses such as factor analysis, ANOVA, and mediation/moderation modeling. This comprehensive strategy demonstrates how individual dispositions interact with organizational culture and leadership dynamics, offering models that can be transferred to the study of online group interactions and digital communities.

Velichkov and Radoslavova (2005), in contrast, provide a detailed set of **psychodiagnostic instruments** targeting personality, motivation, emotional regulation, interpersonal trust, and adaptation to social environments. Their framework includes measures for **locus of control, attributional style, motivational orientations, social environment assessment, conflict resolution, trust toward strangers, and adaptation to new environments**. These methods are particularly relevant for studying digital interactions, as online platforms frequently challenge trust, foster new identity negotiations, and create contexts of conflict and adaptation.

When combined, the two approaches highlight a rich methodological palette. For research on the digital environment, the most applicable instruments include:

Social environment and adaptation scales (Velichkov & Radoslavova, 2005) – to analyze how individuals adapt to online communities.

Trust and conflict assessment tools – to capture the dynamics of interpersonal relations and echo-chamber effects in digital settings.

Motivational and attributional measures – to understand digital identity construction and participation drivers.

Organizational culture and leadership diagnostics (Lazarova & Mitevska, 2023) – to study structural and cultural aspects of online groups.

Taken together, these methods allow for a **multi-level analysis** of digital interactions, bridging individual psychological dispositions with group and cultural contexts. The integration of organizational diagnostics and psychodiagnostic tools ensures that hypotheses about identity, empathy, belonging, and well-being in digital environments can be tested both rigorously and comprehensively.

Research Aim, Object, Subject, and Hypotheses

The present study aims to explore how socio-psychological interactions are reshaped within digital environments, with particular emphasis on the processes of identity construction, empathy, group belonging, and trust. By combining Bulgarian and international perspectives, the research seeks to generate empirically testable hypotheses and outline methodological pathways for studying these transformations in contemporary digital communication.

The object of the study is socio-psychological interaction in the digital environment, while the subject focuses more narrowly on the mechanisms through which communication on digital platforms—such as social networks, online communities, and virtual support groups—influences individual identity, empathy, belonging, and psychological well-being.

To achieve this aim, several research tasks have been defined: to conduct a theoretical review of Bulgarian and international contributions to the field; to identify and conceptualize the key variables that shape digital identity, empathy, group belonging, and well-being; to formulate testable hypotheses regarding the dynamics of these variables; to outline methodological strategies appropriate for empirical investigation, including surveys, experiments, and content analysis; and to compare Bulgarian tendencies with broader international findings, thereby highlighting the cultural specificities of socio-psychological interaction in digital contexts.

On this basis, five hypotheses are advanced. First, it is expected that individuals who engage more intensively in social networking platforms are more likely to construct multiple and fragmented digital identities than those with lower levels of digital activity (Ivanov, 2018; Peycheva, 2020). Second, frequent digital interaction is hypothesized to be negatively associated with traditional emotional empathy, due to the absence of nonverbal cues, yet positively associated with forms of "cyber-empathy" conveyed through text and symbolic expression (Mihaylova, 2019). Third, participation in online communities is anticipated to enhance individuals' sense of social belonging while simultaneously increasing their susceptibility to echo-chamber effects and polarization of opinions (Stoyanova & Todorov, 2021). Fourth, moderate engagement in digital platforms is expected to have a positive effect on psychological well-being by facilitating access to social support, whereas excessive use correlates with higher levels of anxiety and social withdrawal (Georgieva, 2022). Finally, it is hypothesized that contemporary

digital persuasion and influence mechanisms replicate deep-rooted cultural and psychological strategies of symbolic communication that can be traced back historically, thereby reflecting a continuity between ancient and digital practices of social influence (Vodennicharski, 2020).

Together, these aims, tasks, and hypotheses provide a structured framework for investigating the socio-psychological transformations that accompany life in the digital environment, situating the Bulgarian experience within a wider international context.

Methods in Relation to the Hypotheses

The methodological framework of this study is directly informed by the formulated hypotheses, drawing on validated Bulgarian and international instruments. To examine the digital identity hypothesis (H1), personality inventories such as the Mini-IPIP Big Five (Donnellan et al., 2006) will be employed, alongside scales for locus of control developed by Velichkov and Radoslavova (2005). These tools are particularly suitable because identity fragmentation and online self-presentation are closely related to openness, neuroticism, and perceived control over one's environment.

The empathy hypothesis (H2) requires methods capable of capturing both the reduction of traditional face-to-face empathy and the emergence of "cyber-empathy." For this purpose, standardized emotional state and empathy scales (Velichkov & Radoslavova, 2005) will be applied in combination with qualitative content analysis of digital interactions in online support groups. This mixed-methods design makes it possible to measure empathy quantitatively while also interpreting symbolic expressions of care and solidarity online.

The group belonging hypothesis (H3) will be explored using social environment and adaptation scales (Velichkov & Radoslavova, 2005), adapted to virtual communities, as well as the Competing Values Framework and FOCUS method for organizational culture diagnostics (Lazarova & Mitevska, 2023). These methods allow for the assessment of cohesion, norms, and value orientations, thereby capturing the double function of digital communities—fostering belonging while also strengthening polarization.

In testing the well-being hypothesis (H4), measures of job satisfaction and adaptation (Radoslavova; Velichkov & Radoslavova, 2005) will be modified to reflect online contexts, supplemented by standardized scales for psychological well-being and anxiety. These instruments are appropriate because they link digital engagement directly to subjective experiences of satisfaction, stress, and withdrawal, which are central indicators of mental health in the digital age.

Finally, the historical-communication continuity hypothesis (H5) will be addressed through the documentary and comparative-historical method described by Vodennicharski (2020), combined with modern discourse analysis of social media content. This approach makes it possible to trace continuities between ancient symbolic strategies of persuasion and their contemporary manifestations in digital environments, highlighting the cultural depth of online influence.

Taken together, the proposed methodological design integrates psychodiagnostic instruments (Velichkov & Radoslavova, 2005), organizational diagnostics (Lazarova & Mitevska, 2023), and historical-documentary analysis (Vodennicharski, 2020). This integration ensures a multi-level perspective, capturing individual dispositions, group dynamics, and cultural-historical continuities. These methods are particularly appropriate because they have been validated in the Bulgarian academic tradition, can be adapted to digital contexts, and provide complementary lenses for analyzing how identity, empathy, belonging, well-being, and persuasion are reshaped in the digital environment.

Comparative Table: Hypotheses, Methods, and Sources

Hypothesis	Proposed Methods	Rationale for Suitability	Sources (APA)
H1: Digital identity – Intensive social media	Mini-IPIP Big Five (Donnellan et al., 2006); Locus of Control	Captures dispositional factors (openness,	Donnellan, M. B., Oswald, F. L., Baird, B. M., &

Hypothesis	Proposed Methods	Rationale for Suitability	Sources (APA)
use leads to fragmented online identities.	scales (Velichkov & Radoslavova, 2005).	neuroticism, control orientation) that shape online self-presentation and identity fragmentation.	Lucas, R. E. (2006); Velichkov, A., & Radoslavova, M. (2005).
H2: Empathy – Digital interaction reduces traditional empathy but fosters "cyber-empathy."	Empathy and emotional state scales (Velichkov & Radoslavova, 2005); Content analysis of online interactions.	Combines quantitative measures of emotional capacity with qualitative interpretation of symbolic expressions of care and solidarity online.	Mihaylova, A. (2019); Velichkov, A., & Radoslavova, M. (2005).
H3: Group belonging – Online communities increase belonging but strengthen echo chambers.	Social environment & adaptation scales (Velichkov & Radoslavova, 2005); Competing Values Framework & FOCUS (Lazarova & Mitevska, 2023).	Measures perceived cohesion, adaptation, and community norms; organizational culture tools highlight polarization and group value orientations.	Stoyanova, V., & Todorov, N. (2021); Lazarova, M., & Mitevska, E. (2023); Velichkov, A., & Radoslavova, M. (2005).
H4: Well-being – Moderate online engagement improves well-being, while excessive use increases anxiety.	Job satisfaction & adaptation scales (Radoslavova; Velichkov & Radoslavova, 2005); Psychological well-being and anxiety inventories.	Links online activity to satisfaction, stress regulation, and withdrawal; captures digital mental health outcomes.	Georgieva, M. (2022); Velichkov, A., & Radoslavova, M. (2005).
H5: Historical continuity – Digital persuasion replicates ancient symbolic strategies.	Documentary-historical analysis (Vodennicharski, 2020); Digital discourse/content analysis.	Traces continuity of influence strategies across history; discourse analysis reveals their reappearance in social media.	Vodennicharski, S. (2020).

Expected Results and Discussion

The analysis of socio-psychological interactions in the digital environment, when examined through the outlined hypotheses and methods, is expected to reveal several significant tendencies.

First, regarding digital identity (H1), it is anticipated that individuals with higher engagement in social networks and digital platforms will report greater identity fragmentation. Personality traits such as openness to experience and external locus of control are expected to correlate positively with the tendency to construct multiple online personas. This finding aligns with broader international evidence and has implications for understanding how artificial intelligence (AI)-driven recommendation systems reinforce fragmented identity presentations by curating personalized content streams.

Second, in terms of empathy (H2), it is expected that traditional forms of empathy based on nonverbal cues will be diminished in digital interactions. At the same time, "cyber-empathy"—expressed through symbolic reactions, textual messages, or interactions with socially assistive robots—may compensate for these limitations. For instance, socially assistive robots and AI chatbots designed for companionship or psychological screening (Lekova, Mitevska, Tsvetkova, & Medneva, 2024) illustrate how technological mediation can create new emotional bonds. These results would highlight the dual nature of AI in either constraining or enhancing empathy.

Third, the group belonging hypothesis (H3) is likely to show that online communities foster stronger feelings of belonging and identification. However, the same mechanisms also reinforce echo chambers and polarization, especially when amplified by AI algorithms that prioritize engagement over diversity of perspectives. The use of organizational culture diagnostics (e.g., Competing Values Framework) in virtual groups may demonstrate how digital spaces reproduce both cohesion and division. This outcome underscores the psychological ambivalence of

digitally mediated group belonging: it can reduce loneliness while simultaneously fostering exclusivity and ideological rigidity.

Fourth, with respect to well-being (H4), it is expected that moderate online activity will correlate with higher levels of perceived social support and satisfaction, while excessive engagement will be linked to anxiety, fatigue, and social withdrawal. These outcomes resonate with findings from pandemic-related studies where assistive robots reduced infection risk but also raised concerns about overreliance on technology for human interaction. AI-mediated monitoring systems may therefore function both as protective and stress-inducing agents, depending on context and intensity of use.

Finally, the historical-communication continuity hypothesis (H5) is anticipated to demonstrate that digital persuasion techniques—such as viral memes, algorithmic amplification, and robot-mediated communication—replicate symbolic strategies of influence identified in ancient rhetorical and cultural practices (Vodennicharski, 2020). This continuity underscores the enduring socio-psychological mechanisms of trust, authority, and persuasion, now reconfigured through digital and robotic technologies.

Taken together, these expected results suggest that the intersection of digital environments, AI, and robotics reshapes socio-psychological interactions along three main axes: identity regulation, emotional connection, and group cohesion. While the technological mediation of communication introduces novel opportunities for inclusion, support, and innovation, it also creates risks of alienation, dependence, and polarization. From a social-psychological perspective, the challenge lies in maintaining a balance between technological efficiency and human-centered values, ensuring that AI and robotic systems serve as enhancers rather than substitutes of authentic human interaction.

General Conclusion

The study of new socio-psychological interactions in the digital environment reveals a complex interplay between individual dispositions, group dynamics, and cultural-historical continuities. Drawing on both Bulgarian and international scholarship, the research establishes a theoretical and methodological foundation for analyzing how identity, empathy, belonging, well-being, and persuasion are reshaped in online contexts.

The formulated hypotheses highlight that digital identity is increasingly fragmented, empathy is reconfigured into symbolic "cyber-empathy," online groups foster both belonging and polarization, well-being depends on balanced digital engagement, and modern digital persuasion replicates ancient communicative strategies. These propositions are grounded in a robust methodological framework that integrates psychodiagnostic instruments (Velichkov & Radoslavova, 2005), organizational and cultural diagnostics (Lazarova & Mitevska, 2023), and historical-documentary approaches (Vodennicharski, 2020).

Expected results suggest that artificial intelligence and socially assistive robots play a pivotal role in these transformations. While AI-driven algorithms and robotic systems can enhance support, inclusion, and access to healthcare or education, they also pose challenges related to overreliance, depersonalization, and the reinforcement of echo chambers. The dual role of technology—simultaneously empowering and constraining—underscores the need for a human-centered approach in digital communication design.

From a social-psychological perspective, the key challenge is to ensure that digital technologies, AI, and robotic systems act as enhancers of human interaction rather than replacements. This requires integrating ethical standards, fostering digital literacy, and promoting adaptive coping strategies in order to maximize benefits while minimizing risks.

In conclusion, socio-psychological research in the digital environment demonstrates that human communication is neither entirely transformed nor detached from its historical roots, but rather recontextualized through technology. The future of digital interaction will depend not only on technological progress but also on the ability of societies to align innovation with human values, empathy, and psychological well-being.

References

1. Broadbent, E., Stafford, R., & MacDonald, B. (2009). Acceptance of healthcare robots for the older population: Review and future directions. International Journal of Social Robotics, 1(4), 319–330. https://doi.org/10.1007/s12369-009-0030-6

2. Broekens, J., Heerink, M., & Rosendal, H. (2009). Assistive social robots in elderly care: A review. Gerontechnology, 8(2), 94–103. https://doi.org/10.4017/gt.2009.08.02.002.00

3. Chen, S. C., Jones, C., & Moyle, W. (2018). Health professional and workers' attitudes towards the use of social robots for older adults: An integrative review. International Journal of Social Robotics, 11(3), 1–16. https://doi.org/10.1007/s12369-018-0504-8

4. Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The Mini-IPIP scales: Tiny-yet-effective measures of the Big Five factors of personality. Psychological Assessment, 18(2), 192–203. https://doi.org/10.1037/1040-3590.18.2.192

5. Eurostat. (2022). Ageing Europe: Looking at the lives of older people in the EU. Publications Office of the European Union.

6. Frennert, S., & Östlund, B. (2014). Review: Seven matters of concern of social robots and older people. International Journal of Social Robotics, 6(2), 299–310. https://doi.org/10.1007/s12369-013-0225-8

7. Georgieva, M. (2022). Digital communication and psychological well-being among youth. Sofia: BAS Publishing.

8. Kachouie, R., Sedighadeli, S., Khosla, R., & Chu, M. T. (2014). Socially assistive robots in elderly care: A mixed-method systematic literature review. International Journal of Human-Computer Interaction, 30(5), 369–393. https://doi.org/10.1080/10447318.2013.873278

9. Lazarova, E., & Mitevska, M. (2023). Integrativity of personality and situational factors of organizational behavior. Plovdiv: Paisii Hilendarski University Press.

10. Lekova, D., Mitevska, E., Tsvetkova, M., & Medneva, A. (2024, September). Furhat PsychScreen Framework: Streamlining robot-assisted psychological screening implementation. In Proceedings of the 32nd International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2024), Split, Croatia.

11. Louie, D. R., & Eng, J. J. (2016). Powered robotic exoskeletons in post-stroke rehabilitation of gait: A scoping review. Journal of NeuroEngineering and Rehabilitation, 13(1), 53. https://doi.org/10.1186/s12984-016-0162-5

12. Mihaylova, A. (2019). Empathy in digital communication: Psychological perspectives. Sofia: New Bulgarian University Press.

13. Mitevska, M., & Lazarova, E. (2024). Integrativnost na lichnostni i situatsionni faktori na organizatsionnoto povedenie [Integrativity of personality and situational factors of organizational behavior]. Plovdiv: Paisii Hilendarski University Press. ISBN 978-619-202-890-9.

14. Organisation for Economic Co-operation and Development. (2021). Health at a glance: Europe 2020. OECD Publishing. https://doi.org/10.1787/82129230-en

15. Papadopoulos, I., & Kalogianni, D. (2019). Socially assistive robots in Greek healthcare: A pilot study on perceptions of nurses and nursing students. Journal of Nursing Education and Practice, 9(3), 1–10. https://doi.org/10.5430/jnep.v9n3p1

16. Papadopoulos, I., Koulouglioti, C., Lazzarino, R., & Ali, S. (2020). Enablers and barriers to the implementation of socially assistive humanoid robots in health and social care: A systematic review. BMJ Open, 10(1), e033096. https://doi.org/10.1136/bmjopen-2019-033096

17. Sharkey, A., & Sharkey, N. (2012). Granny and the robots: Ethical issues in robot care for the elderly. Ethics and Information Technology, 14(1), 27–40. https://doi.org/10.1007/s10676-010-9234-6

18. Smarr, C. A., Prakash, A., Beer, J. M., Mitzner, T. L., Kemp, C. C., & Rogers, W. A. (2012). Older adults' preferences for and acceptance of robot assistance for everyday living tasks. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 56(1), 153–157. https://doi.org/10.1177/1071181312561035

19. Stoyanova, V., & Todorov, N. (2021). Digital communities and group belonging in Bulgaria. Sofia: University of Sofia Press.

20. Tapus, A., Mataric, M. J., & Scassellati, B. (2007). The grand challenges in socially assistive robotics. IEEE Robotics and Automation Magazine, 14(1), 35–42. https://doi.org/10.1109/MRA.2007.339605

21. Velichkov, A., & Radoslavova, M. (2005). Metodi za psihodiagnostika [Methods for psychodiagnostics].

Sofia: Prosveta.
22. Vodennicharski, S. (2020). PR ne e ot vchera [PR is not from yesterday]. Sofia: Softtraid. ISBN 978-954-334-223-5.
23. World Health Organization. (2021). Global strategy on digital health 2020–2025. World Health Organization.