

# Psychological dimensions of female students' reproductive health: universities, digital care, and demographic futures

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In the context of full-scale war, digital transformation, and demographic crisis, women's reproductive health (RH) in Ukraine requires urgent interdisciplinary attention. A particularly susceptible group are female students of higher education institutions, who face complex psychological, social, and behavioral challenges that can negatively impact their fertility, emotional well-being, and participation in the demographic recovery of the state. This study focuses on the psychological dimensions of female students' RH, with a focus on their experiences, digital self-care, and perceptions of universities as supportive institutions.

**The objective:** to study the psychological dimensions of RH among Ukrainian female students, focusing on emotional distress, behavioral responses, self-guided digital care, and perceptions of the university as an institution of care and demographic sustainability.

**Materials and methods.** A cross-sectional survey was conducted between January and July 2025 with 896 female students from seven Ukrainian universities. Participants completed two author-developed questionnaires: 1) survey for assessing emotional experiences, behavioral responses in RH; 2) survey for perceptions of institutional support related to RH. Descriptive and inferential statistics were used, including Spearman's rank correlation. Ethical approval was granted by the Institute of Practical Psychology.

**Results.** The key results showed that emotional tension related to RH was reported by 573 (64.0%) students; 242 (27.0%) students expressed fertility anxiety and 188 (21.0%) – fear of loss of bodily control. Self-help through digital tools was widespread, with 511 (57.0%) students using apps or online platforms. A significant positive correlation ( $r = +0.53$ ,  $p < 0.001$ ) was found between perceived institutional support and digital reproductive self-care. The study outlines the new role of Ukrainian universities as psychosocial agents of digital care in the conditions of war turbulence. The need to rethink RH as a multi-level construct that encompasses psychological, digital, and educational components is argued. It is proposed to integrate emotional literacy, digital awareness, and inclusive pedagogy programs into the university environment as a means of preserving the reproductive potential of student youth and strengthening the demographic stability of Ukraine in the conditions of post-war recovery.

**Conclusions.** Ukrainian universities, especially during wartime, may serve as key agents of RH promotion and emotional care through the integration of digital tools, inclusive pedagogy, and supportive faculty-student dynamics. This potential is manifested in the integration of digital tools, emotionally sensitive pedagogy, and flexible forms of faculty-student interaction.

**Keywords:** female students, reproductive health, emotional well-being, digital self-care, institutional support, universities, demographic resilience, Ukraine, psychological stress, wartime displacement.

## Психологічні виміри репродуктивного здоров'я студенток: університети, цифрова турбота та демографічне майбутнє

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В умовах повномасштабної війни, цифрової трансформації та демографічної кризи репродуктивне здоров'я (РЗ) жінок в Україні потребує невідкладного міждисциплінарного осмислення. Особливо вразливою групою є студентки закладів вищої освіти, які стикаються зі складними психологічними, соціальними й поведінковими викликами, що можуть негативно впливати на їхню фертильність, емоційне благополуччя та участь у демографічному відновленні держави. У цьому дослідженні увагу акцентовано на психологічних вимірах РЗ студенток, із фокусом на їхні переживання, цифрову самоопіку і сприйняття університетів як інституцій підтримки.

**Мета дослідження:** дослідити психологічні виміри РЗ студенток українських університетів, зосередившись на переживаннях, поведінкових реакціях, цифровій самоопіці та сприйнятті університету як інституції турботи й демографічної стійкості.

**Матеріали та методи.** У період із січня по липень 2025 року було проведено анонімне опитування 896 студенток із семи українських університетів. Використано дві авторські анкети: 1) для вивчення психоемоційних переживань і поведінкових стратегій у сфері РЗ; 2) для аналізу сприйняття університету як простору цифрової підтримки. Застосовано методи описової статистики та кореляційного аналізу за коефіцієнтом Спірмена. Дослідження отримало схвалення етичної комісії Інституту розвитку практичної психології.

**Результати.** Ключові результати засвідчили, що 573 (64,0%) опитаних переживають стрес або емоційний дискомфорт, пов'язаний із РЗ; 242 (27,0%) студентки турбуються щодо своєї фертильності; 188 (21,0%) – бояться втрати контролю над тілом. Цифрову самоопіку, зокрема використання мобільних застосунків, онлайн-ресурсів і телемедицини консультацій, практикують 511 (57,0%) респонденток. Виявлено статистично значущий позитивний зв'язок між суб'єктивним відчуттям підтримки з боку університету та рівнем цифрової турботи про РЗ ( $r = +0,53$ ,  $p < 0,001$ ). У результаті дослідження окреслено нову роль українських університетів як психосоціальних агентів цифрової турботи в умовах воєнної турбулентності. Аргументовано необхідність переосмислення РЗ як багаторівневого конструкта, що охоплює психологічні, цифрові й освітні складові. Запропоновано інтегрувати в університетське середовище програми емоційної грамотності, цифрової обізнаності та інклюзивної педагогіки як засоби збереження репродуктивного потенціалу студентської молоді й зміцнення демографічної стійкості України в умовах післявоєнного відновлення.

**Висновки.** Університети в умовах воєнного часу можуть виконувати роль не лише освітніх, а й психосоціальних інституцій цифрової турботи, що здатні підтримувати РЗ молоді. Цей потенціал виявляється в інтеграції цифрових інструментів, емоційно чутливий педагогіці та гнучких формах факультетсько-студентської взаємодії.

**Ключові слова:** студентки, репродуктивне здоров'я, емоційне благополуччя, цифрова самоопіка, інституційна підтримка, університети, демографічна стійкість, Україна, психологічний стрес, воєнне переміщення.

In the 21st century, reproductive health (RH) is no longer perceived solely through the lens of biology or obstetrics. For female students, especially during times of global uncertainty, RH becomes a multifaceted phenomenon – deeply intertwined with emotional well-being, educational context, and societal expectations. Ukraine, as many other countries affected by war, demographic decline, and systemic instability, exemplifies this convergence of challenges and transformations, as demonstrated in previous studies L. Bilorusets et al. [7], T. Kozub et al. [18], O. Lushchak et al. [21], W. Pac [32], V. Opanasiuk & I. Tyshchuk [31], V. Siusiuka et al. [38], L. Borisova et al. [47].

One of the most pressing global concerns is the decline in RH literacy and fertility awareness among young women, even among medical students [2, 25, 42]. The burden of menstrual irregularities, psychosocial stressors, and limited access to competent reproductive services has been documented across diverse contexts – from Saudi Arabia to Cameroon and Ukraine [3, 5, 24, 27].

The COVID-19 pandemic and wartime conditions have amplified these vulnerabilities. Female students face heightened stress, disrupted health behaviors, and reduced access to preventive gynecological care [11, 22, 34]. Studies show a direct correlation between stress and dysmenorrhea, anxiety, and even academic decline [4, 19, 37].

Yet amid these risks, universities have emerged as powerful actors of health – not only as educational institutions but as environments capable of fostering psychological safety, informed decision-making, and digital health promotion [8, 23, 41]. The concept of “digital care culture” – the integration of digital tools for reproductive support and psychoeducation – has gained recognition in both public health and educational psychology [10, 16, 40].

Mobile applications, AI-based platforms, and social media have been used to promote fertility awareness and access to sexual health services [17, 28, 45]. However, challenges persist regarding trust, inclusivity, and the emotional resonance of such tools, especially for young women navigating identity, trauma, and societal expectations [13, 30, 36].

Despite growing attention to these intersections, the literature remains fragmented. Many studies focus narrowly on either clinical parameters or educational interventions without addressing the psycho-emotional dimension of RH or the pedagogical role of higher education institutions in cultivating sustainable health behaviors [12, 14, 39]. There is also a clear lack of systemic frameworks that connect

mental health, digital culture, and reproductive wellbeing – especially for women living under long-term stress, displacement, or social vulnerability [6, 7, 43, 44].

Thus, our study addresses this critical research gap by exploring how Ukrainian female university students perceive, experience, and manage their RH in the context of psychological stress and digital care. We also examine how universities can act as agents of demographic resilience and gendered well-being – offering a multidimensional model that integrates emotional safety, educational empowerment, and reproductive justice.

**The objective** of this study is to explore how female students at Ukrainian universities perceive, experience, and manage their RH in the context of psycho-emotional stress and digital transformation, as well as to analyze the potential of universities as institutions of digital care and demographic resilience – capable of integrating emotional well-being, health-promoting education, and inclusive RH strategies.

## MATERIALS AND METHODS

### *Study Design and Ethics*

To explore the psychological dimensions of RH among female university students, we conducted a cross-sectional study from January to July 2025 using an anonymous online survey. The study adhered to the ethical principles of voluntary informed consent, confidentiality, and non-invasiveness. Ethical approval was obtained from the Institutional Ethics Board of the Institute of Practical Psychology (Protocol No. 01/2025 dated 09 January 2025).

### *Participants*

A total of 896 female university students aged 18 to 26 years participated in the study. Participants were recruited from seven Ukrainian higher education institutions located in Kyiv, Dnipro, Vinnytsia, and Zaporizhzhia (Dnipro Technological University “STEP”, Oles Honchar Dnipro National University, Khortytsia National Educational and Rehabilitational Academy, National University Zaporizhzhia Polytechnic, Mariupol State University, Vinnytsia National Technical University, and Classic Private University). Inclusion criteria were: (1) current enrollment in a Ukrainian higher education institution; (2) self-identification as female; (3) voluntary participation through informed consent.

### *Instruments and Variables*

Given the applied, exploratory nature of the study and its strategic aim to identify pathways for university-based RH support, two author-developed questionnaires were

used. These instruments were created by a multidisciplinary team of psychologists and educators and validated by a panel of six independent experts in the fields of psychology, RH, and digital pedagogy. Both instruments demonstrated strong internal coherence and face validity.

1. *Psychological Experiences and Behaviors Regarding Reproductive Health.* This instrument (Appendix A, Questionnaire 1) assessed students' subjective perceptions of RH, emotional reactions to reproductive stress, engagement in digital self-care practices, and attitudes toward RH-seeking behavior. It included both Likert scale and categorical items designed to capture psychological dynamics under stress.

2. *University as a Space of Digital Care and Support.* The second author-designed questionnaire (Appendix B, Questionnaire 2) explored students' perceptions of their university's role in supporting reproductive and emotional well-being. Key variables included emotional safety, institutional openness, perceived access to health information, digital care opportunities, and inclusivity. The tool aimed to conceptualize the university not only as an educational institution but as a potential agent of demographic resilience.

Demographic and contextual variables included age, year of study, displacement status, geographic region, and prior experience with RH consultations or digital health tools (apps, chatbots, online counseling, etc.).

#### *Data Collection Procedure*

The online survey was administered via Google Forms and distributed through official university mailing lists, student Telegram communities, and social media pages. Participation was voluntary and anonymous. Participants provided digital informed consent before proceeding to the survey questions. The Google Forms platform was selected due to its accessibility, mobile optimization, and baseline compliance with data protection standards.

#### *Statistical Analysis*

Descriptive statistics (means, standard deviations, response frequencies, and percentage distributions) were used to summarize responses. The analysis focused on identifying patterns of psychological response, digital behavior, and perceived institutional support related to RH. The data were processed using IBM SPSS Statistics, version 27.0. Spearman's rank correlation coefficient was applied to identify relationships between ordinal and scale variables under non-parametric conditions.

## RESULTS AND DISCUSSION

The section presents a model-based analysis of the responses collected through two author-designed questionnaires administered to female university students. The instruments aimed to explore the psychological experiences related to RH and the perception of universities as digital care institutions. The results are structured according to the internal blocks of each questionnaire and visualized through descriptive and inferential statistics.

The model dataset included 896 female university students aged 18 to 26 years ( $M = 21.2$ ,  $SD = 1.7$  – Mean and Standard Deviation, respectively), recruited from seven higher education institutions across various regions of Ukraine. The sample reflected a balance between displaced and non-displaced students, with approximately

Table 1

### Emotional Responses Related to RH Among Female Students (N = 896)

Emotional Response	% of Respondents	N
Anxiety about future fertility	27.0	242
Fear of losing control over one's body	21.0	188
Feeling of loneliness in reproductive matters	15.0	134
No significant emotional distress reported	37.0	332

Table 2

### Types of Digital Tools Used by Female Students (N = 896)

Type of Tool	% of Respondents
Menstrual tracking apps	40.0
Mental health / wellness apps	22.0
Do not use any	38.0

287 female university students (32.0%) identified themselves as internally displaced persons (IDPs) temporarily residing in EU countries (Germany, Poland, Czech Republic, Austria, Slovakia, Romania, Hungary, and Lithuania) following the full-scale invasion.

Notably, 511 (57.0%) respondents reported using at least one digital tool to support their RH – such as mobile tracking apps, or telemedicine services. This reflects a growing trend toward the integration of digital self-care into students' daily routines, consistent with recent findings by O. Cherepiekhina et al. [9] and N. Ponzel et al. [48], who documented the rising role of e-health platforms in addressing reproductive and emotional well-being during wartime displacement.

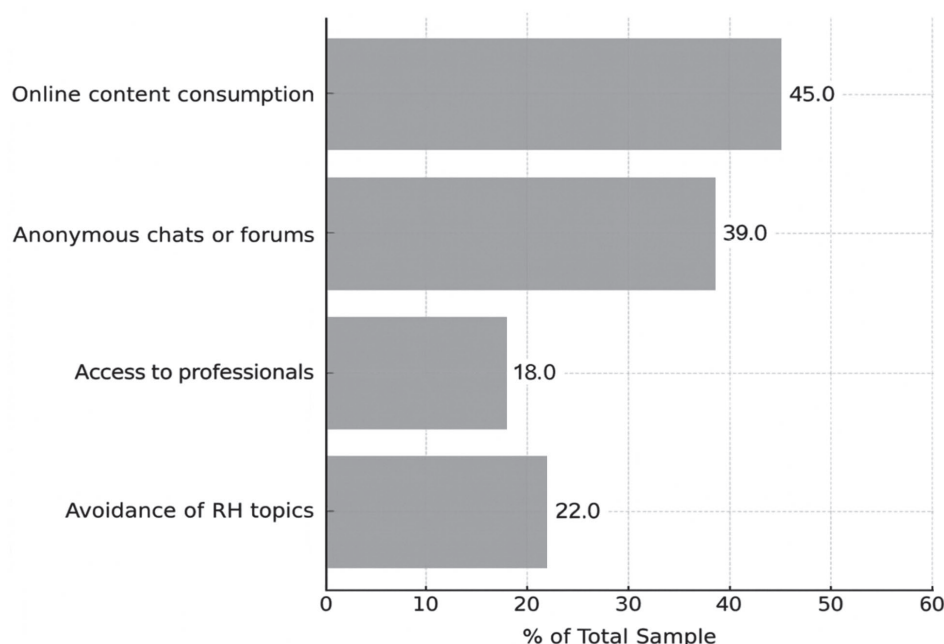
#### *General Emotional States Related to RH*

Overall, 573 (64.0%) respondents reported experiencing moderate to high levels of emotional tension associated with RH. As shown in Table 1, among them, 242 (27.0%) students frequently expressed anxiety about future fertility, 188 (21.0%) respondents reported fear of losing control over their bodies, and 134 (15.0%) – experienced a profound sense of loneliness regarding RH concerns. More than one-third of female students, 332 (37.0%) respondents, explicitly linked their emotional distress to war-related displacement or disrupted access to stable medical care.

#### *Behavioral Responses: How Students Cope*

Among the coping strategies reported in response to reproductive anxiety, self-guided digital practices were most prevalent. 403 (45.0%) participants consumed online resources regularly, 349 (39.0%) students participated in anonymous peer discussions, and only 161 (18.0%) respondents accessed professional support. These distributions are summarized in Figure.

Digital Practices as a Source of Support shown in Table 2. Digital tools emerged as key enablers of RH awareness. Overall, 555 (62.0%) respondents reported using at least one digital resource to monitor or support their RH: 358 (40.0%) students use menstrual tracking applications, 197 (22.0%) – mental health or wellness apps.



### Self-Help Behavioral Strategies (% of Total Sample, N = 896)

Note: multiple responses were allowed.

### Cross-Variable Correlation Analysis: Emotional States, Digital Health Practices, and Institutional Support

To explore how female students' emotional experiences intersect with digital RH behaviors and perceived institutional support, a correlational analysis was performed using Spearman's rank-order coefficients. The variables selected for the analysis were drawn from key clusters of both author-developed questionnaires: emotional distress – a composite measure of reported anxiety, uncertainty, and psychological tension related to RH decisions and future planning; Digital Self-Care Engagement (DSCE) – frequency of using digital tools such as menstrual trackers, or teleconsultation services; Institutional Support Perception (ISP) – perceived availability and quality of reproductive-health-related resources and support at the university level.

The analysis was conducted on the full model dataset (N = 896). Table 3 presents the correlation matrix with statistically significant Spearman coefficients.

These results reveal several statistically significant and theoretically meaningful relationships:

A negative correlation between emotional distress and digital engagement ( $r = -0.41$ ,  $p < 0.001$ ) suggests that students who actively use digital health tools report lower levels of reproductive anxiety. This supports prior findings on the buffering effects of digital self-regulation tools in high-stress environments [15, 35, 48].

A moderate-to-strong negative correlation between emotional distress and perceived institutional support ( $r = -0.48$ ,  $p < 0.001$ ) indicates that students who feel supported by their university report lower reproductive stress. This underscores the importance of institutional climate and availability of mental-health and reproductive services [29].

A positive correlation between digital self-care and institutional support ( $r = +0.53$ ,  $p < 0.001$ ) highlights that

Table 3  
Spearman's Rank Correlation Between Emotional Distress, Digital Practices, and Perceived Institutional Support

Variables	ED	DSC	ISP
ED	1.00	−0.41***	−0.48***
DSC	−0.41***	1.00	+0.53***
ISP	−0.48***	+0.53***	1.00

Notes: \*\*\* –  $p < 0.001$ ; ED – Emotional Distress; DSC – Digital Self-Care; ISP – Institutional Support Perception.

supportive environments tend to facilitate digital engagement among students. It also suggests that students may act as active agents of their health when given the tools and institutional validation.

The observed correlation suggests that institutional support – understood here as the emotionally attuned, proactive involvement of faculty in fostering a culture of digital care – plays a crucial role in enabling students to become agents of their own reproductive well-being. In contexts of war, displacement, and systemic healthcare disruption, the psychological presence and initiatives of university lecturers-particularly those trained in psychology-may complement formal medical support systems.

This finding highlights the strategic potential of universities, not only as educational spaces but as emotionally intelligent ecosystems where reproductive self-care is validated, normalized, and technologically supported. As previous studies suggest, such psychosocially enriched environments contribute to long-term health behavior formation among young women [1, 22, 23, 26].

Such findings emphasize the systemic nature of RH management among female students: emotional states are not isolated, but closely linked to the availability of digital



tools and the perceived responsiveness of educational institutions. These relationships validate the conceptual framing of universities not merely as educational spaces but as active agents of demographic and emotional resilience.

The findings of this study shed light on the intricate psychological dynamics shaping female students' RH behaviors and perceptions in wartime Ukraine – a context marked by digital transformation, emotional strain, and institutional reconfiguration. The novelty of our approach lies in investigating not only psycho-emotional vulnerabilities but also the emerging potential of universities as digital care infrastructures and demographic agents.

Over 573 (64.0%) respondents reported medium to high levels of emotional strain directly linked to RH, including anxiety about future fertility – 242 (27.0%), fear of bodily control loss – 188 (21.0%), and pronounced loneliness in RH decision-making – 134 (15.0%). These findings reflect a broader affective climate of reproductive uncertainty intensified by war-related disruptions: 305 (34.0%) participants explicitly linked their RH-related distress to forced displacement and unstable access to health services. Such results echo observations by O. Cherepiekhina et al., who highlighted the accumulation of psychosocial risks among displaced female populations in Ukraine [9].

In this context, our two-questionnaire model revealed a positive correlation between digital self-care practices and perceived institutional support ( $r = +0.53$ ,  $p < 0.001$ ). This suggests that when universities are experienced not only as academic spaces but also as emotionally supportive environments, students are more likely to engage in proactive health behaviors. From a psychological standpoint, this validates the hypothesis that students act as active agents of their RH when provided with appropriate tools and institutional recognition-even outside disciplines.

Institutional support in this study was understood through a composite of questionnaire items relating to access to non-judgmental educational dialogue, inclusion of RH topics in formal or informal university programming, and students' subjective perception of care-oriented teaching styles. Given that all co-authors of this study are also university educators and psychologists, these findings open a strategic reflection on the transformative role of faculty in embedding reproductive awareness and emotional safety into everyday pedagogical practice, particularly in post-traumatic educational contexts. Prior studies, C. Logie et al., confirm that inclusive academic environments may act as protective spaces that mitigate reproductive distress among displaced learners [20].

One of the most innovative contributions of this research lies in conceptualizing universities as emergent agents of demographic resilience. If higher education institutions take an active role in promoting psychological and reproductive well-being-not only among medical students but across disciplines-they may serve as stabilizing infrastructures in post-crisis societies. In particular, Ukraine's unique wartime context creates unprecedented pressure points that test the elasticity of university systems to absorb psychosocial vulnerability and respond with digital and emotional scaffolding.

The war-driven digitization of health access, coupled with disruptions in physical RH infrastructure, has shifted many care-seeking behaviors online. Our data indicate that students who experienced digital self-care literacy-such as familiarity with menstruation-tracking apps, RH forums, or university-provided online psychoeducational content-also reported lower emotional strain and higher perceived reproductive agency. These trends align with findings by O. Cherepiekhina, who emphasized the potential of digital mental-health tools in supplementing institutional care strategies during migration and stress [10].

From a demographic policy perspective, our results suggest that universities can support reproductive well-being not only reactively (as post-crisis safe spaces), but proactively as part of national demographic strategies. Micro-hypotheses that emerged from the data include the possibility that care-oriented academic mentorship and digitally integrated RH literacy may function as delayed fertility buffers or stress-reducing agents, particularly for displaced women. These insights are relevant not only for Ukrainian recovery agendas, but also for broader European efforts to address declining birthrates amid emotional precarity and digital fragmentation.

In sum, the Ukrainian case offers a compelling prototype for future educational-demographic hybrid models. The convergence of war, mobility, and digitization creates a context in which female students' emotional responses and RH behaviors are inseparable from institutional dynamics. Therefore, we argue that future research and policy should no longer treat RH solely as a clinical issue but also as an educational, emotional, and infrastructural phenomenon-especially in societies facing existential demographic shocks.

#### *Universities as Integrators of Digital Care and Female Students' Mental Health During Wartime Crisis*

The findings revealing a significant positive correlation between the use of digital RH tools and the perceived institutional support ( $r = +0.53$ ,  $p < 0.001$ ) reinforce the argument for the growing role of universities as platforms for digital care. This conclusion aligns with the concept of institutional digital care, which views universities not only as educational establishments but also as emotionally safe environments offering mental health support and health-promoting functions [10, 16]. Particularly in wartime conditions, where access to official healthcare services is often unstable, the role of university-based psychologists, faculty members, and digital platforms becomes critically important in supporting students' RH [7, 9, 25, 33].

#### *Digital Transformation as a Form of Resilience and a New Behavioral Norm in Female RH*

Overall, 511 (57.0%) young women in the sample reported using self-monitoring digital applications, indicating a notable shift toward the digitalization of personal health. This trend reflects international research findings that point to the growing popularity of digital self-care among young women [8, 28]. Unlike in Western contexts, where digital health adoption is often a matter of personal choice, the Ukrainian context demonstrates that this trend is also a response to limited access to traditional medical services [48]. Thus, digital RH care may be viewed as a form of adaptive resilience.

*Psycho-Emotional Challenges as Both a Risk Factor and a Motivator for Self-Organized RH Care*

According to the results, 573 (64.0%) respondents reported experiencing emotional distress related to RH, including anxiety, fear, and loneliness. This finding is consistent with existing studies on women's psycho-emotional burden in crisis settings, particularly regarding the impact of stress on menstrual dysfunction [4, 5, 19, 34]. At the same time, the observed association between institutional support and digital engagement suggests that psycho-emotional strain may drive the search for alternative sources of self-care—primarily through digital services and counseling. This opens up avenues for deeper research into the motivational dynamics behind digital self-care practices.

This opens up avenues for deeper research into the motivational dynamics behind digital self-care practices. These findings are supported by O. Zhdanova, who demonstrated that the readiness of young students to engage in health-preserving behaviors is significantly influenced by motivational mechanisms shaped through educational, psychological, and sociocultural factors – highlighting the importance of supportive environments in fostering health agency and digital self-care readiness [46].

The findings of this study emphasize the fragile interdependence between emotional well-being and RH among female students in the context of war-related stress, digital transformation, and social instability. This calls for a reimagining of universities as holistic care environments that integrate institutional empathy, hybrid support models, and digital self-care tools. It is proposed that emotional literacy, digital awareness, and inclusive pedagogy programs be systematically embedded into the university ecosystem to safeguard the reproductive potential of the

student population and to contribute to Ukraine's demographic resilience in the post-war recovery phase. In this light, universities emerge as not only academic institutions but also social agents of transformation, capable of shaping the future through care, equity, and innovation.

## CONCLUSIONS

This study highlights how female students in Ukrainian universities perceive and manage their RH amid psycho-emotional stress and digital transformation. Based on the responses of 896 participants, three key findings align with the study's aim:

1. Emotional distress related to fertility anxiety, reproductive loneliness, and war-induced disruptions was prevalent and influenced students' RH behavior.

2. A statistically significant correlation ( $r = +0.53$ ,  $p < 0.001$ ) between perceived institutional support and engagement in digital reproductive self-care demonstrates the emerging role of universities as environments of digital emotional care.

3. Digital health tools, including mobile apps and online platforms, are now integral to students' reproductive strategies, especially in contexts of healthcare system instability.

These findings support the recognition of universities as hybrid institutions capable of promoting emotional well-being and reproductive resilience through digital and educational means. Strategic integration of emotional safety, digital health practices, and inclusive pedagogical models may enhance demographic stability and reproductive justice in post-traumatic contexts.

**Conflict of interest.** The authors declare no conflicts of interest.

## APPENDIX A

### Author-Designed Questionnaire

#### Questionnaire 1. "Psychological Experiences and Behaviors Related to Female Students' Reproductive Health"

##### Introduction to the Survey (for Google Forms)

Dear participant,

You are invited to take part in a study exploring the psychological aspects of female reproductive health (RH) under conditions of social transformation and stress.

The survey is anonymous and voluntary. You may stop completing it at any stage.

Your responses are vital for advancing research, safety, and the development of digital care systems for women's health.

Estimated completion time: 7–10 minutes.

If you are ready, please click "Next".

<p><b>Section 1. General Information (non-identifying)</b></p> <ol style="list-style-type: none"> <li>At which university are you currently enrolled? (open-ended field)</li> <li>Where are you currently residing?             <ul style="list-style-type: none"> <li>Ukraine (please specify city/town in the next field)</li> <li>Temporarily abroad (please specify country in the next field)</li> </ul> </li> <li>Your age:             <ul style="list-style-type: none"> <li>18–20</li> <li>21–23</li> <li>24–26</li> <li>27+</li> </ul> </li> <li>How do you identify yourself?             <ul style="list-style-type: none"> <li>Female</li> <li>Other</li> <li>Prefer not to say / Unsure</li> </ul> </li> </ol>	<p><b>Section 2. Awareness and Knowledge of RH</b></p> <ol style="list-style-type: none"> <li>How well do you understand the concept of RH? (Rate from 1 to 5)             <ul style="list-style-type: none"> <li>1 – No understanding at all</li> <li>5 – Very well informed</li> </ul> </li> <li>Where do you usually obtain information related to women's health? (Multiple answers possible)             <ul style="list-style-type: none"> <li>Social media</li> <li>Telegram channels / influencers</li> <li>Gynecologist or endocrinologist</li> <li>Educational lectures / university workshops</li> <li>eHealth platforms (e.g., Helsi)</li> <li>Mobile apps (e.g., Flo, Clue)</li> <li>Friends, mother, sister</li> <li>Other (please specify)</li> </ul> </li> </ol>
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<p>7. Do you have regular access to a qualified gynecologist?</p> <ul style="list-style-type: none"> <li>• Yes, regularly</li> <li>• Occasionally</li> <li>• Rarely</li> <li>• I don't feel the need / I avoid it</li> </ul> <p>8. Have you undergone a preventive gynecological check-up in the past year?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Planning to soon</li> </ul> <p><b>Section 3. Emotional Perceptions and Personal Experience</b></p> <p>9. To what extent are you concerned about RH in your own life?</p> <p>(1 – not concerned at all; 5 – constant worry)</p> <p>10. Have you ever avoided check-ups or discussions about women's health due to shame, fear, or emotional discomfort?</p> <ul style="list-style-type: none"> <li>• Yes, frequently</li> <li>• Sometimes</li> <li>• No</li> </ul> <p>11. How have recent events (e.g., war, pandemic, displacement) affected your attitude toward personal health?</p> <ul style="list-style-type: none"> <li>• Significantly worsened it</li> <li>• Partially affected it</li> <li>• No effect</li> <li>• Increased my self-awareness and attention to health</li> </ul> <p>12. What emotions do you experience when thinking about pregnancy, fertility, or motherhood in your current life circumstances</p> <p>(open-ended field)</p>	<p><b>Section 4. Self-Care Practices and Use of Digital Tools</b></p> <p>13. Do you engage in any regular self-care practices related to RH?</p> <p>(Multiple answers possible)</p> <ul style="list-style-type: none"> <li>• Tracking menstrual cycle</li> <li>• Balanced nutrition</li> <li>• Physical activity</li> <li>• Bodywork/meditation</li> <li>• Contraception as advised by a doctor</li> <li>• Other (please specify)</li> <li>• I do not practice any of the above regularly</li> </ul> <p>14. Which digital tools do you use to monitor your health?</p> <p>(Multiple answers possible)</p> <ul style="list-style-type: none"> <li>• Menstrual tracking apps (e.g., Flo, Clue, Maya)</li> <li>• Telemedicine / online consultations</li> <li>• Health-related chatbots</li> <li>• YouTube/podcasts on women's health</li> <li>• Specialized Telegram channels</li> <li>• I don't use any of these tools</li> </ul> <p>15. To what extent do you feel in control of your body and RH?</p> <p>(1 – no control; 5 – full control)</p> <p>16. If you have used digital health services, which ones positively influenced your awareness or behavior?</p> <p>(open-ended field)</p> <p><b>Closing Note</b></p> <p>Thank you for your participation!</p> <p>Your anonymous responses will be analyzed and used to develop improved systems of digital care and support for female students' RH.</p>
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Appendix B

## Author's Questionnaire 2: "The University as a Space of Digital Care and Support for Reproductive Health"

### Introduction (for Google Forms)

This questionnaire is part of a scientific study on the role of the university in maintaining the psycho-emotional and reproductive health (RH) of female students.

We are interested in how you perceive the support provided by your educational environment and whether you feel safe within it.

Participation is voluntary and anonymous. Your opinion is important.

Estimated completion time: 5–7 minutes.

<p><b>Section 1. Academic Information</b></p> <p>1. Name of your university:</p> <p>(open field)</p> <p>2. Level of education:</p> <ul style="list-style-type: none"> <li>• Bachelor's degree</li> <li>• Master's degree</li> <li>• PhD / Doctoral studies</li> </ul> <p>3. Year of study:</p> <ul style="list-style-type: none"> <li>• 1st</li> <li>• 2nd</li> <li>• 3rd</li> <li>• 4th or above</li> <li>• Other</li> </ul> <p><b>Section 2. Psycho-Emotional Safety</b></p> <p>4. To what extent do you feel emotionally safe in your university environment?</p> <p>(1 – not at all; 5 – completely)</p> <p>5. Can you openly turn to someone at the university regarding mental or RH concerns?</p> <ul style="list-style-type: none"> <li>• Yes, without difficulty</li> <li>• Possibly, but I am not sure</li> <li>• No, I don't know whom to approach</li> <li>• No, I feel ashamed/afraid of judgment</li> </ul>	<p>6. Does your university provide psychological or counselling support?</p> <ul style="list-style-type: none"> <li>• Yes, there is an official psychological service</li> <li>• There are individual initiatives by lecturers or students</li> <li>• No</li> <li>• I don't know</li> </ul> <p>7. In your opinion, does your university provide sufficient support for the psycho-emotional well-being of female students?</p> <p>(open field)</p> <p><b>Section 3. Health Education Support</b></p> <p>8. Have you received any information on RH at university (e.g., lectures, electives, guest speakers)?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Don't remember</li> </ul> <p>9. If yes, how useful was it for you?</p> <p>(1 – not useful; 5 – very useful)</p> <p>10. How would you evaluate the openness of your lecturers to discussing topics such as women's health, reproductive matters, or intimacy?</p> <p>(1 – closed/taboo; 5 – open and respectful)</p>
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<p>11. What would you like to see implemented at the university to support your knowledge and confidence in the area of RH? (multiple choices possible)</p> <ul style="list-style-type: none"> <li>• Educational events/lectures</li> <li>• Access to medical consultations</li> <li>• Psychological support</li> <li>• A Telegram channel with verified information</li> <li>• A digital library or student health guide</li> <li>• Other (please specify)</li> </ul> <p><b>Section 4. Digital Care and Accessibility</b></p> <p>12. Does your university offer any digital tools or services related to mental or RH?</p> <ul style="list-style-type: none"> <li>• Yes, there are apps, chat support, telemedicine, etc.</li> <li>• Some digital support exists, but not related to health</li> <li>• No</li> <li>• I don't know</li> </ul> <p>13. If you have used such services, how would you rate them in terms of (1 – very poor; 5 – excellent)</p> <ul style="list-style-type: none"> <li>• Clarity</li> <li>• Usability</li> <li>• Emotional benefit</li> </ul> <p>(Google Forms format: 3 × 5 matrix)</p>	<p>14. Which digital tools would you consider appropriate for implementation at the university to support female students? (open field)</p> <p><b>Section 5. Access and Equity</b></p> <p>15. Do you believe that all female students at your university have equal access to support for mental and RH?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• Partially</li> <li>• No</li> <li>• Hard to say</li> </ul> <p>16. In your opinion, which groups of students may be more vulnerable in terms of access to information and support? (open field)</p> <p><b>Closing Note</b></p> <p>Thank you sincerely for your participation!</p> <p>Your responses will help foster a culture of care, openness, and safety within the university environment.</p>
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