Socio-psychological distress, violence, and food insecurity in women undergoing gynecological examinations: insights from a cross-sectional study of an Italian Tertiary Clinic

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Tina Pasciuto, PhD; Francesca Moro, PhD; Drieda Zace, PhD; Lidia Borzì, MSc; Katiuscia Patrizi, MSc; Roberta Di Battista, MSc; Francesca Ciccarone, MD; Floriana Mascilini, PhD; Elena Teodorico, MD; Giulia Zinicola, MD; Maria Luisa Di Pietro, PhD; Giovanni Scambia, PhD; Antonia Carla Testa, PhD

BACKGROUND: The reality of gynecological patients represents a distinct subgroup of the population in which social and psychological distress can coexist alongside the burden of the disease. "Unmet social needs," including social distress, which encompasses gender and family violence, abuse, unemployment, and food insecurity, are now widely recognized as critical determinants of health. Some studies have examined the social needs experienced by patients with gynecological disorders, but primarily in gynecologic oncology patients.

OBJECTIVE: This study aims to assess the prevalence of socio-psychological distress, experiences of violence, and food insecurity in patients attending a tertiary outpatient gynecological clinic. Data were collected using a tailored open-ended questionnaire administered by trained volunteers.

STUDY DESIGN: This is a prospective cross-sectional study. An ad-hoc questionnaire, validated through the Delphi methodology, was administered to all women attending the Gynaecological Outpatient Clinic at Fondazione Policlinico A. Gemelli IRCCS in Rome, Italy, from March to November 2023. Their responses were analyzed focusing on self-reported socio-psychological distress, violence experienced and food insecurity. Inferential analysis was provided to evaluate the possible association with socioeconomic distress and clinical characteristics of patients. Multivariable logistic regression models for predicting outcomes were performed including those parameters that were statistically significant at univariable analysis (*p* value <.05).

RESULTS: A total of 408 women were included in the study. One hundred and fifty-two (37.2%) reported socio-psychological distress, 136 (33.3%) violence, and 60 (14.7%) food insecurity. Independent risk factors for socio-psychological distress included oncological conditions (OR: 3.76, 95% CI: 1.55—9.11), chronic conditions (OR: 2.22, 95% CI: 1.38—3.57), economic difficulties (OR: 3.91, 95% CI: 2.20—6.93), and experiencing violence (OR: 4.65, 95% CI: 2.83—7.65). Independent risk factors for violence were benign gynecological conditions (OR: 1.95, 95% CI: 1.02—3.74), alcohol use (OR: 1.88, 95% CI: 1.16—3.04), economic difficulties (OR: 1.72, 95% CI: 1.02—2.90), and experiencing food insecurity (OR: 1.92, 95% CI: 1.03—3.59). The only independent risk factor for food insecurity was having economic difficulties (OR: 6.01, 95% CI: 3.06—11.81).

CONCLUSION: Socio-psychological distress and experiences of violence were found to be prevalent in over one-third of the population studied. Identified risk factors include the type of gynecological condition, economic hardship, and food insecurity. These findings underscore the urgent need for the development of comprehensive social support systems to assist women with gynecological conditions. While integrated clinical and social support programs remain underdeveloped in some countries, trained volunteers can serve as a valuable interim resource, complementing but not replacing the essential role of professional social and psychological services.

Key words: socio-psychological distress, violence, food insecurity, gynaecology, Italy

Written informed consent was obtained from all patients enrolled in the study.

Cite this article as: Pasciuto T, Moro F, Zace D, et al. Socio-psychological distress, violence, and food insecurity in women undergoing gynecological examinations: insights from a cross-sectional study of an Italian Tertiary Clinic. Am J Obstet Gynecol Glob Rep 2025;5:100546.

Corresponding author. Francesca Moro, PhD. francesca.moro@unicamillus.org

AJOG Global Reports at a Glance

Why was the study conducted

Socio-psychological distress, experiences of violence, and food insecurity are not well established among women attending a tertiary outpatient gynecological clinic.

Key findings

Socio-psychological distress, violence, and social needs are common among patients attending a gynecologic clinic, not only for oncologic diseases but also for benign pathologies.

What does this add to what is known?

Our findings emphasize the need to develop social support systems to assist women with gynecologic conditions, particularly those facing economic difficulties and food insecurity.

Introduction

Gynecological conditions such as urinary incontinence, endometriosis, and especially gynecological cancers are not only physically debilitating, but also affect emotional well-being, relationships, and overall quality of life.[1] Many women in these circumstances experience heightened psychological distress, including anxiety, depression, and stress, often exacerbated by uncertainties regarding diagnosis and prognosis, fear of invasive treatments, and concerns about reproductive health and body image.[2−6]

Gynaecological diseases may contribute to the increase in distress due to the biological involvement of intimate parts of the body with subsequent effects on the family environment and social reality.[5−7] Moreover, many patients face significant social challenges, including financial instability, limited access to healthcare resources, social isolation, and caregiving burdens, all of which can contribute to their overall psychological distress.[8] In particular, distress in patients with gynecologic cancers has been recognized and is driving the development and evaluation of tailored intervention programs designed to equip healthcare professionals with the skills to identify and effectively address patient distress.[9]

Despite the well-documented psychological impact, these issues are often underrecognized and undertreated in clinical practice. Clinicians may focus primarily on the medical aspects of care, leaving broader psychosocial needs unmet.[1] In this context, some authors have proposed tailored interventional programs designed to train healthcare professionals to recognize the distress in their patients and offer them opportunities to seek help from support structures.[3,6,10] Most of the studies consider the introduction of psychosocial services by social workers as an effective way to increase referral rates and expedites evaluation. However, many institutions may lack the resources to provide social work referrals for all patients. Additionally, despite the efforts to train healthcare professionals and establish support and care structures, some critical issues remain classified as "unmet needs" for patients including social distress, comprehensive of gender and family violence, abuse, unemployment, and food insecurity.[3] "Unmet social needs" are now widely recognized as critical determinants of health. Some studies have examined the social distress experienced by patients with gynecological disorders, but mainly in gynecologic oncology patients[2,3,7,11−13]

The aim of this study was to evaluate the prevalence of social and psychological distress in patients attending a tertiary gynecological outpatient clinic using an ad hoc open-ended questionnaire administered by trained volunteers. Additionally, the study investigated the role of socio-demographic, psychological, clinical, and lifestyle factors in contributing to socio-psychological distress, violence, and food insecurity.

Materials and methods

This is a cross-sectional study describing the prevalence of psychological and social distress among women attending the Gynaecological Outpatient Clinic at the tertiary care center Fondazione Policlinico Universitario A. Gemelli IRCCS in Rome, Italy. Located in Central Italy, the institution serves as a specialized referral clinic, catering primarily to patients from surrounding regions. It operates under the Italian national health service, with the majority of patients covered through this system. While some patients have private insurance, the proportion is relatively small. The clinic serves a diverse socio-economic population, encompassing indigent, middle-class, and affluent individuals.

An ad hoc open questionnaire was administered to all eligible women referred to the clinic for visit under the Italian national health service during the study period (March−November 2023). Oncologic and non-oncologic patients, as well as women undergoing clinical examination for prevention or periodic checks, were included if they were ≥18 years old and had provided written informed consent. Women with mental disorders who were unable to give consent were excluded.

The protocol was approved by the referral regional ethical committee (Prot. N. 10524/23).

Questionnaire development

The questionnaire was designed according to the results of a literature review (step 1), followed by a Delphi procedure for its validation (step 2).

Step 1- Literature review

The literature search was conducted by D.Z. on PubMed using key words such as: "gynaecological;" "patients;" "women;" "distress;" "social;" "psychological;" "psychosocial;" "needs." A combination of MeSH terms, Boolean operators, and free-text keywords was

employed. Based on the findings from the identified studies, the questionnaire was structured into 5 distinct sections: (1) Socio-demographic information, (2) Family situation, (3) Clinical history, (4) Social and psychological situation, (5) Lifestyle. Detailed information on the steps of the literature review and the full questionnaire in Italian language and its English translation are presented in Supplementary Material (Appendix 1 and 2 respectively).

Step 2- Delphi procedure

A total of eight experts in different fields such as gynaecology, nursing, public health, bioethics, and sociology were invited to participate. The choice of eight experts reflects practical constraints, such as time, resource allocation, and feasibility, without compromising the panel's multidisciplinary nature. All identified experts were individually contacted via e-mail and were asked for their availability to be part of the Delphi procedure. Experts were invited to review the content of the items and to rate each one in terms of its validity and relevance by indicating a value from 1 to 5 on a Likert scale, where 1 = strongly disagree (this question should not be included in this questionnaire/it is irrelevant) and 5 = strongly agree (this question is relevant and should be included in the questionnaire). Furthermore, experts were given the possibility to list any additional comments or questions. Based on their evaluations we calculated the mean and standard deviation for each item in the questionnaire, as well as content validity index (CVI). A CVI greater than 79% was deemed to be suggestive of the item's insertion in the questionnaire, a rate between 70 e 79% was considered indicative for the revision of the item and a rate lower than 70% was deemed to be suggestive of removing the item.[14] The procedure was finalized by all the experts in 2 rounds. In the first round they reviewed the questionnaire (80% response rate). After the first round the mean experts' evaluation obtained for each item of the questionnaire ranged from 4.4 to 5.0, out of a maximum of 5. The questions

with the lowest score (mean value <4.5) were related to living condition of the participants, city of origin, relationship status. CVI for each item ranged from 0.75 to 1.00. Based on the experts' suggestions received in the first round, only very few changes were implemented to the items of the questionnaire. The item related to city of origin was replaced with region of origin, more alternatives were added to the question regarding living condition, the alternatives "other" and "prefer not to answer" were added for 2 questions.

Based on the values of means, CVI, and experts' comments, consensus was obtained in the last round. The definitive version of the questionnaire contained 42 questions: 7 questions for the "Socio-demographic information" section, 7 for the "Family situation" section, 7 for "Clinical situation" section, 15 for "Social and psychological situation" and 6 for lifestyle section.

This version of the questionnaire (Supplementary material appendix 2) was subsequently submitted to a pilot study to assess its face validity and to identify any lack of clarity before carrying out a wider administration.

Questionnaire administration and social and emotional support

Study subjects were approached by volunteers in the outpatient clinic waiting room before the visit in order to avoid bias due to visit result. The volunteers informed them about the purpose and scope of the study and provided an information leaflet. Patients who agreed to participate gave their written informed consent and then completed the questionnaire. Volunteers remained available in the waiting area to assist with any questions or needs, while ensuring a respectful and non-intrusive presence. The questionnaire was anonymous and administered in Italian language. For non-native Italian speakers, interpreter support was available upon request. It was completed in a semi-private setting, minimizing distractions and preserving confidentiality. On average, completion took approximately 15 minutes. All volunteers were women members of the Associazioni Cristiane

Lavoratori Italiani (Acli Roma APS), a national. a no-profit organization that promotes social inclusion, civic engagement, and community-based welfare through a wide range of services and educational initiatives. All volunteers received standardized training on the study protocol, including informed consent procedures, ethical considerations, how to administer the questionnaire and basic knowledge about benign gynecological and oncological conditions.

Emotional support was also offered to women who requested it after completing the questionnaire. This support was given by the Acli volunteer to ensure that women experiencing a difficult situation were not left alone. Moreover, a brochure was available to provide contact details for free opportunities offering social and psychological professional support.

Data collection and management

Participants completed anonymous paper forms, which were digitized by a data manager using REDCap tools hosted at Fondazione Policlinico Universitario A. Gemelli-IRCCS ((https://redcap-irccs.policlinicogemelli.it/).[15] Access was restricted to authorized investigators and data managers.

Sample size

Sample size calculations assumed a 5% type 1 error, an absolute error (accuracy) of 2.5%, and 47% expected prevalence of psychosocial distress.[2,3] With a 70% response rate, 548 women were required to achieve a sample size of 384.

Statistical analysis

Qualitative data were presented as frequencies (%), and quantitative data as mean ± standard deviation (SD) or median and range interquartile (IQR) based on normal distribution (Shapiro—Wilk test).

Inferential analyses were conducted across for 3 main outcomes: (A) socio-psychological distress (present versus absent), (B) violence (experienced versus not experienced), and (C) food insecurity (present versus absent). These outcomes were defined based on 3

specific questionnaires, directly addressed to women. Each question included multiple-choice responses for single answers and was dichotomized using a conservative approach. Specifically, socio-psychological distress and violence were categorized as present and experienced, respectively, if women responded "yes," "I don't know," or "I prefer not to respond" to the related questions. Conversely, they were categorized as absent and not experienced, respectively, for other responses. Food insecurity was considered absent when women responded "never had the impossibility to buy at least one meal in 12 months"; otherwise, it was defined as present (responses: "sometimes," "often," "always").

The association of the A, B, and C outcomes with socio-demographic, economic, lifestyle, and clinical characteristics - including age, education level, occupation, relationship status, presence of pathology, etc. - and the mutual influence between A, B, and C was evaluated through inferential analyses, including multivariable logistic regression modeling. Quantitative variables were analyzed using Student's t-test or Mann-Whitney's test, while categorical variables were examined with Pearson's Chi-square test or Fisher's exact test, as appropriate.

Multivariable logistic regression models predicting the A, B, and C outcomes included parameters that were statistically significant in univariable analyses (p-value < .05). To enhance clarity and brevity, categorical variables in the models, with the exception of the "reason for clinical examination" variable, were dichotomized by merging multiple response options. Examples include: relationship status (married and stable relationships versus other), education level (elementary, middle, and high school degrees versus bachelor's and post-graduate degrees), employment status (none versus other), and housing conditions (house owned and parent's house versus other). All estimates were reported as Odds Ratios (OR) with 95% Confidence Intervals (CI).

Statistical analyses were performed by an experienced biostatistician (TP)

using STATA software (STATA/BE 17.0 for Windows, StataCorp LP, College Station, TX). Two-sided tests were applied, and no imputation was performed for missing data. The significance level was set at $p=.05$, except in cases requiring multiple comparisons, where Bonferroni's correction was applied.

Results

From March 24, 2023, to November 11, 2023, 411 women were asked to study participation and 408 (99.3%) who agreed were included. A total of 406/408 (99.5%) were residents in Italy and 396/408 (97.1%) were Italian. No non-native Italian speakers asked for interpreter support, while 4 women (1.0%) requested an emotional support after questionnaire competition. Clinical and lifestyle characteristics of the study population, described according to outcomes of socio-physical distress, violence, and food insecurity, are shown in Table 1. The mean age of the women was 43 years (SD: 13 years). They attended gynecological outpatient clinics for benign gynecological conditions in 186/408 (45.6%) cases (details are reported in Supplementary Table S1), for oncological reasons in 146/408 (35.8%) cases, and for control/prevention in 76/408 (18.6%) cases. Most patients (264/408, 64.7%) underwent medical or surgical treatment disease and 192/408 (47.1%) women also had a chronic disease (ie, autoimmune disease, diabetes, etc.). Details of the specific chronic disease are shown in Supplementary Table S2. The median (IQR) self-reported health status score (ranging from 1 to 10) was 7.4 (6.0−8.0). In the study population, 152 (37.2%) reported socio-psychological distress, 136 (33.3%) violence, and 60 (14.7%) food insecurity.

Specifically, patients who reported socio-psychological distress were more likely to have an oncologic disease than those who did not report socio-psychological distress (73/152, 48% vs 73/256, 28.5%, $p<.0001$), to have received medical or surgical treatment (112/152, 73.7% vs 152/256, 59.4%, $p=.008$), and to have chronic diseases (95/152, 62.5%

vs 97/256, 37.9%, $p<.0001$). They also reported worse self-reported health status than women without distress (median (IQR): 6.6 (6.0−8.0) vs 7.8 (7.0−9.0), $p<.0001$). Similarly, patients who experienced violence were more likely to have a chronic disease (75/136, 55.1% vs 117/272, 43.0%, $p=.027$) and had worse self-reported health status than women who did not experience violence (median (IQR): 7.0 (6.0−8.0) vs 7.5 (6.8−9.0), $p=.006$).

Sociodemographic characteristics are shown in Table 2. Almost all patients (396/408, 97.1%) were Italian and most (331/408, 81.1%) were from central Italy; details on the specific regions of residence of the women are reported in Supplementary Table S3. Approximately half of the patients were either married (149/408, 36.5%) or in a stable relationship (68/408,16.7%). Regarding school education, only 79/408 (19.4%) had a postgraduate degree. Regarding employment, most patients had a full-time job (220/408, 53.9%). Almost half of the patients (198/408, 48.5%) had children. Patients who reported socio-psychological distress were more likely to be unemployed than women without distress (56/152, 36.8% vs 58/256, 22.7%, $p=.002$). Patients who experienced violence were less likely to be married than those who did not (40/136, 29.4% vs 109/272, 40.1%, $p=.035$). Patients with food insecurity were less likely to be married (14/60, 23.3% vs 135/348, 38.8%, $p=.022$) and more likely to be unemployed (26/60, 43.3% vs 88/348, 25.3%, $p=.004$). Types of violence, types of food insecurity, and economic status or economic hardship are reported in Table 3. Patients with socio-psychological distress, violence, and food insecurity were more likely to report economic hardship than those without.

Information on psychological distress is provided in Supplementary Table S4. Specifically, about 50% of women reported that the disease had changed their lives, both in terms of self-perception and relationships with others. Additionally, 34.6% reported that people's attitudes toward them had changed because of the disease.

TABLE 1
Clinical and lifestyle characteristics of the study population compared according to 3 different outcomes: (A) socio-psychological distress (present vs absent), (B) violence (experienced vs not experienced), (C) food insecurity (present vs absent).

Characteristics	All cases N=408	Outcome A: Socio-psychological distress			Outcome B: Violence			Outcome C: Food insecurity		
		Present N=152	Absent N=256	P-value	Experienced N=136	Not experienced N=272	P-value	Present N=60	Absent N=348	P-value
Age, years	43±13	43±13	43±13	.958	42±12	43±13	.612	40±12	43±13	.093
Type of disease for clinical examination				<.0001			.014			.695
None	76 (18.6)	13 (8.6)	63 (24.6)		16 (11.8)	60 (22.1)		10 (16.7)	66 (19.0)	
Gynaecological benign	186 (45.6)	66 (43.4)	120 (46.9)		68 (50.0)	118 (43.4)		27 (45.0)	159 (45.7)	
Oncological	146 (35.8)	73 (48.0)	73 (28.5)		52 (38.2)	94 (34.6)		23 (38.3)	123 (35.3)	
Type of carcinoma				.052			.869			.132
Cervical cancer	31 (21.2)	13 (17.8)	18 (24.7)		12 (23.1)	19 (20.2)		7 (30.4)	24 (19.5)	
Ovarian cancer	31 (21.2)	22 (30.1)	9 (12.3)		13 (25.0)	18 (19.1)		1 (4.3)	30 (24.4)	
Endometrial and myometrial cancer	26 (17.8)	13 (17.8)	13 (17.8)		7 (13.5)	19 (20.2)		5 (21.7)	21 (17.1)	
Brest cancer	23 (15.8)	7 (9.6)	16 (21.9)		7 (13.5)	16 (17.0)		2 (8.7)	21 (17.1)	
Vulvar cancer	9 (6.2)	6 (8.2)	3 (4.1)		3 (5.8)	6 (6.4)		2 (8.7)	7 (5.7)	
Carcinoma NOS	26 (17.8)	12 (16.4)	14 (19.2)		10 (19.2)	16 (17.0)		6 (26.1)	20 (16.3)	
Age at first diagnosis of disease ⬚	39±12	38±13	39±12	.440	38±11	40±13	.094	39±11	39±13	.790
Medical/surgical treatments for disease	264 (64.7)	112 (73.7)	152 (59.4)	**.008**	93 (68.4)	171 (62.9)	.573	40 (66.7)	224 (64.4)	.455
Medical/surgical treatment duration, years				.947			.390			.145
< 2	141/264 (53.4)	61/112 (54.5)	80/152 (52.6)		46/93 (49.5)	95/171 (55.6)		20/40 (50.0)	121/224 (54.0)	
2-5	61/264 (23.1)	24/112 (21.4)	37/152 (24.3)		22/93 (23.7)	39/171 (22.8)		10/40 (25.0)	51/224 (22.8)	
> 5	38/264 (14.4)	17/112 (15.2)	21/152 (13.8)		13/93 (14.0)	25/171 (14.6)		3/40 (7.5)	35/224 (15.6)	
Don't know / don't remember	24/264 (9.1)	10/112 (8.9)	14/152 (9.2)		12/93 (12.9)	12/171 (7.0)		7/40 (17.5)	17/224 (7.6)	
Presence of chronic diseases	192 (47.1)	95 (62.5)	97 (37.9)	**<.0001**	75 (55.1)	117 (43.0)	**.027**	33 (55.0)	159 (45.7)	.182
Actual smoker	320 (78.4)	118 (77.6)	202 (78.9)	.857	99 (72.8)	221 (81.3)	.060	48 (80.0)	272 (78.2)	.865
Starting age of smoking, years	19±6	18±6	19±6	.489	19±6	19±6	.950	17±3	19±6	.050
Number of cigarettes per day				.319			.664			.830
< 1	4 (4.5)	3 (8.8)	1 (1.9)		3 (8.1)	1 (2.0)		0 (0.0)	4 (5.3)	
1-5	28 (31.8)	8 (23.5)	20 (37.0)		10 (27.0)	18 (35.3)		5 (41.7)	23 (30.3)	
6-10	28 (31.8)	13 (38.2)	15 (27.8)		13 (35.1)	15 (29.4)		4 (33.3)	24 (31.6)	

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TABLE 1
Clinical and lifestyle characteristics of the study population compared according to 3 different outcomes: (A) socio-psychological distress (present vs absent), (B) violence (experienced vs not experienced), (C) food insecurity (present vs absent). *(continued)*

Characteristics	All cases N=408	Outcome A: Socio-psychological distress			Outcome B: Violence			Outcome C: Food insecurity		
		Present N=152	Absent N=256	P-value	Experienced N=136	Not experienced N=272	P-value	Present N=60	Absent N=348	P-value
11-20	23 (26.1)	9 (26.5)	14 (25.9)	.168	9 (24.3)	14 (27.5)		2 (16.7)	21 (27.6)	
> 20	5 (5.7)	1 (2.9)	4 (7.4)		2 (5.4)	3 (5.9)		1 (8.3)	4 (5.3)	
Use of alcohol	110 (27.0)	47 (30.9)	63 (24.6)	.168	47 (34.6)	63 (23.2)	**0.018**	11 (18.3)	99 (28.4)	.116
Health status self-reported evaluation*	7.4 (6-8)	6.6 (6.0-8.0)	7.8 (7.0-9.0)	**<.0001**	7.0 (6.0-8.0)	7.5 (6.8-9.0)	**0.006**	6.8 (6.0-8.0)	7.4 (6.0-9.0)	**.004**

Results are presented as n (%) or as mean ± standard deviation or as median (first quartile-third quartile) as appropriate. Comparisons were made with 2-sided Pearson's Chi Square, Exact, †Student's and Mann–Whitney's U test as appropriate. Bold font highlights statistically significant differences. Level of significance was set at 0.05. NOS: Not Otherwise Specified. ② Information available for 323/327 cases. One patient has been suffering from recurrent cystitis since she was 4 years old.

* Score from 1 to 10.

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Multivariable analysis (Table 4) revealed that independent risk factors for socio-psychological distress include: (1) having an oncological condition (OR: 3.76, 95% CI: 1.55–9.11); (2) suffering from chronic conditions (OR: 2.22, 95% CI: 1.38–3.57); (3) experiencing economic difficulties (OR: 3.91, 95% CI: 2.20–6.93); (4) having experienced violence (OR: 4.65, 95% CI: 2.83–7.65). Independent risk factors for experiencing violence of any kind include: (1) having a benign gynecological condition (OR: 1.95, 95% CI: 1.02–3.74); (2) alcohol use (OR: 1.88, 95% CI: 1.16–3.04); (3) experiencing economic difficulties (OR: 1.72, 95% CI: 1.02–2.90); (4) experiencing food insecurity (OR: 1.92, 95% CI: 1.03–3.59). The only independent risk factor for food insecurity is experiencing economic difficulties (OR: 6.01, 95% CI: 3.06–11.81).

Comment
Principal findings
This study found that in an Italian tertiary gynecologic outpatient clinic, socio-psychological distress and experience of violence were prevalent in more than one-third of the population. Additionally, around 15% of patients reported experiencing food insecurity. The study also identified independent risk factors for socio-psychological distress including gynecologic oncologic disease, chronic disease, economic difficulties and violence. Risk factors for violence included alcohol use, benign gynecologic conditions, food insecurity, and economic difficulties. For food insecurity, the primary risk factor was economic hardship.

Results in the context of what is known
Consistent with the literature, we found that patients with gynecologic cancers are associated with increased distress.[11] Additionally, patients facing economic difficulties were found to have an increased risk of experiencing basic social resource needs, such as food insecurity.[12] Similar to our study, other authors have aimed to identify the most common social needs and distress in gynecologic patient populations, but

Socio-demographic characteristics of the study population compared according to 3 different outcomes: (A) socio-psychological distress (present vs absent), (B) violence (experienced vs not experienced), (C) food insecurity (present vs absent).

		Outcome A: Socio-psychological distress			Outcome B: Violence			Outcome C: Food insecurity		
Characteristics	All cases N=408	Present N=152	Absent N=256	P-value	Experienced N=136	Not experienced N=272	P-value	Present N=60	Absent N=348	P-value
Italian nationality	396 (97.1)	146 (96.1)	250 (97.7)	.133	130 (95.6)	266 (97.8)	.070	57 (95.0)	339 (97.4)	.281
Residence in Italy	406 (99.5)	152 (100.0)	254 (99.2)	.530	136 (100.0)	270 (99.3)	.550	59 (98.3)	347 (99.7)	.272
Lazio	309 (75.7)	107 (70.4)	202 (78.9)		106 (77.9)	203 (74.6)		41 (68.3)	268 (77.0)	
Geographic area of domicile				.132			.520			.094
Central Italy	331 (81.1)	117 (77.0)	214 (83.6)		115 (84.6)	216 (79.4)		43 (71.7)	288 (82.8)	
Southern Italy and Islands	72 (17.6)	34 (22.4)	38 (14.8)		20 (14.7)	52 (19.1)		16 (26.7)	56 (16.1)	
Northern Italy	5 (1.2)	1 (0.7)	4 (1.6)		1 (0.7)	4 (1.5)		1 (1.7)	4 (1.1)	
Relationship				.183			**.005**			**.017**
Married	149 (36.5)	55 (36.2)	94 (36.7)		40 (29.4)	109 (40.1)		14 (23.3)	135 (38.8)	
Cohabitant	74 (18.1)	29 (19.1)	45 (17.6)		22 (16.2)	52 (19.1)		16 (26.7)	58 (16.7)	
Single	71 (17.4)	24 (15.8)	47 (18.4)		29 (21.3)	42 (15.4)		9 (15.0)	62 (17.8)	
Stable relationship	68 (16.7)	20 (13.2)	48 (18.8)		20 (14.7)	48 (17.6)		8 (13.3)	60 (17.2)	
Separated / Divorced	27 (6.6)	13 (8.6)	14 (5.5)		17 (12.5)	10 (3.7)		8 (13.3)	19 (5.5)	
Occasional partner	11 (2.7)	5 (3.3)	6 (2.3)		3 (2.2)	8 (2.9)		2 (3.3)	9 (2.6)	
No answer	8 (2.0)	6 (3.9)	2 (0.8)		5 (3.7)	3 (1.1)		3 (5.0)	5 (1.4)	
Education				.770			.419			**.024**
Elementary license	4 (1.0)	1 (0.7)	3 (1.2)		2 (1.5)	2 (0.7)		1 (1.7)	3 (0.9)	
Middle school license	45 (11.0)	18 (11.8)	27 (10.5)		11 (8.1)	34 (12.5)		13 (21.7)	32 (9.2)	
High school diploma	161 (39.5)	64 (42.1)	97 (37.9)		57 (41.9)	104 (38.2)		26 (43.3)	135 (38.8)	
Bachelor's degree	119 (29.2)	44 (28.9)	75 (29.3)		36 (26.5)	83 (30.5)		12 (20.0)	107 (30.7)	
Post-graduate degree	79 (19.4)	25 (16.4)	54 (21.1)		30 (22.1)	49 (18.0)		8 (13.3)	71 (20.4)	
Employment				**.020**			.702			**.0009**
Full time	220 (53.9)	74 (48.7)	146 (57.0)		74 (54.4)	146 (53.7)		19 (31.7)	201 (57.8)	
Part time	62 (15.2)	19 (12.5)	43 (16.8)		22 (16.2)	40 (14.7)		14 (23.3)	48 (13.8)	
None	114 (27.9)	56 (36.8)	58 (22.7)		38 (27.9)	76 (27.9)		26 (43.3)	88 (25.3)	
Non-response	12 (2.9)	3 (2.0)	9 (3.5)		2 (1.5)	10 (3.7)		1 (1.7)	11 (3.2)	

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TABLE 2
Socio-demographic characteristics of the study population compared according to 3 different outcomes: (A) socio-psychological distress (present vs absent), (B) violence (experienced vs not experienced), (C) food insecurity (present vs absent). *(continued)*

Characteristics	All cases N=408	Outcome A: Socio-psychological distress			Outcome B: Violence			Outcome C: Food insecurity		
		Present N=152	Absent N=256	*P*-value	Experienced N=136	Not experienced N=272	*P*-value	Present N=60	Absent N=348	*P*-value
Family members she lives with				.205			.054			.209
0	65 (15.9)	26 (17.1)	39 (15.2)		32 (23.5)	33 (12.1)		10 (16.7)	55 (15.8)	
2	133 (32.6)	54 (35.5)	79 (30.9)		44 (32.4)	89 (32.7)		18 (30.0)	115 (33.0)	
3	75 (18.4)	21 (13.8)	54 (21.1)		24 (17.6)	51 (18.8)		11 (18.3)	64 (18.4)	
4	92 (22.5)	34 (22.4)	58 (22.7)		24 (17.6)	68 (25.0)		10 (16.7)	82 (23.6)	
> 4	36 (8.8)	12 (7.9)	24 (9.4)		9 (6.6)	27 (9.9)		8 (13.3)	28 (8.0)	
Cohabitation with other people (religious community, friend, housemate, etc.)	7 (1.7)	5 (3.3)	2 (0.8)		3 (2.2)	4 (1.5)		3 (5.0)	4 (1.1)	
Original family members				.978			.633			.448
2	14 (3.4)	5 (3.3)	9 (3.5)		5 (3.7)	9 (3.3)		3 (5.0)	11 (3.2)	
3	60 (14.7)	21 (13.8)	39 (15.2)		23 (16.9)	37 (13.6)		12 (20.0)	48 (13.8)	
4	200 (49.0)	76 (50.0)	124 (48.4)		61 (44.9)	139 (51.1)		26 (43.3)	174 (50.0)	
> 4	134 (32.8)	50 (32.9)	84 (32.8)		47 (34.6)	87 (32.0)		19 (31.7)	115 (33.0)	
Children	198 (48.5)	72 (47.4)	126 (49.2)	.795	65 (47.8)	133 (48.9)	.910	31 (51.7)	167 (48.0)	.699
Number of children	2±1	2±1	2±1	.97	2±1	2±1	.303	2±1	2±1	.445
Children age, years										
0 - 3	14/198 (7.1)	5/72 (6.9)	9/126 (7.1)	1	7/65 (10.8)	7/133 (5.3)	.230	2/31 (6.5)	12/167 (7.2)	1
4 - 6	22/198 (11.1)	8/72 (11.1)	14/126 (11.1)	1	11/65 (16.9)	11/133 (8.3)	.090	5/31 (16.1)	17/167 (10.2)	.350
7 - 10	32/198 (16.2)	9/72 (12.5)	23/126 (18.3)	.320	12/65 (18.5)	20/133 (15.0)	.540	4/31 (12.9)	28/167 (16.8)	.792
11 - 17	63/198 (31.8)	19/72 (26.4)	44/126 (34.9)	.270	15/65 (23.1)	48/133 (36.1)	.070	11/31 (35.5)	52/167 (31.1)	.670
17 - 21	29/198 (14.6)	11/72 (15.3)	18/126 (14.3)	.830	8/65 (12.3)	21/133 (15.8)	.750	3/31 (9.7)	26/167 (15.6)	.580
21 - 26	33/198 (16.7)	16/72 (22.2)	17/126 (13.5)	.120	10/65 (15.4)	23/133 (17.3)	.670	8/31 (25.8)	25/167 (15.0)	.190
26 - 30	27/198 (13.6)	9/72 (12.5)	18/126 (14.3)	.830	8/65 (12.3)	19/133 (14.3)	.820	2/31 (6.5)	25/167 (15.0)	.260
> 30	43/198 (21.7)	19/72 (26.4)	24/126 (19.0)	.280	12/65 (18.5)	31/133 (23.3)	.470	4/31 (12.9)	39/167 (23.4)	.240

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TABLE 2
Socio-demographic characteristics of the study population compared according to 3 different outcomes: (A) socio-psychological distress (present vs absent), (B) violence (experienced vs not experienced), (C) food insecurity (present vs absent). *(continued)*

Characteristics	All cases N=408	Outcome A: Socio-psychological distress			Outcome B: Violence			Outcome C: Food insecurity		
		Present N=152	Absent N=256	P-value	Experienced N=136	Not experienced N=272	P-value	Present N=60	Absent N=348	P-value
Care of disabled or old people				.087			.484			.372
No	314 (77.0)	108 (71.1)	206 (80.5)		100 (73.5)	214 (78.7)		43 (71.7)	271 (77.9)	
Yes	53 (13.0)	24 (15.8)	29 (11.3)		21 (15.4)	32 (11.8)		8 (13.3)	45 (12.9)	
Non-response	41 (10.0)	20 (13.2)	21 (8.2)		15 (11.0)	26 (9.6)		9 (15.0)	32 (9.2)	

Results are presented as n (%). Comparisons were made with 2-sided Pearson's Chi Square, Exact test as appropriate. Bold font highlights statistically significant differences. Level of significance was set at 0.05.

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their focus has been primarily on patients with oncologic diseases. In contrast, we included all types of disease (benign, oncologic (mainly gynecological), and screening). Nyakudarika et al., in a prospective study of 135 gynecologic oncology patients, identified the most common social needs and sources of distress.[11] They found that 65.2% of patients had at least one unmet social need, and 36.3% screened positive for distress. Social isolation, lack of home safety, and financial difficulties were significantly associated with distress, while transportation problems and distress were linked to treatment interruptions.

Beavis et al in a large population of 752 patients assessed the prevalence of basic social resource needs identified through a quality improvement initiative in a gynecologic oncology outpatient clinic.[12] They found that 36% of women had at least one basic social need, with financial strain being the most commonly reported. However, unlike our study, Beavis et al. did not investigate the prevalence of socio-psychological distress and violence. Similar results to Beavis' study were obtained from Cotangco et al[13] who identified social needs of 488 gynecologic oncology patients, of which 54% screened positive for at least one social need.

Some authors have also investigated the prevalence of violence among women with gynecologic or obstetrics conditions. For example, Alaman et al.[16] studied the prevalence of domestic sexual violence behaviors by husbands among 200 married women attending a gynecology outpatient clinic. They reported that 53% of the women had been exposed to at least one type of domestic sexual violence by their husbands. Rietveld et al.[17] investigated the prevalence of intimate partner violence among 200 patients (82 of whom were pregnant) attending an obstetrics and gynecology outpatient clinic. They found that 23% of the women had ever experienced violence, and 9% were currently experiencing it. Violence was more prevalent among women with lower-educated partners. Our findings regarding food insecurity align with

TABLE 3
Socio-psychological distress, violence and ecomonics characteristics of the study population compared according to 3 different outcomes: (A) socio-psychological distress (present vs absent), (B) violence (experienced vs not experienced), (C) food insecurity (present vs absent).

Characteristics	All cases N=408	Outcome A: Socio-psychological distress			Outcome B: Violence			Outcome C: Food insecurity		
		Present N=152	Absent N=256	P-value	Experienced N=136	Not experienced N=272	P-value	Present N=60	Absent N=348	P-value
Social or psychological distress				-			<.0001			.003
No	256 (62.7)	0 (0.0)	256 (100.0)		51 (37.5)	205 (75.4)		27 (45.0)	229 (65.8)	
Yes	102 (25.0)	102 (67.1)	0 (0.0)		57 (41.9)	45 (16.5)		18 (30.0)	84 (24.1)	
Don't know	24 (5.9)	24 (15.8)	0 (0.0)		11 (8.1)	13 (4.8)		4 (6.7)	20 (5.7)	
Non-response	26 (6.4)	26 (17.1)	0 (0.0)		17 (12.5)	9 (3.3)		11 (18.3)	15 (4.3)	
Violence				<.0001			-			.002
Not experienced	272 (66.7)	67 (44.1)	205 (80.1)		0 (0.0)	272 (100.0)		29 (48.3)	243 (69.8)	
Experienced	136 (33.3)	85 (55.9)	51 (19.9)		136 (100.0)	0 (0.0)		31 (51.7)	105 (30.2)	
Physical	30/136 (22.1)	18/85 (21.2)	12/51 (23.5)	.830	30/136 (22.1)	-		10/31 (32.3)	20/105 (19.0)	.140
Psychological	75/136 (55.1)	46/85 (54.1)	29/51 (56.9)	.890	75/136 (55.1)	-		20/31 (64.5)	55/105 (52.4)	.320
Verbal	58/136 (42.6)	39/85 (45.9)	19/51 (37.3)	.370	58/136 (42.6)	-		15/31 (48.4)	43/105 (41.0)	.540
Sexual	11/136 (8.1)	7/85 (8.2)	4/51 (7.8)	1	11/136 (8.1)	-		3/31 (9.7)	8/105 (7.6)	.710
Other	2/136 (1.5)	1/85 (1.2)	1/51 (2.0)	1	2/136 (1.5)	-		0/31 (0.0)	2/105 (1.9)	1
Non-response	25/136 (18.4)	17/85 (20.0)	8/51 (15.7)	.650	25/136 (18.4)	-		5/31 (16.1)	20/105 (19.0)	
Economic difficulties				<.0001			<.0001			<.0001
No	304 (74.5)	83 (54.6)	221 (86.3)		85 (62.5)	219 (80.5)		21 (35.0)	283 (81.3)	
Yes*	33 (8.1)	27 (17.8)	6 (2.3)		23 (16.9)	10 (3.7)		15 (25.0)	18 (5.2)	
Non- response	71 (17.4)	42 (27.6)	29 (11.3)		28 (20.6)	43 (15.8)		24 (40.0)	47 (13.5)	
Housing conditions				.984			.510			.029
House owned	248 (60.8)	91 (59.9)	157 (61.3)		76 (55.9)	172 (63.2)		29 (48.3)	219 (62.9)	
Rented house	94 (23.0)	34 (22.4)	60 (23.4)		34 (25.0)	60 (22.1)		17 (28.3)	77 (22.1)	
Parents' house	40 (9.8)	16 (10.5)	24 (9.4)		16 (11.8)	24 (8.8)		6 (10.0)	34 (9.8)	
Non- response	18 (4.4)	9 (5.9)	9 (3.5)		8 (5.9)	10 (3.7)		4 (6.7)	14 (4.0)	
Other	8 (2.0)	2 (1.3)	6 (2.3)		2 (1.5)	6 (2.2)		4 (6.7)	4 (1.1)	
				.016			.009			

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TABLE 3
Socio-psychological distress, violence and economics characteristics of the study population compared according to 3 different outcomes: (A) socio-psychological distress (present vs absent), (B) violence (experienced vs not experienced), (C) food insecurity (present vs absent). *(continued)*

Characteristics	All cases N=408	Outcome A: Socio-psychological distress			Outcome B: Violence			Outcome C: Food insecurity		
		Present N=152	Absent N=256	P-value	Experienced N=136	Not experienced N=272	P-value	Present N=60	Absent N=348	P-value
Food shortage and lack of money to buy food in the past 12 months										
Never	348 (85.3)	119 (78.3)	229 (89.5)		105 (77.2)	243 (89.3)		0 (0.0)	348 (100.0)	
Sometimes	34 (8.3)	20 (13.2)	14 (5.5)		17 (12.5)	17 (6.3)		34 (56.7)	0 (0.0)	
Often	8 (2.0)	4 (2.6)	4 (1.6)		5 (3.7)	3 (1.1)		8 (13.3)	0 (0.0)	
Don't know	18 (4.4)	9 (5.9)	9 (3.5)	**.002**	9 (6.6)	9 (3.3)	**.008**	18 (30.0)	0 (0.0)	-
Impossibility of buying nutritionally balanced meals in the past 12 months										
Never	350 (85.8)	121 (79.6)	229 (89.5)		106 (77.9)	244 (89.7)		24 (40.0)	326 (93.7)	
Sometimes	37 (9.1)	24 (15.8)	13 (5.1)		19 (14.0)	18 (6.6)		22 (36.7)	15 (4.3)	
Often	11 (2.7)	5 (3.3)	6 (2.3)		7 (5.1)	4 (1.5)		6 (10.0)	5 (1.4)	
Don't know	10 (2.5)	2 (1.3)	8 (3.1)		4 (2.9)	6 (2.2)		8 (13.3)	2 (0.6)	

Results are presented as n (%). Comparisons were made with 2-sided Pearson's Chi Square, Exact test as appropriate. Bold font highlights statistically significant differences. Level of significance was set at 0.05.

* Economic difficulties were in 20/33 (60.6%) job-related, in 3/33 (9.1%) housing-related, in 2/33 (6.1%) associated with rising living cost, 1/33 (3.0%) disease-related, 1/33 (3.0%) family-related, in 6/33 (18.2%) reason unspecified.

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previous studies conducted in the Italian context, which report a 15.4% prevalence of food insecurity among households with children in Italy.[18]

Clinical implications

Our study has important implications. Indeed, we demonstrated that socio-psychological distress, violence, and social needs are common among patients attending a gynecologic clinic, not only for oncologic diseases but also for benign pathologies. Our findings emphasize the need to develop social support systems to assist women with gynecologic conditions, particularly those facing economic difficulties and food insecurity.

The World Health Organization (WHO) highlights the importance of addressing social determinants, including socioeconomic status, education, and social support networks, in improving health outcomes. Interventions that address both medical and social needs are increasingly being explored to provide more holistic care. While national health systems are best positioned to provide standardized, equitable, and unbiased care, such integrated programs remain limited in some countries. In the absence of comprehensive, structured support, trained volunteers with expertise in social care may offer a provisional resource to help patients navigate complex social and psychological challenges. Volunteer programs in healthcare could improve patient satisfaction, emotional well-being, and even clinical outcomes by providing practical support, emotional companionship, and assistance in accessing community resources.[19-21] However, it is essential to ensure that any social support—particularly when provided by volunteers —should be delivered in an unbiased, nonjudgmental manner and does not attempt to influence patient decisions.

Research implications

Further studies are needed to extend the questionnaire to other populations and to develop social programs aimed at improving the socio-environmental conditions of patients with gynecologic diseases.

TABLE 4
Multivariable logistic regression analysis for prediction of presence of socio-psychological distress, of experience of violence and of presence of food insecurity.

Characteristics	Outcome A: Socio-psychological distress		Outcome B: Violence		Outcome C: Food insecurity	
	OR (95% CI)	P value	OR (95% CI)	P value	OR (95% CI)	P value
Type of disease for clinical examination					ni	
None	Ref.		Ref.			
Gynaecological benign	2.07 (0.95-4.54)	.069	1.95 (1.02-3.74)	**.043**		
Oncological	3.76 (1.55-9.11)	**.003**	1.98 (1-3.93)	.050		
Medical/surgical treatments for disease (no vs yes)	0.92 (0.5-1.69)	.793	ni		ni	
Chronic diseases (no vs yes)	2.22 (1.38-3.57)	**.001**	1.52 (0.98-2.35)	.062	ni	
Use of alcohol (no vs yes)	ni		1.88 (1.16-3.04)	**.010**	ni	
Relationship (married and stable relationship vs other)	ni		1.46 (0.93-2.27)	.098	1.61 (0.83-3.12)	.156
Education (elementary, middle and high school degree vs bachelor's and post-graduate degree)	ni		ni	ni	0.67 (0.35-1.29)	.236
Employment (none vs other)	0.68 (0.4-1.15)	.148	ni	ni	0.58 (0.3-1.12)	.107
Economic difficulties (no vs other)	3.91 (2.2-6.93)	**<.0001**	1.72 (1.02-2.9)	**.040**	6.01 (3.06-11.81)	**<.0001**
Housing conditions (house owned and parent's house vs other)	ni		ni		0.71 (0.37-1.36)	.297
Food insecurity (absent vs present)	0.93 (0.45-1.94)	.847	1.92 (1.03-3.59)	**.041**	-	
Socio-psychological distress (absent vs present)	-		ni	-	0.84 (0.41-1.73)	.640
Violence (not experienced vs experienced)	4.65 (2.83-7.65)	**<.0001**	-	-	1.85 (0.94-3.63)	.074

Bold font highlights statistically significant value (p<.05). OR: Odds Ratio. CI: Confidence Interval. ni: characteristic not included in the multivariable analysis as not statistically significant at univariable analysis (p>.05).

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Strengths and limitations

The present study was statistically powered through a sample size calculation designed to detect psychosocial distress among patients with both benign and oncologic gynecological conditions. The combination of in-person recruitment, familiarity with the clinical environment, and the supportive approach of Acli's volunteers likely contributed to the exceptionally high participation rate that allowed us include more participants than originally estimated, enhancing the statistical power and robustness of our findings. Another strength is the extensive amount of information included in the survey though the questionnaire created ad hoc and validated through Delphi procedure. However, the panel of experts did not include psychologists or mental health experts, but individuals with backgrounds in public health and bioethics, who possessed substantial experience in addressing sensitive clinical and social issues, including those related to vulnerability and distress in healthcare settings. Moreover, economic hardship — recognized as independent risk factor for socio-psychological distress, exposure to violence, and food insecurity — was measured through a simplified self-reported item with an open-ended component. While this approach facilitated participant understanding and questionnaire accessibility, it may lack detailed insight into the nuances of financial constraints.

Our study was conducted at a tertiary referral center, which may limit the generalizability of our findings to other settings. Additionally, although a volunteer association was involved, there was no formal training program. The development of a dedicated social training program specifically tailored for gynecologic settings could provide significant benefits. Additionally, the benefits of volunteer-based social support, while plausible, are not supported by our findings and they have to be seen as a complement rather than a replacement of national support system.

Conclusions

Socio-psychological distress and experiences of violence were found to be prevalent in over one-third of the population studied. Identified risk factors include the type of gynecological condition, economic hardship, and food insecurity. These findings underscore the urgent need for the development of comprehensive social support systems to assist women with gynecological conditions. While integrated clinical and social support programs remain underdeveloped in some countries, trained volunteers can serve as a valuable interim resource, complementing-but not replacing-the essential role of professional social and psychological services.

By addressing both medical and social determinants of health, such interventions could significantly improve patient well-being and overall health outcomes. ■

CRediT authorship contribution statement

Tina Pasciuto: Writing — original draft, Supervision, Project administration, Methodology, Formal analysis, Data curation, Conceptualization. **Francesca Moro:** Writing — original draft, Methodology, Formal analysis, Data curation. **Drieda Zace:** Methodology, Investigation, Data curation. **Lidia Borzì:** Project administration. **Katiuscia Patrizi:** Project administration. **Roberta Di Battista:** Project administration. **Francesca Ciccarone:** Investigation. **Floriana Mascilini:** Investigation. **Elena Teodorico:** Investigation. **Giulia Zinicola:** Investigation. **Maria Luisa Di Pietro:** Project administration. **Giovanni Scambia:** Writing — review & editing, Supervision, Conceptualization. **Antonia Carla Testa:** Writing — review & editing, Supervision, Methodology, Data curation, Conceptualization.

Maria Teresa Mirandola, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Maria Teresa Giudice, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Luciana Massimi, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Desiree Longo, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Francesca Giansante, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Elisa Tempestilli, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Maurizio Pietro Faggioni, Ordinario di Bioetica all'Accademia Alfonsiana di Roma e professore invitato alla Pontificia Università Antonianum

Giulia Di Gregorio, Associazioni Cristiane Lavoratori Italiani (Acli Roma APS)

Marica Sozio, Associazioni Cristiane Lavoratori Italiani (Acli Roma APS)

Manuela Minotti, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Debhora Moro, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Livia Pasculini, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Monica Ciccarella, Dipartimento Scienze della Salute della Donna, del Bambino e di Sanità Pubblica, Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Rome, Italy

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.xagr.2025.100546.

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