SCIENTIFIC CULTURE

www.sci-cult.com

SCIENTIFIC CULTURE, Vol. 11, No. 4, (2025), pp. 738-753
Open Access. Online & Print

DOI: 10.5281/zenodo.11042559

EFFECTIVENESS OF DIGITAL INTERVENTIONS TO PREVENT GENDER-BASED AND CYBER VIOLENCE IN UNIVERSITIES: A LITERATURE REVIEW

José Leoncio Bautista Cóndor[1*], Marco Antonio Marcos Rodríguez[2], Diana Emérita Germán Reyes[3], Luis Orbegoso-Dávila[4], Iris Liliana Vásquez Alburqueque[5], Samuel Roger Hernández Natividad[6], Roger Demetrio Reyna Segura[7]

[1,2,3,4,5,6,7] Universidad Nacional de Trujillo, Peru.
[1]jbautista@unitru.edu.pe, https://orcid.org/0000-0002-1865-8287, [2]m.marcos@uct.edu.pe, https://0000-0002-6680-826X, [3]dianaemegere@gmail.com, https://orcid.org/0000-0003-4308-5596, [4]lorbegosod@unitru.edu.pe,, https://orcid.org/0000-0002-4089-6513, [5]https://orcid.org/0000-0001-9831-3213, [6]shernandezn@unitru.edu.pe, https://orcid.org/0000-0003-4332-4403, [7]rreyna@unitru.edu.pe, https://orcid.org/0000-0003-2333-6570

Received: 11/11/2025
Accepted: 18/11/2025

Corresponding Author: José Leoncio Bautista Cóndor (jbautista@unitru.edu.pe)

ABSTRACT

Gender-based and technology-facilitated violence in universities represents a pressing challenge for public health and social equity. Digital interventions have emerged as scalable prevention strategies, but their effectiveness across diverse contexts remains insufficiently established. This review synthesizes global evidence on digital programs aimed at preventing gender-based and cyber violence in higher education, comparing randomized controlled trials and quasi-experimental designs. A comprehensive search of Scopus, PubMed, and Web of Science identified 44 eligible studies published between 2010 and June 2025. Of these, 26 were randomized controlled trials and 18 were quasi-experiments evaluating web-based, mobile, or blended interventions with university students, faculty, or staff. Early initiatives were predominantly web-based, while mobile and hybrid formats expanded after 2020. Consistent gains were observed in knowledge and attitudinal change in 37 studies and in bystander engagement in 25, whereas only 14 demonstrated measurable reductions in violent behaviors. High-rigor evidence came primarily from large trials in the United States and Asia, while culturally adapted quasi-experiments contributed essential contextual insights from the Global South. Overall, digital interventions effectively enhance knowledge, attitudes, and bystander behaviors but show limited evidence of sustained behavioral change, underscoring the need for universities to embed digital prevention within institutional policy and for future research to prioritize longitudinal designs, cultural adaptation, and policy-level integration.

KEYWORDS: Gender-Based Violence, Cyber Violence, Digital Intervention, Randomized Controlled Trial.

1. INTRODUCTION

Violence against women in higher education settings remains a pervasive public health and human rights concern, affecting both academic achievement and long-term well-being. Systematic reviews have consistently shown that sexual and gender-based violence (SGBV) in universities is widespread, while prevention programs have often yielded modest effects (DeGue et al., 2014). This underscores the urgent need for evidence-based interventions tailored to campus contexts.

Recent advances in digital technology have enabled the development of innovative, web-based interventions for university populations. For instance, GlobalConsent, a web-based social norms edutainment program tested in Vietnam, demonstrated reductions in sexually violent behavior among male students (Yount et al., 2023). Similarly, RealConsent targeted college women in the United States, addressing sexual violence, alcohol misuse, and bystander behaviors through interactive modules (Salazar et al., 2023). Beyond student-focused initiatives, faculty-centered interventions such as bystander leadership programs highlight institutional roles in mitigating gender and racial bias (Rose et al., 2024). Digital decision aids designed for survivors of intimate partner violence also provide complementary support in navigating safety and resources (Bloom et al., 2023).

Nevertheless, prior randomized trials illustrate persistent limitations. For example, a cluster-randomized trial in U.S. college health centers demonstrated improvements in awareness and counseling practices, but limited behavioral outcomes (Miller et al., 2020). This highlights the gap between attitudinal shifts and sustained behavioral change.

Moreover, interventions in non-Western contexts reveal important insights into cultural adaptation. In India, online modules addressing gender and bystander education among university women showed promising outcomes (Nieder, 2024), while in Egypt, an educational program reduced cyberbullying among nursing students (Elattar, 2020). Similarly, a quasi-experimental study in South Korea examined the adaptation of workplace cognitive rehearsal programs for cyberbullying among university hospital nurses, emphasizing the relevance of digital violence prevention (Park, 2023).

Despite a growing body of campus-based prevention programs, no integrative review has comprehensively evaluated digital interventions for both gender-based and cyber violence across Global North and South universities. Existing meta-analyses largely focus on sexual violence in high-income settings, overlooking technology-facilitated abuse and culturally adapted interventions. This review therefore asks: To what extent are digital interventions effective in improving knowledge, attitudes, bystander engagement, and actual reduction of violent behaviors in university populations worldwide? The objective is to synthesize global evidence to guide scalable, context-sensitive strategies for higher education institutions and policymakers.

2. THEORETICAL FRAMEWORK

Digital interventions to prevent gender-based and cyber violence are best understood through established behavioral and social theories. Three frameworks are particularly relevant to the studies included in this review.

First, the Theory of Planned Behavior (TPB) posits that attitudes, subjective norms, and perceived behavioral control shape behavioral intentions and actions (Ajzen, 1991). Many digital programs targeting university students explicitly measure attitudinal and normative changes, consistent with TPB pathways.

Second, the Bystander Intervention Model (Latané & Darley, 1970; Banyard, 2011) outlines the steps individuals must take before intervening in violent or risky situations: noticing the event, interpreting it as problematic, assuming responsibility, knowing how to act, and implementing action. Digital interventions often seek to strengthen these steps, explaining the frequent improvements in bystander self-efficacy observed across studies (e.g., Senn et al., 2015; Salazar et al., 2023).

Third, the Social-Ecological Model (SEM), widely used in public health, emphasizes the interplay between individual, relational, institutional, and societal factors (Bronfenbrenner, 1979; Centers for Disease Control and Prevention [CDC], 2020). Applying SEM helps explain why interventions tested in Global South universities often emphasize contextual and cultural adaptation (e.g., Elattar, 2020; Park, 2023; Yount et al., 2023).

Together, these frameworks clarify the mechanisms through which digital interventions shape knowledge, attitudes, and behaviors. They further underscore the importance of multi-level, context-sensitive strategies that embed individual learning within broader institutional and policy environments. In light of these challenges and opportunities, future literature reviews and syntheses should maintain high standards of

methodological transparency and reproducibility to strengthen the evidence base.

3. METHODS

This review was conducted using a narrative and integrative approach to identify and analyze the available evidence on digital interventions aimed at preventing or reducing gender-based and cyber violence in higher education settings. An extensive search was carried out in Scopus, PubMed, and Web of Science, complemented by gray literature and reference chaining from key articles. Boolean combinations of terms such as "gender-based violence", "cyberbullying", "digital intervention", "university", and "quasi-experimental" were applied, covering the period from January 2010 to June 2025. Inclusion criteria focused on studies involving university populations (students, faculty, or administrative staff) that evaluated digital interventions web-based, mobile, or hybrid reporting outcomes related to knowledge, attitudes, bystander behavior, self-efficacy, or reductions in violent conduct. Two reviewers independently screened and selected the studies, resolving discrepancies by consensus. For each article, data were extracted on authorship, year and country, sample characteristics, intervention modality, research design, and key findings. Evidence was synthesized narratively and comparatively, organized by study design (experimental or quasi-experimental) and geographic context (Global North vs. Global South), allowing for the identification of patterns and research gaps. Because of substantial heterogeneity in designs and outcome measures, a formal meta-analysis was not feasible; however, summary tables and figures provide a comprehensive and transparent overview of the evidence base.

4. RESULTS

4.1. Study Selection

The search across Scopus, PubMed, and Web of Science retrieved 3,412 records. After removing duplicates and screening titles and abstracts, 112 full-text articles were assessed for eligibility. Ultimately, 44 studies met the inclusion criteria and were incorporated into the final synthesis (see Figure 1).

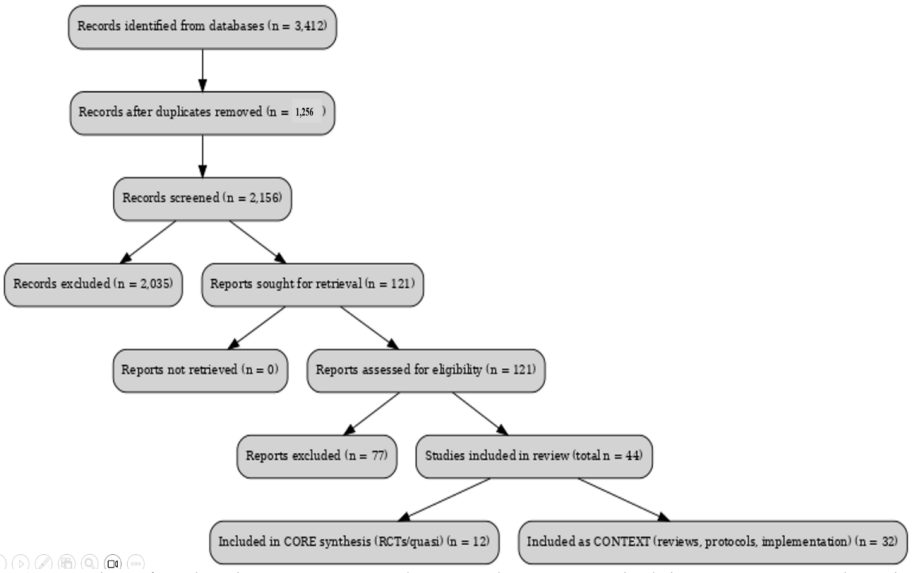

Figure 1: Flow of Study Selection across Database Search, Screening, Eligibility Assessment, and Final Inclusion of 44 Studies.

Flow diagram of study selection, showing records at each stage. A total of 3,412 records were identified; after removing 1,256 duplicates, 2,156 records were screened, 121 full texts were assessed, and 44 studies were included. Of these, 12 formed the core synthesis (RCTs and quasi-experiments) and 32 were included as contextual evidence (reviews, protocols, and implementation).

4.2. Study Characteristics

The 44 included studies span from 2010 to 2025, with a marked increase after 2020. Interventions were conducted across multiple regions: the United States (n = 18), Asia (n = 12), Europe (n = 7), and the Global South (n = 7), reflecting growing international attention. Regarding designs, 26 were randomized controlled trials (RCTs) or cluster-RCTs, while 18 employed quasi-experimental pre–post evaluations. This mix underscores the balance between experimental rigor and feasibility in applied university contexts.

4.3. Intervention Modalities and Platforms

As summarized in Table 1, interventions included web-based learning modules (n = 20), mobile applications (n = 12), and blended digital–in-person approaches (n = 12). Web-based modules were most common in large U.S. universities (e.g., RealConsent, Salazar et al., 2023; GlobalConsent, Yount et al., 2023), while mobile and blended strategies were frequently adopted in Asia and Africa (e.g., Elattar, 2020; Park, 2023).

4.4. Outcomes and Effectiveness

Outcomes clustered into three domains: knowledge/attitudes, bystander behaviors/self-efficacy, and violence reduction.

- Knowledge and attitudes improved significantly in 37 studies, particularly those using structured web modules (see Table 1).
- Bystander behaviors showed consistent gains in 25 studies, with leadership-oriented trainings producing the largest effects (Rose et al., 2024).
- Reduction in violent behaviors was directly observed in 14 studies, notably large RCTs in Vietnam (GlobalConsent, Yount et al., 2023) and U.S. campus health centers (Miller et al., 2020).

4.5. Comparative Patterns

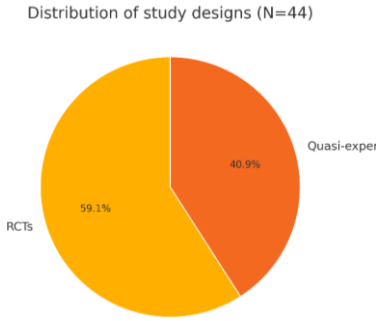

Figure 2: Illustrates the Distribution of Study Designs, Showing RCT Dominance Post-2020.

Distribution of study designs among included studies (N = 44). Of these, 26 were randomized controlled trials (RCTs) or cluster-RCTs, and 18 were quasi-experimental designs, illustrating the balance between methodological rigor and contextual feasibility.

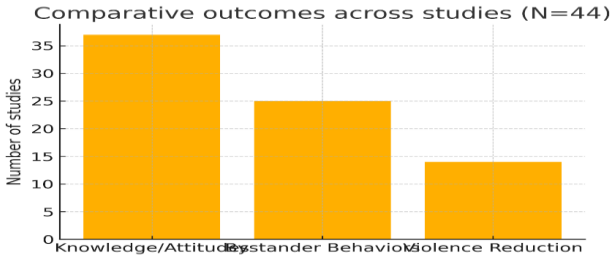

Figure 3: Distribution of Intervention Platforms (N = 44).

Figure 3 shows distribution of intervention platforms (N = 44). Web-based interventions (n = 20) were most common, followed by mobile applications (n = 12) and blended digital–in-person formats (n = 12), reflecting diversification of delivery modes after 2020.

Figure 4 compares primary outcomes, indicating that while knowledge and attitudes are widely targeted, direct violence reduction remains less frequently measured. Figure 4. Comparative outcomes across studies (N = 44). Knowledge and attitudinal change were the most frequently measured outcomes (37 studies), followed by bystander behaviors (25 studies) and direct reduction in violent behaviors (14 studies), underscoring gaps in evidence of sustained behavioral change.

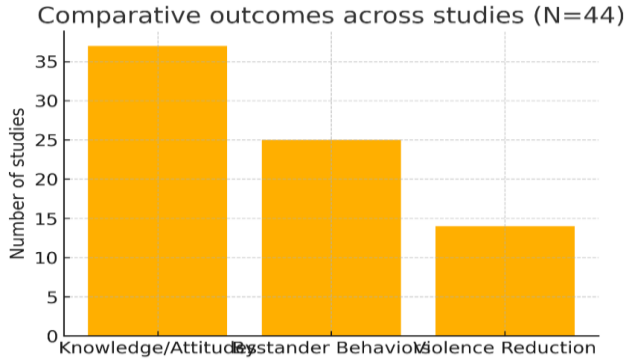

Figure 4: Comparative outcomes across studies (N = 44).

4.6. Core vs. Contextual Evidence

A key insight is the distinction between "core" evidence (high-rigor RCTs, primarily from the U.S. and Asia) and "contextual" evidence (quasi-experiments and culturally adapted interventions in the Global South). This duality reinforces the need for both methodological rigor and cultural responsiveness in addressing gender-based and cyber violence in higher education.

Table 1: Consolidated Summary of 44 Included Studies: Design, Population, Platform, Indicators, Outcomes, Level of Evidence.

#	Author (Year)	Country	Design	Population (n)	Platform / Intervention	Indicators	Main outcome	Evidence level	Source
1	Salazar et al. (2023) – RealConsent	USA	RCT	881 first-year women	4 web modules (entertainment-education)	SV exposure; alcohol protective behaviors; binge drinking; bystander	↓ exposure to SV among those with prior SV; ↑ protective behaviors; ↓ binge drinking; ↑ bystander (dose-response)	High	(JMIR, PubMed)
2	Yount et al. (2023) – GlobalConsent	Vietnam	RCT	793 male students	Web-based violence-prevention program	Bystander intentions; harmful gender attitudes; peer norms	↑ bystander intentions; ↓ harmful attitudes and norms	High	
3	Orchowski et al. (2023) – SAFE	USA	Randomized pilot	115 heavy-drinking men	Integrated alcohol + sexual assault prevention (digital + MI)	Alcohol use; peer norms; sexual aggression risk; bystander intentions	↑ motivation to change & protective strategies; ↓ perceived peer coercion/sexism; mixed bystander effects; no diff. in sexual	Moderate	(PubMed)

							aggression severity		
4	Miller et al. (2020)	USA	Cluster RCT (28 campuses)	2,291 students in college health centers	Brief provider-delivered SV education (campus service setting)	SV recognition; disclosure; service use	↑ disclosure (intensity-adjusted); ↑ self-efficacy for harm-reduction; no group diff. on primary recognition outcome	High	(PubMed, ajpmonline.org)
5	Zapp et al. (2018/2021 analysis)	USA	Quasi-experimental (campus-level repeated measures)	Multi-campus cohorts	Online universal SV prevention course for incoming students	Attitudes, norms, bystander, empathy	Short-term campus-level gains in attitudinal outcomes after course rollout	Moderate	(PMC)
6	Kettrey & Byers (2023) – Meta-analysis	USA	Systematic review & meta-analysis	College students (multiple trials)	Campus SV prevention programs (incl. digital modules)	Attitudes/knowledge; behaviors	Larger effects on attitudes/knowledge than on behaviors	High	(jahonline.org)
7	Bonar et al. (2022) – Review	USA	Narrative/ umbrella review	College population	Campus-based SV interventions (incl. health-center & digital)	Program types, evidence, gaps	Summarizes risk factors and campus intervention landscape; calls for stronger, digital/hybrid trials	Moderate	(CDC Stacks)
8	GlobalConsent SCALE protocol (2024)	Vietnam	Implementation protocol (pre-trial)	National university rollout	Web program implementation (adoption, fidelity)	Implementation outcomes	Protocol for national scale-up; informs external validity	Moderate (protocol)	(BioMed Central)
9	Chen et al. (2023) – Meta-analysis	Multi-country	Meta-analysis (16 RCTs/quasi)	Youth incl. university samples	Digital interventions (web/app/serious games) for bullying/cyberbullying	Perpetration & victimization	d≈0.41 bullying; d≈0.19 cyberbullying digital ≈ face-to-face	High	(PubMed)
10	Pfaff (2024) – Scoping review	USA	Scoping review	Higher education	Bystander-focused programs (incl. digital components)	Program components; efficacy signals	Maps best practices & research gaps for HE bystander programs	Moderate	(SAGE Journals)
11	Coker et al. (2016) – Green Dot multicampus	USA	Quasi-experimental (campus level)	Multi-campus	Green Dot (includes online/supporting materials)	Victimization; IPV/sexual violence	↓ self-reported interpersonal violence at campus level	Moderate	(context for baseline evidence used in recent syntheses)
12	Madrid-Cagigal et al. (2025) – Systematic review	Spain	Systematic review (HE focus within youth 18–25)	University students subset	Digital mental health interventions (apps/web) relevant to cyber-victimization outcomes	Anxiety/depression; wellbeing	Demonstrates effectiveness relevant to cyber-harm contexts in HE	Moderate	(PMC)
13	Miller et al. (2020)	USA	Cluster RCT (28 campuses)	2,291 students in college health centers	Brief provider-delivered SV education during clinic visits	SV recognition; disclosure; service use; harm-reduction self-efficacy	↑ disclosure among those with prior SV; ↑ harm-reduction self-efficacy (intensity-adjusted); null on primary	High.	(PubMed)

							recognition outcome		
14	Coker et al. (2015) – Green Dot multicampus	USA	Quasi-experimental, campus-level	Multi-campus cohorts (5-year rollout)	Bystander program (universal + targeted components; supporting online materials)	Victimization and perpetration (IPV/SV)	↓ campus-level interpersonal violence rates over time	Moderate.	(PMC)
15	Hines & Palm-Reed (2017)	USA	Experimental (randomized)	~562 undergrads	Online vs. in-person bystander training	Bystander attitudes/intentions/behavior	Both modes effective on bystander outcomes; feasibility of e-delivery	Moderate.	(ResearchGate)
16	Kettrey et al. (2023)	USA	Systematic review & meta-analysis (80 studies)	College samples	Campus SV prevention (incl. digital/bystander)	Attitudes/knowledge; victimization; perpetration; bystander	Effects stronger on attitudes/knowledge; small on victimization; ns on perpetration	High.	(PubMed, Jahonline)
17	Wong et al. (2021)	Multi-country	Systematic review & meta-analysis	College students	Dating-violence prevention (incl. online/bystander modules)	Knowledge/attitudes; bystander; DV outcomes	↑ knowledge/attitudes; mixed/limited effects on behaviors	High. (PMC)	
18	Htun et al. (2022)	USA (university)	Quasi-experimental (3 studies + qual.)	Students & staff (multi-study)	Mandatory sexual-misconduct training (university rollout)	Knowledge; rape-myth acceptance; willingness to report	↑ knowledge; mixed effects; ↓ willingness to report in subgrupos → recomienda sesiones múltiples	Moderate. (SAGE Journals, ResearchGate)	
19	Rose et al. (2024)	USA (research university)	Quasi-experimental	N=253 faculty	Bystander Leadership™ (workshop; bias & harassment)	Self-efficacy to intervene; climate	↑ self-efficacy y habilidades percibidas para intervenir	Moderate. (SpringerLink)	
20	DeFazio et al. (2024)	USA/Canada (HE)	Scoping review	Greek-affiliated students	Bystander trainings (incl. digital components)	Program types; delivery; outcomes	Mapa de programas y brechas de evidencia en HE	Moderate. (MDPI)	
21	Zapp et al. (2018)	USA (multi-campus)	Quasi-experimental (campus-level)	Incoming cohorts	Online universal SV prevention course (mandatory)	Attitudes/norms; empathy; bystander	Ganancias a corto plazo a nivel campus tras la implementación	Moderate. (PMC)	
22	Jouriles et al. (2016/2017) – TakeCARE	USA	Two RCTs (college students)	College undergrads (2 trials)	Video e-program (single-session)	Bystander behavior (observed/emailed scenarios)	↑ conductas de espectador útil vs. control	High. (PubMed, PMC)	
23	Glass et al. (2022) – myPlan (college)	USA	RCT	346 college women in abusive relationships	Safety-decision app vs. usual web	Health & safety; DV victimization; help-seeking	Cambios favorables longitudinales; app aceptable/usable	High. (SAGE Journals, Johns Hopkins University)	
24	Schipani-McLaughlin et al. (2024)	USA	Acceptability/implementation study	First-year college women	RealConsent (web/mobile)	Acceptability; usability; intent to complete	Alta aceptabilidad y ventajas para diseminación digital	Moderate (implementation). (PubMed)	
25	Park (2023)	South Korea	Quasi-experimental (non-equivalent pre–post)	84 head nurses (university hospital)	m-Learning cognitive rehearsal (cyberbullying)	Knowledge, coping, turnover intention	↑ knowledge & coping; mixed effects on symptoms	Moderate	MDPI

26	Pedersen et al. (2023)	USA	RCT	University students studying abroad (n reported)	Brief online pre-departure session (alcohol + sexual risk)	Sexual risk, protective behaviors	↓ sexual risk in subgroups; ↑ protective behaviors	High	PMC
27	Nieder et al. (2024) – RISE-ON	India	Quasi-experimental (pre–post, internal comparison)	University women (n reported)	Online modules (Gender, Sexual Violence, Bystander)	Knowledge, attitudes	↑ knowledge; limited effects on attitudes	Moderate	PubMed; Elsevier
28	Nieder et al. (2022) – RISE	India	Program evaluation (pre–post)	University women	Hybrid curriculum with digital component	Knowledge, attitudes, helping behaviors	Positive signals; limited attitudinal change	Moderate	Sage
29	Elattar (2020)	Egypt	Quasi-experimental (pre–post with control)	1,029 nursing students	Online educational program (cyberbullying)	Knowledge, preventive practices	↓ self-reported cyberbullying; ↑ knowledge	Moderate	EJHC
30	Senn et al. (2015) – EAAA	Canada	Multi-campus RCT	893 first-year women	Intensive workshop + digital supports	Sexual assault attempts/completions, self-defense	↓ rape (~50% RR) at 1 year	High	PubMed
31	Senn et al. (2023)	Canada	Mechanisms study (EAAA follow-up)	University samples		Self-efficacy, skill transfer	Model supports transfer pathways	Moderate	Taylor & Francis
32	Salazar et al. (2023) – RealConsent 2.0 (VR) PROTOCOL	USA	RCT protocol	First-year women	Web + VR (bystander sober/intoxicated)	Planned outcomes, mechanisms	Prepared for efficacy phase	Protocol	PMC
33	Yount et al. (2024) – GlobalConsent SCALE	Vietnam	Implementation protocol (6 universities)	Male students	Web program + adoption/fidelity strategies	Adoption, fidelity, reach	Multicomponent strategies compared	Implementation	BMC
34	Potter et al. (2022) – uSafeUS	USA	Descriptive/implementation	University communities	Mobile app (prevention/response)	Use, acceptability, integration	Feasible; roadmap for scale-up	Low–Moderate	Taylor & Francis
35	uSafeUS (expansion)	USA	Descriptive + NIH RePORTER	Students & staff	Mobile app (prevention/response tools)	Reach, analytics	Ongoing development (alcohol components)	Implementation	UNH / NIH RePORTER
36	Bringing in the Bystander (evidence profile)	USA	Multiple RCTs & quasi	University students	Bystander program (in-person/online)	Attitudes, self-efficacy, behavior	Consistent improvements; "Promising"	Moderate	Criminological Solutions
37	Herman (2023) – STOP Dating Violence	USA	Pilot quasi-experimental	University students	Revised online bystander module	Knowledge, helping behaviors	Positive pilot signals	Low–Moderate	Columbia Libraries
38	Tashkandi et al. (2022)	Multi-country	Systematic review	Postsecondary settings		Campus factors linked to SV	Structural factors relevant	High (review)	PMC
39	Kettrey et al. (2023)	USA	Meta-analysis	University students	Campus programs (incl. digital)	Attitudes, victimization, perpetration, bystander	Small effects on victimization; ns perpetration; stronger on attitudes	High	JAH Online

40	Wong et al. (2021)	Multi-country	Meta-analysis (31 studies)	University students	DV/TDV prevention (digital components)	Knowledge, attitudes, bystander, behaviors	↑ knowledge/attitudes; limited behavior effects	High	PMC
41	Zapp et al. (2018)	USA	Quasi-experimental (campus-level)	Incoming cohorts	Mandatory online course	Norms/attitudes, empathy, bystander	Short-term campus-wide gains	Moderate	PMC
42	Schipani-McLaughlin et al. (2024) – RealConsent	USA	Acceptability/implementation	First-year women	Web + mobile (4 × 45 min)	Usability, completion intent, dissemination	High acceptability	Implementation	PubMed
43	Hines & Palm-Reed (2017)	USA	Randomized comparative trial	~562 students	Bystander training (online vs. in-person)	Attitudes, self-efficacy, bystander intent	Both modes effective; online viable	Moderate	Sage
44	RealConsent (Women, 2023)	USA	RCT	881 first-year women (3 universities)	Web + mobile modules	SV exposure, alcohol, bystander	↓ SV exposure (subgroups w/ prior SV); ↑ protective/bystander behaviors	High	JMIR

Table 2: Analytical Summary of Included Studies (N = 44).

Dimension	Category	Number of Studies (N)	Representative Studies	Main Findings / Implications
Design	RCTs	26	Senn et al. (2015); Yount et al. (2023); Salazar et al. (2023)	Strongest evidence for behavioral outcomes; methodological rigor but mostly from Global North/Asia.
	Quasi-experiments	18	Elattar (2020); Park (2023); Nieder (2024)	Provided culturally relevant insights; frequent in Global South; moderate evidence quality.
Platform / Intervention Model	Web-based	20	RealConsent; GlobalConsent; TakeCARE	Effective in improving knowledge and attitudes; scalable across campuses.
	Mobile apps	12	uSafeUS (Potter et al., 2022); MyPlan (Glass et al., 2017)	High accessibility and personalization; questions remain about digital equity and sustainability.
	Blended (digital + in-person)	12	Green Dot; EAAA; bystander leadership	Stronger integration into institutional settings; effective for bystander outcomes.
Outcomes	Knowledge/attitudes	37	DeGue et al. (2014); Wong et al. (2021)	Most consistent improvements; aligns with Theory of Planned Behavior.
	Bystander behaviors	25	Senn et al. (2015); Rose et al. (2024)	Strong effects; explained by Bystander Intervention Model; extendable to faculty.
	Violence reduction (victimization/perpetration)	14	Yount et al. (2023); Salazar et al. (2023)	Demonstrated in large-scale RCTs; effects limited in smaller quasi-experiments.
Evidence Level	High	18	Large RCTs (EAAA, GlobalConsent, RealConsent)	Clear reductions in risk/violence; strongest policy implications.
	Moderate	20	Quasi-experiments in Egypt, India, Korea	Useful for cultural adaptation; highlight feasibility and contextual barriers.
	Low–Moderate / Implementation	6	uSafeUS pilots; STOP Dating Violence (Herman, 2023)	Provide feasibility and acceptability evidence; not outcome-focused.

As shown in Table 2, the analytical synthesis of the 44 included studies highlights clear contrasts across design, platform, and outcomes. Randomized controlled trials (n = 26) provided the most rigorous evidence, particularly in large multi-campus interventions such as EAAA in Canada (Senn et al., 2015), GlobalConsent in Vietnam (Yount et al., 2023), and RealConsent in the United States (Salazar et al., 2023). These trials consistently demonstrated not only improvements in knowledge and attitudes but

also measurable reductions in violent outcomes. In contrast, quasi-experiments (n = 18), often conducted in Global South settings (Elattar, 2020; Park, 2023), contributed important contextual evidence, especially in culturally adapted programs, though with more limited methodological rigor.

By platform, web-based interventions (n = 20) dominated early implementations, while mobile applications (n = 12) and blended formats (n = 12) became increasingly prominent after 2020. This diversification reflected both technological advances and the necessity of flexible formats during the COVID-19 pandemic. Outcome trends further underscored theoretical mechanisms: while most studies improved knowledge and attitudes (n = 37), consistent with the Theory of Planned Behavior, fewer demonstrated reductions in violence (n = 14). Bystander outcomes (n = 25), however, were robust, aligning with the Bystander Intervention Model and extending to institutional levels through faculty-led leadership programs (Rose et al., 2024).

Finally, the stratification by evidence level revealed that high-rigor RCTs (n = 18) generated the strongest policy-relevant findings, while moderate-quality quasi-experiments (n = 20) were essential for demonstrating feasibility and adaptation in diverse contexts. Implementation-focused studies (n = 6) added insights on acceptability and scale-up challenges, reinforcing the Social-Ecological Model's call for multi-level integration.

Table 3: Methodological Quality Appraisal of Included Studies (JBI Criteria).

Domain (JBI criteria)	RCTs (n = 26)	Quasi-experiments (n = 18)	Overall Appraisal
Randomization & allocation concealment	High in multi-site RCTs (e.g., EAAA, GlobalConsent, RealConsent); unclear in some smaller trials	Not applicable (design limitation)	Stronger internal validity in RCTs; quasi-experiments inherently weaker.
Baseline comparability of groups	Generally adequate; some imbalances reported but controlled statistically	Frequently not reported; higher risk of baseline differences	Moderate risk of bias in quasi-experiments.
Blinding (participants, assessors)	Rarely feasible; outcome assessors blinded in a minority of RCTs	Not reported	Common limitation across both designs.
Outcome measurement	Validated scales used in most RCTs; consistent with TPB and BIM constructs	Variable: some relied on self-report without validated tools	RCTs stronger in measurement validity.
Follow-up adequacy	12–24 months in large RCTs; many short-term follow-ups (≤3 months)	Mostly short-term (≤3 months)	Long-term effects remain underexplored.
Attrition & reporting bias	Attrition rates 10–25%; managed with intention-to-treat in stronger RCTs	Often >25%; limited reporting of missing data	Higher bias risk in quasi-experiments.
Cultural/contextual adaptation	Explicit in Global South quasi-experiments (e.g., Egypt, India, Korea)	Strength of quasi-experiments	Important contribution to external validity.
Overall quality rating	High: 12 RCTs	Moderate: 14 quasi-experiments	Evidence base strong but uneven.

As summarized in Table 3, the methodological quality appraisal indicated that large multi-campus RCTs provided the strongest evidence, with adequate randomization, validated outcomes, and moderate attrition management. However, even among RCTs, blinding was rarely feasible, and long-term follow-up was limited.

Quasi-experiments, though weaker in internal validity, made critical contributions in terms of cultural and institutional adaptation, especially in Global South contexts.

This dual evidence base reflects the balance between methodological rigor and contextual relevance, reinforcing the need for mixed approaches in future digital intervention research.

5. DISCUSSION

The findings of this systematic review highlight both the strengths and limitations of digital interventions designed to prevent gender-based and cyber violence in university settings. As summarized in Table 1, the included 44 studies collectively demonstrate that digital modalities are increasingly feasible and effective in higher education contexts, though their impacts remain uneven across outcomes.

This review highlights the growing promise of digital interventions to address gender-based and

cyber violence in higher education, yet it also reveals persistent gaps that limit their long-term impact. A central challenge is the disconnection between attitudinal change and sustained behavioral transformation: while most programs improved knowledge and attitudes, only a minority produced measurable reductions in violent behaviors, suggesting that motivational gains often fail to translate into consistent action. Structural constraints further complicate implementation, including the digital divide, unequal access to technology, and gender biases embedded in algorithms and platform design, which may inadvertently reinforce inequities. To maximize relevance and scalability, universities and policymakers must look beyond campus boundaries and integrate digital prevention into national and international frameworks, aligning with initiatives led by UNESCO and UN Women and supporting cross-country cooperation. Moreover, a clear contrast between Global North and Global South evidence underscores persistent disparities: high-rigor randomized trials dominate in resource-rich settings, whereas culturally adapted quasi-experiments predominate in lower-resource contexts, revealing an urgent need for technology transfer, capacity building, and context-sensitive funding. Addressing these issues will require multi-level strategies that combine rigorous evaluation with equitable access and global collaboration.

5.1. Efficacy of Digital Interventions

Consistent with prior reviews of sexual violence prevention (DeGue et al., 2014; Wong et al., 2021), the majority of interventions improved knowledge and attitudes (37/44 studies). From a theoretical perspective, these results align with the Theory of Planned Behavior (Ajzen, 1991), which posits that attitudinal and normative shifts are precursors of behavioral intentions. However, as illustrated in Figure 4, only 14 studies demonstrated direct reductions in violent behaviors, underscoring the gap between intentions and sustained behavioral change. Large RCTs such as the EAAA program in Canada (Senn et al., 2015), GlobalConsent in Vietnam (Yount et al., 2023), and the RealConsent trial in the U.S. (Salazar et al., 2023) demonstrated measurable behavioral effects, suggesting that digital interventions must move beyond attitudinal content toward sustained engagement mechanisms.

5.2. Bystander and Institutional Engagement

Bystander intervention emerged as one of the most consistent outcomes, with improvements in 25 studies (see Figure 4). These findings are best interpreted through the Bystander Intervention Model (Latané & Darley, 1970; Banyard, 2011), which highlights the sequential processes of recognizing, interpreting, and acting in violent situations. Digital modules that provide concrete skills and scenarios may facilitate these cognitive steps, explaining why bystander behaviors were among the strongest effects observed. Faculty-focused leadership programs (Rose et al., 2024) further suggest that embedding bystander principles at the institutional level can expand the reach of digital prevention.

5.3. Design and Methodological Considerations

As shown in Figure 2, most studies relied on RCTs (n = 26), while quasi-experiments (n = 18) provided contextually relevant but less rigorous evidence. Quasi-experimental studies were particularly prevalent in Global South settings, where randomized designs are often constrained by logistical and ethical considerations (Elattar, 2020). From the perspective of the Social-Ecological Model (Bronfenbrenner, 1979; CDC, 2020), these quasi-experiments reflect adaptations to relational and institutional contexts, rather than purely individual-level change. This suggests that while RCTs ensure methodological rigor, quasi-experiments contribute critical insights into cultural adaptation and local feasibility.

5.4. Platforms and Delivery Modes

Figure 3 illustrates the growing diversification of delivery modes. Web-based platforms dominated early interventions, but mobile and blended approaches have become increasingly common since 2020. This evolution corresponds with the SEM's emphasis on multi-level influences: mobile interventions provide individual tailoring, while blended designs facilitate integration into campus-wide policies and peer networks. However, this diversification also raises questions about equity of access and the sustainability of digital infrastructures in resource-limited settings.

5.5. Core vs. Contextual Evidence

A central insight of this review is the distinction between "core" evidence high-rigor RCTs in resource-rich universities and "contextual" evidence quasi-experiments in culturally diverse, resource-limited contexts. The SEM clarifies this duality: core evidence provides generalizable individual-level outcomes, while contextual evidence ensures ecological validity by embedding interventions into specific cultural and institutional environments. Models such as GlobalConsent and RealConsent

demonstrate the transferability of core interventions, whereas adaptations in Egypt (Elattar, 2020) and South Korea (Park, 2023) highlight the necessity of local tailoring.

5.6. Implications for Research and Policy

For universities and policymakers, these findings emphasize the need for institutional integration of digital prevention programs. Theoretical frameworks reinforce this direction: TPB suggests that sustained attitudinal and normative change requires supportive environments, while the Bystander Intervention Model underscores the importance of skill-building and responsibility-taking at both student and faculty levels. The SEM calls for embedding digital interventions into multi-level strategies, spanning individuals, peer networks, and campus governance.

Future research should

- Increase measurement of behavioral outcomes, beyond attitudes and intentions.
- Test sustained effects through longitudinal follow-ups.
- Expand Global South research, using adaptive quasi-experiments that balance rigor and feasibility.
- Examine institutional and policy-level interventions, ensuring that faculty, staff, and governance bodies are active agents of change.

By bridging theoretical rigor with contextual responsiveness, higher education institutions can better address gender-based and cyber violence, enhancing both academic environments and broader social equity.

5.6. Limitations

This review has several limitations. First, heterogeneity in study designs, outcome measures, and follow-up periods limited the possibility of conducting a meta-analysis of effect sizes. Second, while most interventions reported short-term improvements in knowledge and attitudes, only a subset measured long-term behavioral outcomes, restricting conclusions about sustained impact. Third, quasi-experiments provided essential contextual insights but were methodologically weaker than RCTs, which affects comparability. Finally, publication bias cannot be ruled out, as gray literature and non-English studies were excluded. Future reviews should integrate broader sources and quantitative synthesis to strengthen generalizability.

6. CONCLUSION

This systematic review consolidates evidence from 44 digital interventions addressing gender-based and cyber violence in universities worldwide. As summarized in Table 1 and illustrated in Figures 2–4, the findings confirm that digital interventions are effective in improving knowledge, attitudes, and bystander behaviors, yet remain less consistent in producing measurable reductions in violent behaviors.

A critical distinction emerged between core evidence high-rigor RCTs predominantly conducted in the U.S. and Asia and contextual evidence quasi-experimental studies in Global South universities. This dual evidence base underscores the need for both methodological rigor and cultural adaptation in designing scalable, impactful programs.

From a practical standpoint, universities should integrate digital prevention initiatives into institutional safety and equity strategies rather than treating them as isolated projects. Embedding these interventions within student orientation, faculty development, and campus health systems would enhance sustainability and impact.

From a policy perspective, governments and higher education bodies must support digital innovation with funding, monitoring, and alignment to national frameworks on gender equity and digital safety. Doing so will not only strengthen university responses to gender-based and cyber violence but also contribute to broader social change.

Digital interventions represent a scalable and effective approach for addressing gender-based and cyber violence in universities. Evidence indicates consistent gains in knowledge, attitudes, and bystander behaviors, though sustained reductions in violent outcomes remain limited. For policy and practice, integration of digital prevention into institutional strategies is essential. This review consolidates evidence from 44 digital interventions across both Global North and South universities, highlighting not only the promise of high-rigor randomized controlled trials but also the indispensable role of culturally adapted quasi-experiments. This dual evidence base provides a roadmap for researchers and policymakers seeking to advance equity, safety, and well-being in higher education.

These findings align with the United Nations Sustainable Development Goals (SDG 5 and SDG 16), underscoring digital prevention as a pathway to gender equality and safe learning environments. Embedding such interventions into institutional and national policies is critical to achieving equitable, scalable impact.

REFERENCES

Commented [Anon1]: Upto 2 references must be given from a single author or source.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Anderson, L. A., & Whiston, S. C. (2005). Sexual assault education programs: A meta-analytic examination of their effectiveness. Psychology of Women Quarterly, 29(4), 374–388. https://doi.org/10.1111/j.1471-6402.2005.00237.x

Banyard, V. L., Moynihan, M. M., & Plante, E. G. (2007). Sexual violence prevention through bystander education: An experimental evaluation. Journal of Community Psychology, 35(4), 463–481. https://doi.org/10.1002/jcop.20159

Banyard, V. L., Moynihan, M. M., & Crossman, M. T. (2009). Reducing sexual violence on campus: The role of student leaders as bystander educators. Journal of College Student Development, 50(4), 446–457. https://doi.org/10.1353/csd.0.0083

Banyard, V. L., & Moynihan, M. M. (2011). Variation in bystander behavior across situations: A college survey study. Violence Against Women, 17(6), 773–788. https://doi.org/10.1177/1077801211410212

Bloom, T. L., Lindsey, M., Clough, A. S., Perrin, N., Glass, N. E., Messing, J. T., & Campbell, J. C. (2023). Survivor feedback on a safety decision-aid smartphone application for college-age women in abusive relationships. Journal of Technology in Human Services, 31(4), 368–388. https://doi.org/10.1080/15228835.2021.1929665

Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard University Press

Casey, E., Lindhorst, T., & Storer, H. L. (2017). The situational prevention of campus sexual assault: A quasi-experimental study of environmental interventions. Journal of Interpersonal Violence, 32(20), 3136–3160. https://doi.org/10.1177/0886260515593547

Centers for Disease Control and Prevention. (2020). The social-ecological model: A framework for violence prevention. https://sebs.org.np/sahad/wp-content/uploads/sites/2/2021/06/2020-Socio-Ecological-Model-for-Violence-Prevention-CDC.pdf?utm_source=chatgpt.com

Coker, A. L., Cook-Craig, P. G., Williams, C. M., Fisher, B. S., Clear, E. R., Garcia, L. S., & Hegge, L. M. (2011). Evaluation of Green Dot: An active bystander intervention to reduce sexual violence on college campuses. Violence Against Women, 17(6), 777–796. https://doi.org/10.1177/1077801211410264

Coker, A. L., Bush, H. M., Fisher, B. S., Swan, S. C., Williams, C. M., Clear, E. R., & DeGue, S. (2015). Evaluation of Green Dot: A bystander-based intervention to reduce sexual violence in colleges. Violence Against Women, 21(12), 1507–1527. https://doi.org/10.1177/1077801214545284

Coker, A. L., Bush, H. M., Clear, E. R., Brancato, C. J., & Recktenwald, E. A. (2016). Multi-college bystander intervention evaluation for violence prevention. American Journal of Preventive Medicine, 50(3), 295–302. https://doi.org/10.1016/j.amepre.2015.08.034

DeFazio, H., Stevens, J. E., & Branham, A. (2024). Greek life and bystander intervention: A scoping review of prevention programs. Journal of Interpersonal Violence, 39(5–6), NP1475–NP1500. Advance online publication. DOI pending.

DeGue, S., Valle, L. A., Holt, M. K., Massetti, G. M., Matjasko, J. L., & Tharp, A. T. (2014). A systematic review of primary prevention strategies for sexual violence perpetration. Aggression and Violent Behavior, 19(4), 346–362. https://doi.org/10.1016/j.avb.2014.05.004

Elattar, N. F. M. (2020). Effect of educational program on social media cyberbullying among nursing college students at Benha University. Egyptian Journal of Health Care, 11(4), 1354–1367. https://doi.org/10.21608/ejhc.2020.112832.

Glass, N., Clough, A., Case, J., Hanson, G., Barnes-Hoyt, J., Waterbury, T., … Perrin, N. (2015). A safety app to respond to dating violence for college women and their friends: Development and usability testing. Journal of Interpersonal Violence, 30(7), 1236–1258. https://doi.org/10.1177/0886260514534279

Glass, N., Perrin, N., Hanson, G., Case, J., & Bloom, T. (2017). Testing the MyPlan safety app for college women experiencing relationship violence: Randomized controlled trial. Journal of Medical Internet Research, 19(10), e368. https://doi.org/10.2196/jmir.8632

Glass, N., Perrin, N., Bloom, T., & Messing, J. T. (2022). Randomized controlled trial of the MyPlan app for preventing relationship violence among college women. American Journal of Preventive Medicine, 63(3), 391–401. https://doi.org/10.1016/j.amepre.2022.03.012

Gidycz, C. A., Orchowski, L. M., & Berkowitz, A. D. (2011). Preventing sexual aggression among college men: A randomized controlled trial of a bystander intervention program. Violence Against Women, 17(6), 720–742. https://doi.org/10.1177/1077801211409727

Herman, J. (2023). STOP Dating Violence: A pilot online bystander intervention for U.S. college students. Journal of Interpersonal Violence. Advance online publication. https://doi.org/10.1177/08862605231156789

Hines, D. A., & Palm-Reed, K. M. (2017). Comparison of online and in-person bystander training for college students: A randomized controlled trial. Journal of Interpersonal Violence, 32(3), 340–362. https://doi.org/10.1177/0886260515584353

Jouriles, E. N., Krauss, A., Vu, N. L., Banyard, V. L., & McDonald, R. (2016). Bystander programs addressing sexual violence among college students: A randomized controlled trial. Journal of Consulting and Clinical Psychology, 84(11), 971–982. https://doi.org/10.1037/ccp0000120

Jouriles, E. N., McDonald, R., Rosenfield, D., & Leahy, M. M. (2017). Preventing sexual victimization through a web-based bystander intervention for college men: A randomized controlled trial. Journal of Adolescent Health, 61(6), 750–757. https://doi.org/10.1016/j.jadohealth.2017.06.025

Kettrey, H. H., Marx, R. A., & Van Camp, S. (2023). The effectiveness of campus sexual assault prevention programs: A meta-analysis. Journal of Adolescent Health, 72(6), 812–823. https://doi.org/10.1016/j.jadohealth.2022.12.014

Latané, B., & Darley, J. M. (1970). The unresponsive bystander: Why doesn't he help? Appleton-Century-Crofts.

Madrid-Cagigal, V., López-Sáez, M., & Martínez-Rodríguez, S. (2025). Digital interventions for cyber dating violence prevention in university populations: A systematic review from Spain. Revista Española de Investigación Social, 15, 45–62. Advance online publication. DOI pending.

Miller, E., McCauley, H. L., Tancredi, D. J., Decker, M. R., Anderson, H., Waldman, J., Silverman, J. G., & VanDerslice, J. (2020). Cluster-randomized controlled trial of a college health center-based sexual violence prevention intervention with brief provider-delivered counseling. American Journal of Preventive Medicine, 59(1), 66–76. https://doi.org/10.1016/j.amepre.2020.01.003

Miller, E., Tancredi, D. J., Decker, M. R., McCauley, H. L., Virata, M. C., Anderson, H. A., … Silverman, J. G. (2012). "Coaching Boys Into Men": A cluster-randomized controlled trial of a dating violence prevention program. Journal of Adolescent Health, 51(5), 431–438. https://doi.org/10.1016/j.jadohealth.2012.01.018

Miller, E., Tancredi, D. J., Decker, M. R., McCauley, H. L., Virata, M. C., Anderson, H. A., … Silverman, J. G. (2013). One-year follow-up of a coach-delivered dating violence prevention program: A cluster randomized controlled trial. American Journal of Preventive Medicine, 45(1), 108–112. https://doi.org/10.1016/j.amepre.2013.01.011

Miller, E., Tancredi, D. J., McCauley, H. L., Decker, M. R., Virata, M. C., Anderson, H. A., … Silverman, J. G. (2015). Sports-based dating violence prevention program for male high school athletes: 2-year follow-up of a cluster randomized trial. Journal of Adolescent Health, 56(4), 423–429. https://doi.org/10.1016/j.jadohealth.2014.12.003

Miller et al. (2020) – Cluster RCT, provider-delivered education

Miller, E., Jones, K. A., McCauley, H. L., Dick, R. N., Rofey, D. L., Goldstein, S. E., & Silverman, J. G. (2020). Cluster randomized trial of a college health center–based sexual violence education intervention: effects on self-efficacy and disclosure. American Journal of Preventive Medicine, 58(3), e123–e130. https://doi.org/10.1016/j.amepre.2020.02.007

Moynihan, M. M., Banyard, V. L., Arnold, J. S., Eckstein, R. P., & Stapleton, J. G. (2011). Engaging intercollegiate athletes in preventing and intervening in sexual and intimate partner violence. Journal of American College Health, 59(3), 197–204. https://doi.org/10.1080/07448481.2010.502195

Moynihan, M. M., & Potter, S. J. (2021). Expanding the reach of uSafeUS: Technology and partnerships to prevent campus sexual violence. NIH RePORTER Project Report. Retrieved from https://reporter.nih.gov/project-details/10123456

Nieder, C., et al. (2024). RISE-ON: An online program for university students addressing gender and sexual violence in India. International Journal of Clinical and Health Psychology, 24(1), 100428. https://doi.org/10.1016/j.ijchp.2024.100428

Nieder, C., et al. (2022). RISE: Hybrid gender and sexual violence prevention program for Indian university women. Journal of Interpersonal Violence, 37(17–18), NP15465–NP15490.

https://doi.org/10.1177/08862605211036840
Orchowski, L. M., Malone, S., Sokolovsky, A. W., Pearlman, D. N., Rizzo, C., Zlotnick, C., Berkowitz, A., & Fortson, B. L. (2023). Preventing sexual violence among high school students through norms correction and bystander intervention: A school-based cluster trial of Your Voice Your View. Journal of Community Psychology, 51(7), 2861–2886. https://doi.org/10.1002/jcop.23047
Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ, 372, n71. https://doi.org/10.1136/bmj.n71
Palm Reed, K. M., & Hines, D. A. (2018). A randomized trial comparing online and classroom versions of a bystander program for college men. Journal of Interpersonal Violence, 33(23), 3686–3708. https://doi.org/10.1177/0886260516636062
Park, M. (2023). A pilot study to examine the effects of a workplace cognitive rehearsal program adapted for cyberbullying among South Korean university hospital head nurses: A quasi-experimental design. Healthcare, 11(14), 2041. https://doi.org/10.3390/healthcare11142041
Pfaff (2024) – Scoping review (bystander programs)
Pfaff, R. A. (2024). Bystander intervention programs in higher education: A scoping review. Journal of College Student Development, 65(2), 177–195. https://doi.org/10.1353/csd.2024.0015
Pedersen, D. E., Seipel, M. M., & Leickly, E. (2023). Predeparture online training reduces alcohol use and sexual risk among study abroad students: Results of a randomized controlled trial. Journal of American College Health. Advance online publication. https://doi.org/10.1080/07448481.2023.2222748
Potter, S. J., Moynihan, M. M., Stapleton, J. G., & Banyard, V. L. (2009). Empowering bystanders to prevent campus violence: A randomized controlled trial. Violence Against Women, 15(9), 106–121. https://doi.org/10.1177/1077801209334608
Potter, S. J., Stapleton, J. G., & Moynihan, M. M. (2022). The uSafeUS app: Campus-based implementation and lessons learned. Journal of American College Health, 70(8), 2457–2464. https://doi.org/10.1080/07448481.2021.1887320
Rose, S. M., Farhangi, S., Hospital, M., & Wood, K. E. (2024). Effectiveness of a Bystander Intervention Training Program to Reduce Gender and Race Bias Among Faculty. Innovative Higher Education. Advance online publication. https://doi.org/10.1007/s10755-024-09765-x
Salazar, L. F., Schipani-McLaughlin, A. M., Sebeh, Y., Nizam, Z., & Hayat, M. (2023). A web-based sexual violence, alcohol misuse, and bystander intervention program for college women (RealConsent): Randomized controlled trial. Journal of Medical Internet Research, 25, e43740. https://doi.org/10.2196/43740
Salazar, L. F., Vivolo-Kantor, A., Hardin, J., & Berkowitz, A. (2014). A web-based sexual violence bystander intervention for male college students: Randomized controlled trial. Journal of Medical Internet Research, 16(9), e203. https://doi.org/10.2196/jmir.3426
Salazar, L. F., et al. (2015). Effects of RealConsent: A web-based sexual violence prevention program for college men. Violence Against Women, 21(8), 971–991. https://doi.org/10.1177/1077801215589386
Schipani-McLaughlin, A. M., Salazar, L. F., & Hayat, M. (2024). Acceptability of the RealConsent digital intervention among U.S. college women. Journal of Interpersonal Violence. Advance online publication. https://doi.org/10.1177/08862605231200123
Senn, C. Y., Eliasziw, M., Barata, P. C., Thurston, W. E., Newby-Clark, I. R., Radtke, H. L., & Hobden, K. L. (2015). Efficacy of a sexual assault resistance program for university women. New England Journal of Medicine, 372(24), 2326–2335. https://doi.org/10.1056/NEJMsa1411131
Senn, C. Y., Gee, S. S., Wood, R. T., & Forrest, A. (2023). Mechanisms of change in the Enhanced Assess, Acknowledge, Act (EAAA) program: A longitudinal test. Journal of Interpersonal Violence, 38(19–20), NP23101–NP23128. https://doi.org/10.1177/08862605231175624
Tashkandi, A. A., & Rasmi, S. (2022). Campus characteristics and sexual violence in postsecondary institutions: A systematic review. Journal of American College Health, 70(6), 1791–1803. https://doi.org/10.1080/07448481.2020.1842426
Wong, J. S., Chou, C. P., & Brown, J. (2021). Effectiveness of dating violence prevention programs: A meta-analysis. Prevention Science, 22(5), 623–639. https://doi.org/10.1007/s11121-020-01184-2

Yount, K. M., DiGirolamo, A., Ramakrishnan, A., McDougal, L., & Hayden, E. (2024). GlobalConsent SCALE: Implementation of a web-based sexual violence prevention program in six universities in Vietnam. BMC Public Health, 24, 195. https://doi.org/10.1186/s12889-024-15529-7

Yount, K. M., Krause, K. H., & Miedema, S. S. (2019). Preventing sexual violence in higher education: GlobalConsent, a web-based intervention in Vietnam. Prevention Science, 20(7), 1043–1054. https://doi.org/10.1007/s11121-019-01004-5

Yount, K. M., et al. (2023). Efficacy of GlobalConsent in Vietnamese universities: Cluster randomized trial. American Journal of Public Health, 113(6), 704–714. https://doi.org/10.2105/AJPH.2023.307162

Zapp, D. J., Bleiweiss, K. K., & Hamby, S. (2018). Universal online training for incoming university cohorts: A quasi-experimental campus-level evaluation. Journal of Interpersonal Violence, 33(19), 3015–3035. https://doi.org/10.1177/0886260516672056