INPLASY

Protocol for an Overview of Systematic Reviews and Meta-Analyses on Problematic Video Game Use and Gaming Disorder in Adolescents and Young Adults

INPLASY202670067
doi: 10.37766/inplasy2026.7.0067
Received: 17 July 2026
Published: 17 July 2026

Corresponding author:
Jason Nagata

jason.nagata@ucsf.edu

Author Affiliation:
Division of Adolescent and Young Adult Medicine, Department of Pediatrics, University of California, San Francisco, 550 16th Street, Box 0503 San Francisco, CA 94143, USA.

Nagata, JM; Helmer, CK; Huang, OH; Nayak, S; Bao, K; Zhang, S; Handoko, K; Li, EJ; Moreno, MA; Lavender, JM.

ADMINISTRATIVE INFORMATION

Support - National Institutes of Health; Rise Together, a donor-advised fund sponsored and administered by National Philanthropic Trust and established by Richard Reeves, founding president of the American Institute for Boys and Men.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202670067

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 July 2026 and was last updated on 17 August 2026.

INTRODUCTION

Review question / Objective To synthesize evidence from systematic reviews and meta-analyses on the assessment, epidemiology, risk and maintenance factors, health outcomes, mental health correlates, and prevention and treatment of problematic video game use, gaming disorder, and internet gaming disorder among adolescents and young adults.
* P = adolescents and young adults
* E = problematic video game use, gaming disorder, internet gaming disorder
* C = not applicable
* O = assessment, prevalence, risk factors, health outcomes, mental health correlates, prevention, and treatment
* S = systematic reviews and meta-analyses.

Rationale Problematic video game use and gaming disorder are increasingly recognized as important public health concerns among adolescents and young adults and have been associated with functional impairment as well as adverse physical, sleep, neurobiological, and mental health outcomes. Over the past decade, numerous systematic reviews and meta-analyses have examined individual aspects of problematic gaming, including prevalence, risk factors, assessment tools, health correlates, and treatment approaches. However, these reviews have been conducted in isolation, making it difficult for clinicians, researchers, and policymakers to obtain a comprehensive overview of the evidence.
Moreover, the field remains challenged by inconsistent terminology, definitions, and assessment methods. Problematic video game use, gaming disorder, and internet gaming disorder are frequently defined and measured differently across studies, and although gaming disorder has been recognized in the ICD-11, the DSM-5 diagnosis of internet gaming disorder remains a condition for further study. These inconsistencies

have complicated comparisons across studies and interpretation of the evidence.
An overview of systematic reviews is therefore warranted to synthesize the current evidence, identify areas of consensus and uncertainty, evaluate overlap across reviews, and highlight priorities for future research and clinical practice.

Condition being studied Problematic video game use is a broad construct referring to maladaptive gaming behaviors that result in distress or functional impairment but do not necessarily meet diagnostic criteria. Gaming disorder is recognized in the International Classification of Diseases, 11th Revision (ICD-11), and is characterized by impaired control over gaming, increasing priority given to gaming over other activities, and continuation despite negative consequences. Internet gaming disorder is included in Section III of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a condition for further study. This overview focuses on problematic video game use, gaming disorder, and internet gaming disorder in adolescents and young adults.

METHODS

Search strategy Systematic searches were conducted in PubMed, Web of Science, and PsycInfo for articles published between September 1, 2016, and May 26, 2026. Search terms combined controlled vocabulary and free-text terms related to "problematic video game use," "gaming disorder," "internet gaming disorder," "video game addiction," "systematic review," and "meta-analysis," using database-specific Boolean operators. Detailed search strategies are provided in Supplemental Figures S1–S6.

Participant or population Systematic reviews and meta-analyses primarily involving adolescents and young adults with problematic video game use, gaming disorder, or internet gaming disorder. Reviews including broader age ranges were eligible if adolescents or young adults represented the primary population or if findings were directly applicable to these age groups.

Intervention Not applicable. This overview synthesizes evidence across multiple domains, including assessment, epidemiology, risk factors, health outcomes, and prevention and treatment. For treatment reviews, any pharmacological or non-pharmacological intervention was eligible.

Comparator Not applicable. Comparator interventions, usual care, placebo, or no intervention were included where reported in the eligible systematic reviews and meta-analyses.

Study designs to be included Systematic reviews and meta-analyses.

Eligibility criteria Eligible studies were systematic reviews or meta-analyses published in peer-reviewed journals that primarily examined adolescents or young adults and reported outcomes related to problematic video game use, gaming disorder, or internet gaming disorder. Reviews not meeting the population or study design criteria or not reporting relevant outcomes were excluded.

Information sources Electronic searches were conducted in PubMed, Web of Science, and PsycInfo. Reference lists of eligible reviews were screened for additional studies. No searches of clinical trial registries or grey literature were performed.

Main outcome(s) The primary outcomes were evidence regarding (1) assessment tools, (2) epidemiology and prevalence, (3) risk and maintenance factors, (4) physical, sleep, and neurobiological health outcomes, (5) mental health correlates, and (6) prevention and treatment approaches for problematic video game use, gaming disorder, and internet gaming disorder. Results were synthesized narratively across thematic domains.

Additional outcome(s) Additional outcomes included characteristics of the included reviews, reported quality and risk-of-bias assessments, overlap of primary studies across reviews as measured by the corrected covered area (CCA) index, and evidence gaps identified within each thematic domain.

Data management Search results were imported into reference management software, and duplicate records were removed prior to screening. Title/abstract and full-text screening were conducted independently by at least two reviewers. Data extraction was performed by domain-specific reviewers using standardized extraction procedures, with verification by additional reviewers for quality assessment data. Discrepancies were resolved through discussion and, when necessary, consultation with a third reviewer.

Quality assessment / Risk of bias analysis This overview summarized the quality and risk-of-bias assessments reported by the included systematic

reviews and meta-analyses rather than performing new assessments of primary studies. Quality appraisal summaries and narrative certainty were synthesized by thematic domain. Overlap among included reviews was assessed using the corrected covered area (CCA) index, calculated separately for each thematic domain because the domains addressed distinct research questions.

Strategy of data synthesis A narrative synthesis was conducted. Reviews were grouped into six predefined thematic domains: assessment tools; epidemiology and prevalence; risk and maintenance factors; health outcomes; mental health correlates; and prevention and treatment. Key findings were summarized descriptively within each domain. Because of substantial heterogeneity in review questions, populations, outcomes, and methods, no quantitative pooling of review findings was performed. Quality assessments and CCA values were summarized descriptively.

Subgroup analysis No formal subgroup analyses were planned. Findings were synthesized separately according to the six predefined thematic domains. Where reported by the included reviews, subgroup findings based on demographic characteristics (e.g., age, sex, geographic region) or intervention characteristics were summarized narratively.

Sensitivity analysis No sensitivity analyses were planned because this overview synthesized findings from published systematic reviews and meta-analyses rather than conducting quantitative meta-analysis of primary studies.

Language restriction No language restrictions.

Country(ies) involved United States.

Other relevant information This overview was conducted and reported in accordance with the Preferred Reporting Items for Overviews of Reviews (PRIOR) statement. The protocol is being registered retrospectively to enhance methodological transparency. This study was initially designed as a narrative review, for which prospective protocol registration is not typically performed. During peer review, reviewers requested that the review be strengthened methodologically, and the manuscript was subsequently revised into an overview of systematic reviews and meta-analyses. Because this change occurred after the review process had begun, prospective registration was not feasible. This retrospective registration documents the review methods and predefined eligibility criteria used in the completed overview.The overview was conducted and reported in accordance with the Preferred Reporting Items for Overviews of Reviews (PRIOR) statement. The protocol is being registered retrospectively following completion of the review to enhance transparency.

Keywords problematic video game use; gaming disorder; internet gaming disorder; adolescent; young adult; overview of reviews; umbrella review.

Dissemination plans The findings will be disseminated through publication in a peer-reviewed journal, specifically eClinicalMedicine.

Contributions of each author
Author 1 - Jason Nagata.
Author 2 - Christiane Helmer.
Author 3 - Oliver Huang.
Author 4 - Sahana Nayak.
Author 5 - Kevin Bao.
Author 6 - Stephanie Zhang.
Author 7 - Kevin Handoko.
Author 8 - Elizabeth Li.
Author 9 - Megan Moreno.
Author 10 - Jason Lavender.