

Appendix 3. Methodological evaluation of study quality

First author, year	Research design	Conceptual framework	Sampling	Data collection method and instrument	Analysis method	Threats to validity
Manganello et al, 2016 [1]	Qualitative and Quantitative	None	Convenience sampling (community organizations)	Semistructured interviews	Semiquantitative analysis	Self-report; Limited generalizability
Johnson et al, 2015 [2]	Quantitative; Cross-sectional	None	Convenience sampling across multiple sites (clinics, advocacy organizations' websites, and Facebook)	Online survey using MyRheum, Illness Intrusiveness Scale, and investigator-developed questionnaire	Descriptive statistics, <i>t</i> test, chi-square test	Self-report and self-selection bias; heterogeneous sample
Wetterlin et al, 2014 [3]	Quantitative; Cross-sectional	None	Convenience sampling across multiple sites (Facebook and Twitter, online university student communities, and community organizations)	Online survey using Bell Youth Impact Survey and investigator-developed questionnaires	Descriptive statistics and descriptive analysis	Self-report and self-selection bias; Limited generalizability
Fergie et al, 2013 [4]	Qualitative	None	Purposive and snowball sampling across multiple sites (university course conveners and community youth group leaders)	Focus groups	Thematic analysis using a constant comparison method	Self-selection bias; Limited generalizability (homogenous sample)
Henderson et al, 2013 [5]	Quantitative; Cross-sectional; Correlational	None	Convenience sampling across multiple sites (four schools)	Online survey using investigator-developed questionnaires, pain coping questionnaire, etc	Descriptive statistics; chi-square test, correlational analyses (Pearson <i>r</i> test)	Self-report; Limited generalizability
Nordfeldt et al, 2013 [6]	Qualitative	None	Purposive sampling (catchment area of a county hospital)	Focus groups	Qualitative inductive analysis; content analysis	Self-selection bias; Limited generalizability
Neumark et al, 2013 [7]	Quantitative Cross-	None	Stratified sampling across multiple sites (five schools)	Survey	Multivariate regression	Self-report

	sectional; Correlational					
Stephens et al, 2013 [8]	Qualitative and quantitative	None	Purposive sampling at a single site (hospital)	Semistructured interviews; Survey using investigator-developed questionnaire	Content analysis (framework approach)	Self-report and self-selection bias; Limited generalizability
Gaskin et al, 2012 [9]	Quantitative; Cross-sectional	None	Convenience sampling at a single site (juvenile detention facility)	Interviews using an investigator-developed questionnaire	Descriptive statistics	Self-report and self-selection bias; Limited generalizability because of single site
Magee et al, 2012 [10]	Mixed methods; Cross-sectional	None	Convenience sampling across multiple sites	Interviews	Descriptive thematic analysis (inductive approach)	Limited generalizability
Ghaddar et al, 2012 [11]	Quantitative; Cross-sectional; Correlational	None	Random sampling across multiple sites (four schools)	Online survey using investigator-developed questionnaires, General Self-Efficacy Scale, eHealth (electronic health) Literacy Scale, Newest Vital Sign	Descriptive statistics, Univariate tests (chi-square and <i>t</i> tests); multivariate analyses (linear and logistic regressions)	Self-report; Limited generalizability (single state)
Selkie et al, 2011 [12]	Mixed methods; Cross-sectional	Grounded theory	Purposive sampling across multiple sites (community centers and schools)	Focus groups; paper survey using Youth Risk Behavior Survey, the National Health and Nutrition Examination Survey	Descriptive analysis; Constant comparative method	Self-report and self-selection bias; Limited generalizability
Barman-Adhikari et al, 2011 [13]	Quantitative; Cross-sectional	Conceptual model for online sexual health information seeking among runways and	Convenience sampling at a single site (drop-in agency)	Survey	Logistic regression	Self-report; Limited generalizability

		homeless youths (based on Andersen behavioral model and Pescosolido's network episode model)				
Mustanski et al, 2011 [14]	Mixed methods; Cross- sectional	None	Convenience and purposive sampling across multiple sites	Survey; Interviews	Descriptive analysis (inductive approach)	Self-report; Limited generalizability
Rushing et al, 2011 [15]	Quantitative; Cross- sectional	American Indian/ American Native Health Disparities and Wellness Model	Convenience sampling	Survey	Descriptive statistics; Chi-square analysis	Self-report; Limited generalizability
Buhi et al, 2009 [16]	Quantitative and qualitative; Cross- sectional	None	Convenience and purposive sampling at a single site (college)	Online survey using investigator-developed questionnaires; Observation (verbal report using "talking out loud" method)	Descriptive statistics; descriptive analysis	Self-report; limited generalizability because of single site
Tercyak et al, 2009 [17]	Quantitative; Correlational	Problem behavior theory; theory of planned behavior	Convenience sampling at a single site (hospital)	Survey; self-report using Adolescent eHealth Promotion Scale, National Centers for Disease Control and Prevention's Youth Risk Behavior Survey, Center for Epidemiologic Studies- Depression Scale	Multivariate linear regression	Self-report and self- selection bias; limited generalizability
Ybarra et al, 2008 [18]	Quantitative; Cross- sectional	None	Random sampling across multiple sites (five schools)	Survey	Logistic regression	Self-report

Nwagwu, 2007 [19]	Quantitative; Cross-sectional; Correlational	Uses and gratifications theory	Random sampling across multiple sites (22 schools and community organizations)	Survey; Investigator-modified questionnaire	Descriptive statistics, chi-square and <i>t</i> tests; Regression analysis	Limited generalizability because of incomparability of proportions of in-school and out-of-school samples
Abbreviations: AI/AN, American Indian, American Native						

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