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REVIEW

Psychosocial assessments for young people: a systematic review examining acceptability, disclosure and engagement, and predictive utility

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Abstract: Adolescence and young adulthood are often turbulent periods in a person's life. There are high rates of accidental deaths, suicide, mental health concerns, substance use, and sexual experimentation. Health care professionals need to conduct holistic assessments of clients in these developmental life stages to identify psychosocial risks and provide targeted early intervention and implement prevention strategies. The most useful psychosocial assessments for most health care professionals are those that can provide a complete picture of the young person's life and circumstances. This article identifies psychosocial assessment instruments that can be used as an initial assessment and engagement tool with the general population of young people presenting for health care. We review the psychometric properties of each of the instruments, determining what type of instrument is most acceptable to young people, whether any can increase disclosure and improve engagement between young people and health professionals, and whether they have predictive utility. The search strategy complied with the relevant sections of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. A total of 89 published articles were identified, covering 31 different assessment instruments. Results indicated that those that were self-administered were most acceptable to young people, although it is unclear whether pen-and-paper or computer formats were preferred. Most psychosocial assessments can improve rates of disclosure and enhance engagement between young people and health professionals; however, worryingly, we found evidence that clinicians did not always respond to some of the most serious identified risks. Only for one instrument was there any mention of predictive utility. Future research should employ longitudinal approaches to determine the predictive utility of psychosocial assessments and focus on whether the use of new technologies can improve rates of disclosure.

Keywords: adolescence, emerging adults, mental health, intervention, prevention, risk

Introduction

Adolescence and young adulthood are significant periods of social, emotional, physical and neurophysiologic development.[1] During this time, young people push barriers, take on new roles and responsibilities, and increasingly become more reliant on their peers and less so on their parents and caregivers. While most young people successfully navigate these challenges, there are many who require additional support, with rates of accidental deaths, drinking and driving, suicide, mental health concerns, substance use, and sexually transmitted diseases peaking during this time.[2–4] Early identification of these behavioral risks and emotional problems enables health professionals to provide appropriate support and implement preventative strategies, which is likely to lead to significant reductions in rates of morbidity and mortality.[5]

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Although "adolescence" and "young people" continue to be defined in various ways, recently, there has been some consensus, with these terms together understood to concern the ages from 12 to 25 years, as this covers the complete transition from childhood to adulthood.[6] Neurophysiologic evidence shows that adolescence is not just a period of transition within the social sphere, but also a period of transition for the brain in which there are distinctly different processes and structures.[7,8] For example, research suggests that the adolescent brain may be less responsive to stimuli relative to adults or children, leading adolescents to take greater risks or seek novelty stimuli.[1] Historically, services have been split into child and adolescent mental health services for those under 18 years of age, and adult mental health services for those over 18 years. However, these services often differ in their views on diagnosis, etiology, and treatment, which makes the transition between the two particularly difficult.[9] This dichotomy of service provision requires young people to not only navigate their developmental transition into adulthood but also navigate a new health care system at the age of 18 years.[10,11] Over the past decade, a new model of service delivery that suggests youth specific services should be provided to those aged 12–25 years has been gaining support.[12] The aim of these services is to provide continuous and developmentally appropriate support to the young person until they reach adulthood.

When a young person presents for physical or mental health care, it is highly likely that there will be a number of psychosocial issues that should be addressed. While the young person may initially disclose a certain issue, health care professionals should take the opportunity to conduct a holistic assessment of the young person, as this can lead to early intervention or implementation of prevention strategies for issues or risks that may otherwise go unaddressed.[13,14] Further, a complete psychosocial assessment provides health professionals with a holistic picture of the young person, which is needed for an individualized treatment program that is likely to lead to better long-term prognosis.[15] However, getting young people to speak about risky behaviors or difficult issues is a challenge and is likely to be contingent on trust, confidentiality, and direct questioning.[16]

Many psychosocial assessment instruments have been developed that provide health care professionals in multidisciplinary contexts with a framework with which to use to discuss with young people their psychological, social, behavioral, and environmental concerns. The effectiveness of these instruments is reliant on their acceptability to young people, their ability to create a space for disclosure and engagement between the young person and health professional, and their predictive utility in identifying possible future risks and concerns.

The current systematic review aimed to identify psychosocial assessment instruments available for use with the general population of young people by clinicians working in primary care and multidisciplinary contexts. The psychosocial instruments of interest were those that could be used during initial contact with the young person and asked about multiple domains of their life in order to improve engagement and understanding between the young person and health professional. The domains included psychological and emotional as well as behavioral, environmental, and social aspects. Specifically, we aimed to identify the characteristics of each of the instruments, including the age it was suitable for, the mode of administration and administration time frame, its psychometric properties, and the context/location in which the instrument had been tested. We were also interested in determining whether there were common domains covered by the instruments. Further, we examined whether young people were willing to complete the assessments and whether this was dependent on the mode of instrument administration, whether the instruments could increase disclosure and engagement between the young person and health care professional, and whether the instrument could predict any future risky behaviors or emotional problems. It was particularly important to identify instruments that could be used across the 12–25 year age range to recognize the emerging service model of youth-specific mental health care.

Methods

A systematic review of the literature was undertaken by reviewing all published studies that describe the use of a psychosocial assessment for young people that could be used in an initial assessment context to improve engagement between the young person and health professional, and provide a complete picture of the young person and their environment. Acceptable articles included all types of trials, systematic reviews, individual instrument reviews, and critical discussions. A "psychosocial assessment" was defined as an assessment or instrument that provides information about multiple psychosocial areas of a young person's life. The assessment could be self-administered, in the form of a structured or semi-structured interview, or a combination of these. To be considered "psychosocial" the instrument had to cover both psychological and social/environmental aspects. "Young people" were defined as those aged 12–25 years old.

The search methodology and reported findings comply with the relevant sections of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement.[17] Initially, a broad search strategy was implemented covering all studies published in English between January 1, 1980 and July 12, 2012 from MEDLINE®, Embase, PsycINFO® and the Cochrane Central Register of Controlled Trials databases. The search terms used were: "psychosocial" OR "multidimensional" AND "assess*" OR "measure*" OR "screen" AND "adolescen*" OR "young*" OR "child" OR "tool*"; and "therap*" AND "Engag*." *The Mental Measurements Yearbook* database was searched using the terms "psychosocial" OR "multidimensional." Additionally, all eleven volumes of *Test Critiques* and the reference books *Measures for Clinical Practice*,[18] *Assessment in Psychiatric and Mental Health Nursing*,[19] *Oxford Handbook of Paediatrics*,[20] *Behavioural, Social, and Emotional Assessment of Children and Adolescents*,[21] *Major Psychological Assessment Instruments*,[22] and *The Handbook of Psychological Testing*[23] were searched by hand to identify any other psychosocial instruments that met the study inclusion criteria. Further studies were identified through searching by hand the references of relevant studies and reviews.

Following the database search, abstracts and titles were scanned and irrelevant studies were removed; the remaining full-text articles were assessed for eligibility by both authors. The final eligibility criteria were that the article evaluated or discussed a psychosocial assessment that was: in English, for young people aged 12–25 years, for use with the general population, did not require proxy input from any other persons, and provided information about multiple psychosocial domains in the young person's life. Instruments that asked about multiple domains but only provided a single overall score or outcome measure were excluded, as were those primarily used to diagnose a specific mental disorder. Further, instruments stated as only being for those aged 18 years and older were excluded to keep the review manageable; however, it was recognized that this would exclude a number of viable instruments for those in the 18–25-year-old age group.

Although the search was extensive, authors were not contacted to ascertain further information or to obtain unpublished work. A further systematic review for every published article on the identified instruments was not conducted, as the aim was to identify all psychosocial instruments that met the inclusion criteria; it was not to identify every published article on each of the identified instruments. Figure 1 shows the PRISMA flow diagram for study inclusion.

Results

Search results

The search strategy identified 89 published articles covering 31 different psychosocial instruments. Of the 89 articles, 44 were research trials, 40 were individual instrument reviews, and five were systematic reviews. The median number of identified references for each instrument was two, with the most referenced instrument being the HEADSSS assessment with nine identified articles. The key characteristics of the 31 identified instruments are summarized in Table 1.

Instrument summary

Acceptable age range

The Structured Pediatric Psychosocial Interview (SPPI) had the lowest recommended minimum age of use, at five years. While the Personal Problems Checklist for Adolescents (PPCA) had an age range of 13–17 years, there were also alternate forms of the instrument for those aged 5–12 years and 18+ years. Taking into account the three versions of the PPCA, this instrument covered the widest possible range of ages. The mean minimum age in reported studies was 11.42 years and the mean maximum age was 20 years.

Administration time

Of all the assessments, the minimum suggested administration time was three minutes, which was for HEADSSS. The maximum suggested administration time was 90 minutes, which was for both HEADSSS and the Life Stressors and Social Resources Inventory-Youth Form (LISRES-Y). HEADSSS had the largest suggested possible administration time range of 87 minutes. The mean administration time for all assessments was 27.53 minutes.

Method and mode of administration

While the aim of each of the instruments identified is to help promote engagement between the young person and health professional through discussions of the young person's answers/results, many instruments were designed to be initially self-completed either using pen-and-paper or computer-assisted administration formats. Twenty-three instruments were identified as being purely self-administered, two were delivered purely in a structured/semi-structured interview, and six instruments could be delivered via either self-administration or interview. In terms of the mode of administration, at the time of research, 17 instruments were only available in a paper format for completion using a pen, one was only available in a computer/online format; two were only available in a face-to-face interview format; five

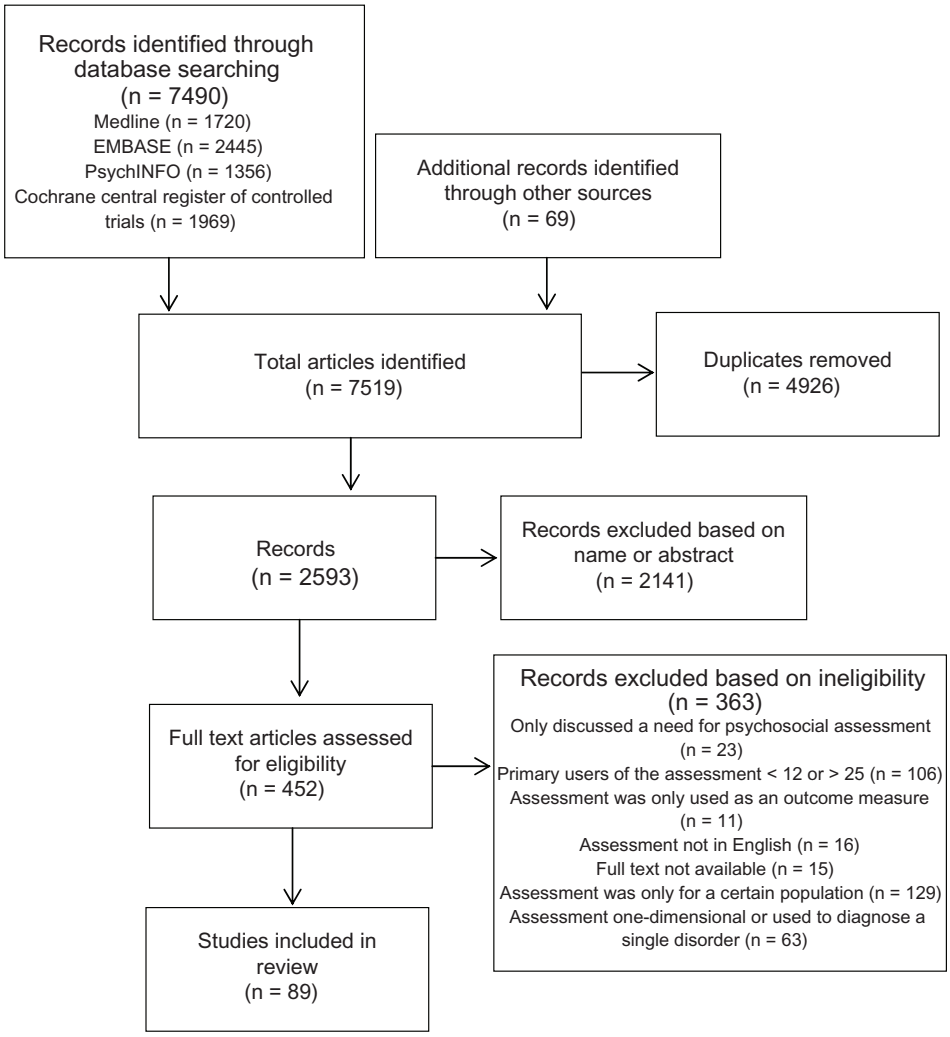

Figure 1 Prisma flow diagram.

were available in both paper and online/computer versions; and six were available in all three formats: paper, online/computer, and face-to-face interview.

Validity and reliability

The construct, content, and criterion validity and the internal consistency and test–retest reliability were evaluated for each instrument and are summarized in Table 2. Evidence of validity and reliability coefficients was obtained solely from the articles identified within the search strategy. If there was no mention of any type of validity or reliability, evidence was noted as unclear. Evidence of construct validity was found for twelve instruments, content validity was present for 26 instruments, and criterion validity evident for 14 instruments. The Life Experiences Questionnaire (LEQ), Personal Inventory, Brief Life History Inventory (BLHI), and Psychological/Social History Report made no mention of any type of validity. Internal reliability coefficients were available for 19 instruments and test–retest reliabilities available for 12 instruments. Only KIDSCREEN, Behavior Assessment System for Children, Second Edition (BASC-2), Personality Inventory for Youth (PIY), Self-Description Questionnaire 2 (SDQ-2), and the Strengths and Difficulties Questionnaire (SDQ) had evidence for all three types of validity as well as internal and test–retest reliability.

Location/context

Half the instruments had been tested in multiple contexts. Eight instruments had only been tested in the initial instrument development or to obtain norms; these occurred in either a school or community context (four in each). Two instruments had only been tested in a general practice setting, one in an emergency department/hospital setting and one in a youth-specific mental health setting.

Domains

To identify the domains covered by each instrument and determine whether common domains existed, the individual domains of each instrument were categorized under one of 43 possible common domain headings. In some cases, domains covered within the instruments could fit more than one common domain category; for example, the HEADSSS assessment includes suicide and depression under the one domain name; therefore, this was included under both the anxiety/depression/mood and suicide domains during categorization. This was the case for a number of instruments and different domains. In other cases, instrument domains were more highly specified than the common domain name may indicate. For example, the Multidimensional Adolescent Assessment Scale (MAAS) included the separate domains of "mother problems," "father problems," and "family problems" – these domains were combined and categorized under the common domain name of "family." The Instrument for Monitoring Adolescent Health Issues and the Psychological/Social History Report separated the domains for exercise and diet, and these were combined and categorized under the common domain name of "eating/body issues." The Adolescent Health Review (AHR), Guidelines for Adolescent Preventive Services (GAPS), Instrument for Monitoring Adolescent Health Issues, MAAS, and Hilson Adolescent Profile (HAP) all contain separate domains for alcohol, cigarette use, and drug use; these were combined under the common domain name "substance use/abuse." Finally, the AHR, GAPS, KIDSCREEN, MAAS, BLHI, BASC-2, HAP, LISRES-Y, PPCA, Psychological/Social History Report, Quickview Social History, SDQ-2, and Youth Risk and Resilience Inventory (YRRI) all ask specifically about education and omit work/employment; these were included within the "education/work" common domain category.

The number of domains covered by each instrument ranged from three in the YRRI, to 16 in the HAP. The average number of domains per instrument was nine. The most commonly included category was "social relations," covered by 21 different instruments. This category included both social and intimate relationships and support. The domains covered by two or more instruments (and the number of instruments that covered them), in order were: social relations (21), education and work (19), mental health (18), physical health (17), emotional distress (15), harm or violence to self or others (12), sexuality (12), family relations (11), substance use/abuse (11), eating/body issues (11), rule-breaking behavior/conduct disorder or legal history (10), home environment (10), anxiety/depression/mood (8), psychosis/mania (8), hyperactivity (8), suicide (6), leisure activities/hobbies (6), self-esteem (5), material well-being/financial status (5), concentration/productivity (5), emotional control (5), autonomy (4), stress (4), somatization (4), family medical/mental health history (4), general risk-taking behavior (4), place in community (3), personality (2), spirituality/religion (2), developmental history (2), and presenting problem (2).

Article results

Acceptability to young people

To determine whether the instruments were acceptable to young people, completion rates and rates of disclosure were investigated. The systematic review of 105 studies reporting health risk behaviors by Brener et al[24] found that self-administered questionnaires identified higher rates of risk behaviors than interviewer-administered questionnaires. Patients in the study by Silber and Rosenthal[25] also indicated that it was initially easier to state their problems on paper using the Mile Square Questionnaire (MSQ) than to state them verbally to the health care provider.

Findings of differences in disclosure rates between online and paper versions of various instruments were mixed. In a pilot study of a computerized version of the SDQ, Truman et al[26] found no differences in response rates between the paper and online versions; however, there was significantly better user satisfaction with the online version. The systematic review by Silber and Rosenthal[25] found that computer-assisted self-administration questionnaires resulted in higher rates of reporting illegal drug use, suicidal behavior, and high-frequency sexual behaviors than paper versions. In contrast, Beebe et al[27] found that risk behaviors were generally more likely to be reported using a paper version of the AHR than using an online version. However, this difference was only significant within the domains of alcohol quantity and substance use disorder. Higher scores were also found for a paper version of the Child Health Questionnaire Child Form (CHQ-CF) compared with an Internet version.[28] These differences were statistically significant for the domains of general behavior, role functioning – physical, mental health and family activities. However, less data were missing when the Internet version of the CHQ-CF was utilized.

Disclosure and engagement

Disclosure and engagement were evaluated by identifying results focusing on each instrument's ability to create

Table 1 Instrument summary

Measure	Reference(s)	Domains	Context/location instrument tested	No. of items	Age	Modality	Administration time
Adolescent health review (AHR)	Beebe et al,[27] Harrison et al[42,43]	Lack of exercise, poor nutrition, unhealthy weight control, family interaction problems, problems at school, emotional distress, suicidal behavior, violent behavior, sexual activity, cigarette smoking, alcohol use, marijuana use, substance abuse/ dependence, physical or sexual abuse	Multiple	30	12+	Self-Administered (computer)	3–5 mins
Adolescent psychopathology scale	Konold,[44] Piersel[45]	Clinical disorders, personality disorders, psychosocial problems, response style indicators	–	346	12–19	Self-Administered (pen and paper and computer scoring)	45–60 mins
Adquest	Elliott et al,[29] Giannone et al,[46] Peake et al[33]	Education/work, safety, health, sexuality, substance use/abuse, personal life/family life, other	Youth specific mental health service	80	10–21	Self-Administered (pen and paper)	20 mins
Behavior assessment system for children, second edition (BASC-2)	Gladman and Lancaster,[47] Merenda,[48] Tan[49]	Anxiety, attention problems, attitude to school, attitude to teachers, atypicality, depression, hyperactivity, interpersonal relations, locus of Control, relations with parents, self-esteem, self-reliance, sensation seeking, sense of inadequacy,social stress, somatization	Multiple	176 185	12–21 18–25	Self-Administered (pen and paper)	30 mins
Brief life history inventory (BLHI)	Mattei et al[50]	General information, present problems, history, family life, education, miscellaneous	Multiple	72	12–18	Self-Administered (pen and paper) Semi-structured interview	30–40 mins
Child behavior checklist –Youth self-report (CBCL-YSR)	Achenbach and Ruffle[51]	Anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, aggressive behavior	–	112	11–18	Self-Administered (pen and paper and computer)	10 mins
Child health questionnaire –Child completed form (CHQ-CF87)	Houghton et al,[52] Landgraf and Abetz,[53] Raat et al,[28] Waters et al[54,55]	Physical functioning, role/social-physical, general health perceptions, bodily pain, role/ social emotional, role/social behavior, self-esteem, mental health, family activities, family cohesion	Multiple	87	5–18	Self-Administered (pen and paper)	16–25 mins
Comprehensive quality of life scale–School version (ComQol-S5)	Cummins et al,[56] Gullone and Cummins[57]	Material well-being, health, productivity, intimacy, safety, place in community, emotional well-being	School	44	12–18	Self-Administered (pen and paper)	15–20 mins
Guidelines for adolescent preventive services (GAPS)	Epner et al,[30] Gadomski et al,[58] Klein et al[31]	Medical history, family information, specific health issues, eating/weight/body, school, friends and family, weapons/violence, tobacco, drugs, development/relationships, emotions, special circumstances, self	General practice	72 61	11–15 16–21	Self-Administered (pen and paper)	15 mins

HEADSSS	Carr–Cregg and Manocha,[59] Cohen et al,[60] Goldenring and Cohen,[5] Goldenring and Rosen,[61] Jones et al,[62] Parker et al,[32] Sanci et al,[63] Van Amstel et al,[34] Yeo et al[36]	Home and environment, education and employment, activities, drugs and alcohol, relationships and sexuality, suicide and depression, safety/conduct difficulties and risk taking, anxiety and eating, psychosis and mania	Multiple	–	12–25	Interview	3–90 mins
Health and daily living form, second edition (HDL-2)	Haynes,[64] Kagee[65]	Individual functioning, stressful life circumstances, social network resources, help-seeking responses	–	–	12–18 18+	Self-Administered (pen and paper) interview	30–45 mins
Hilson adolescent profile (HAP)	Calkins and Walker,[66] Hess[67]	Guardedness, alcohol, drugs, educational adjustment difficulties, law/society violations, frustration tolerance, antisocial/risk-taking attitudes, rigidity/obsessiveness, interpersonal/assertiveness difficulties, home life conflicts, social/sexual adjustment, health concerns, anxiety/phobic avoidance, depression/suicide potential, suspicious temperament, unusual responses	Multiple	310	10+	Self-Administered (pen and paper)	45 mins
Instrument for monitoring adolescent health issues	Stanton et al[68]	Tobacco use, alcohol use, other substance use, sun exposure, leisure, dietary habits, exercise and illness, sexual health, mental health, violence, safety, injury	Community	–	12–18	Self-Administered (pen and paper)	35 mins
Juvenile wellness and health survey (JWHS-76)	Steiner et al[69]	General risk taking behavior, mental health problems, sex related risk, eating and dietary problems, general health problems	School	76	10–18	Self-Administered (pen and paper)	50 mins
Kidscreen	Rajmil et al,[70] Ravens–Sieberer et al[71]	Physical well-being, psychological well-being, moods and emotions, self-perception, autonomy, parent relation and home life, financial resources, peers and social support, school environment, bullying	Community	52	8–18	Self-Administered (pen and paper and computer) Interviews (over the phone or face-to-face)	15–20 mins
Life experiences questionnaire (LEQ)	Newcomb et al[72]	Family/parents, accident/illness, sexuality, autonomy, deviance, relocation, distress	School	39	16–18	Self-Administered (pen and paper)	15–20 mins
Life stressors and social resources inventory-youth form (LISRES-Y)	Crehan,[73] Daniels and Moos,[74] Oosterhof[75]	Physical health, school, home and money, parents, siblings, extended family, boyfriend/girlfriend, friends, social activities	Multiple	–	12–18 18+	Self-Administered (pen and paper) structured interview	30–90 mins
Mile square questionnaire (MSQ)	Silber and Rosenthal[25]	Personal/family, school/work/friends, body/weight, somatic concerns/cancer, sexuality/birth control, drinking/drugs	ED/Hospital	20	10–25 years	Self-Administered (pen and paper)	5–30 mins

(*Continued*)

Table 1 (*Continued*)

Measure	Reference(s)	Domains	Context/location instrument tested	No. of items	Age	Modality	Administration time
Multidimensional adolescent assessment scale (MAAS)	Mathiesen et al[76]	Depression, self-esteem, mother problems, father problems, personal stress, friend problems, school problems, aggression, family problems, suicide, guilt, confused thinking, disturbing thoughts, memory loss, alcohol abuse, drug abuse	Community	177	10–21 years	Self-Administered (Pen and paper)	30–45 mins
Offer self-image questionnaire, revised (OSIQ)	Allen,[77] Furlong and Karno,[78] Jacob[37]	Impulse control, family functioning, emotional tone, self-confidence, body image, vocational attitudes, social functioning, ethical values, self-reliance, mental health, sexuality, idealism	Community	–	13–18	Self-Administered (Pen and paper or micro-computer disk)	30 mins
Personal inventory	Grossman,[79] Ireton,[80] Randall[81]	Well-Being, life concerns, emotional-mental status, life stress, personality, life satisfaction/desire for change	General practice	37	16+	Self-Administered (Pen and paper) Structured/ semi-structured interview	10–15 mins
Personal problems checklist for adolescents (PPCA)	Martens,[82] McCarthy,[83] Santmire[84]	Social and friends, appearance, attitudes and opinions, parents, family and Home, school, money, religion, emotions, dating and sex, health and habits, job, crises	Multiple	240	5–12 13–17 18+	Self-Administered (Pen and paper)	10–20 mins
Personality inventory for youth (PIY)	Lachar and Gruber,[85] Marchant and Ridenour,[86] Wrobel et al[87]	Cognitive impairment, impulsivity/ distractibility, delinquency, family dysfunction, reality distortion, somatic concern, psychological discomfort, social withdrawal, social skill deficits	Multiple	270	9–19	Self-Administered (Pen and paper)	45 mins
Psychological/social history report	Mattei et al[88]	Presenting problem, family history, developmental history, education, financial status, employment history, medical history, marital/family status, diet/exercise, psychological/life stressors, religion, alcohol and drug history	Multiple	–	17+	Self-Administered (Computer)	30–45 mins
Quality of life profile –adolescent version (QLP-A)	Bradford,[89] Raphael et al[90]	Physical being, psychological being, spiritual being, physical belonging, social belonging, community belonging, practical becoming, leisure becoming, growth becoming	School	54	14–20 years	Self-Administered (Pen and paper)	40 mins
Quickview social history (Quickview)	Dixon,[91] Starr[92]	Developmental history, family of origin, educational history, marital history, legal history, military history, symptom screen (Psychological and physical)	Multiple	235	16+	Self-Administered (Pen and paper or computer)	30–45 mins

Rapid assessment for adolescent preventative services (RAAPS)	Salerno et al,[93] Yi et al[35]	Eating/weight, physical activity, unintentional injury/violence, substance use, sexual health, depression/self-harm, adult support	Multiple	21	11–14 15–20	Self-Administered (Pen and paper, and online)	5–10 mins
Self-description questionnaire 2 (SDQ-2)	Atlas,[94] Boyle,[95] Gable,[96] Isonio,[97] Lennings and Lawler,[98] Marsh et al[99]	Physical abilities, physical appearance, reading, mathematics, peer relations, parent relations, general-self, general-school	Multiple	102	13–17	Self-Administered (Pen and paper)	20–25 mins
Structured pediatric psychosocial interview (SPPI)	Piersel,[100] Webb et al,[101] Weinberg[102]	Fretfulness, impetuosity, adherence, emulation, doubtfulness, obdurateness, composure, unhappiness, resentfulness	Multiple	–	5–19	Structured interview	20 mins
The strengths and difficulties questionnaire (SDQ)	Goodman et al,[103] Mellor,[104] Percy et al,[105] Ruchkin et al,[106] Truman et al[26]	Conduct problems, hyperactivity, emotional symptoms, peer problems, prosocial behavior	Multiple	25	11–16	Self-Administered (Pen and paper)	5 mins
Youth risk and resilience inventory (YRRI)	Cosden,[107] Konald[108]	School, home, community	Multiple	54	10–17	Self-Administered (Pen and paper)	10–15 mins

a space for discussion of relevant domains between the health professional and young person. The introduction of a psychosocial assessment instrument was found to improve engagement between the young person and health professional, thereby improving the clinician's understanding of the young users and their environment, in the studies by Beebe et al,[27] Elliott et al,[29] Epner et al,[30] Klein et al,[31] Parker et al,[32] Peake et al,[33] Silber and Rosenthal,[25] Van Amstel et al,[34] and Yi et al.[35] Specifically, clinicians in the study by Elliott et al,[29] stated that Adquest was able to: identify issues important to the adolescents, identify which domains the young person was ready to discuss right away – and which needed to be returned to at a later time, signal to the young person that it was okay to disclose information about relevant domains, and organize the young person's thoughts and issues ahead of time by providing them with a format for self-reflection. Further, clinicians felt that the section titles and introductions were able to indicate the organization's philosophy on domains, provide a "common language" for clinical assessment and discussion, and give permission for them to ask the young person difficult questions. Similar responses were provided by physicians using the MSQ, who stated that the instrument helped "break the ice"; provided a legitimate reason to ask young people about other issues that might be of concern to them; and indicated to young people that doctors were available to them to talk about emotional and psychosocial concerns, not just their presenting physical need.[25]

Unfortunately, four studies found that clinicians ignored certain domains that were identified as issues for the young person. In the evaluation of GAPS, it was found that general practitioners (GPs) discussed all the identified risk behaviors with the young person in only 23% of cases.[30] In 62% of cases, the GP discussed half or more of the identified risk behaviors, and in 15% of cases they discussed fewer than half of the identified risks. Epner et al[30] found that GPs were least likely to respond to behaviors regarding weapons and violence or depression and abuse. A follow-up with young participants in the study by Klein et al[31] found that adolescents reported receiving less counseling around their identified risks than the clinicians reported they had provided. Van Amstel et al[34] found that the inclusion of a HEADSSS stamp on emergency department patient records significantly increased documentation of the education, alcohol, and smoking domains, but that the domains of home environment, substance use/abuse, and sexual activity continued to be ignored by physicians. A retrospective review of 100 medical records and the HEADSSS assessment by Yeo et al[36] found only seven records showed that a complete screen had been conducted.

Table 2 Instrument psychometric properties.

Measure	Construct	Content	Criterion	Cronbach's alpha range	Test-retest range	Test-retest time frame
AHR	Unclear	Yes	Yes	–	–	–
Adolescent psychopathology scale	Yes	Yes	Unclear	> 0.80	–	–
Adquest	Unclear	Yes	Unclear	–	–	–
BASC-2	Yes	Yes	Yes	Upper 0.60's-Upper 0.80's	Upper 0.70's-Lower 0.90's	8–65 days
BLHI	Unclear	Unclear	Unclear	–	–	–
CBCL-YSR	Unclear	Yes	Yes	–	–	–
CHQ-CF87	Yes	Yes	Yes	0.69–0.92	–	–
ComQol-S5	Yes	Yes	Unclear	0.75–0.83	0.40–0.88	1 week
GAPS	Yes	Yes	Unclear	–	–	–
HEADSSS	Unclear	Yes	Unclear	–	–	–
HDL-2	Yes	Yes	Unclear	0.77–0.92	–	–
HAP	Unclear	Yes	Yes	0.67–0.90	0.74–0.95	2–4 week
Instrument for monitoring adolescent health issues	Unclear	Yes	Unclear	–	0.21–0.99	2 weeks
JWHS-76	Yes	Yes	Unclear	0.56–0.81	–	–
Kidscreen	Yes	Yes	Yes	0.77–0.89	0.56–0.77	2 weeks
LEQ	Unclear	Unclear	Unclear	0.94–0.98	–	–
LISRES-Y	Unclear	Yes	Yes	0.68–0.93	0.13–0.60	12–15 months
MSQ	Unclear	Yes	Unclear	–	–	–
MAAS	Yes	Yes	Unclear	0.74–0.97	–	–
OSIQ	Unclear	Yes	Yes	0.45–0.90	0.63	2 years
Personal inventory	Unclear	Unclear	Unclear	0.42–0.82	0.20–0.56	2 month
PPCA	Unclear	Yes	Unclear	–	–	–
PIY	Yes	Yes	Yes	>0.70	0.77–0.91	–
Psychological/social history report	Unclear	Unclear	Unclear	–	–	–
QLP-A	Unclear	Yes	Unclear	0.65–0.94	–	–
Quickview	Unclear	Yes	Unclear	–	–	–
RAAPS	Unclear	Yes	Yes	–	–	–
SDQ-2	Yes	Yes	Yes	0.75–0.90	0.72–0.88	7 weeks
SPPI	Unclear	Unclear	Yes	0.43–0.93	0.60	1–4 months
SDQ	Yes	Yes	Yes	0.59–0.75	0.65–0.83	–
YRRI	Unclear	Yes	Yes	>0.80	–	–

Predictive utility

Only the article by Jacob,[37] which reviews the Offer Self-Image Questionnaire, Revised (OSIQ), was found to mention an instrument's ability to predict future risks or psychosocial issues. The author refers to an earlier longitudinal study conducted by Offer and Offer in 1975, in which the OSIQ was shown to be able to identify "normal"' adolescent males who were likely to develop minimal psychological problems in the future. No other articles presented information on the predictive utility of the psychosocial assessment instruments.

Discussion

This systematic review has highlighted the many psychosocial assessment instruments that are available to improve engagement between health care professionals and young people who present for health care within a generalist primary care or multidisciplinary context. Most of the instruments were appropriate for use with young people aged 12–20 years. The administration times averaged about half an hour, which is appropriate for many clinical visits, although may be too long in time-restricted general practices.[38] The majority of instruments were designed to be initially self-administered using a pen on a paper questionnaire and then to have the answers discussed between the young person and health care professional. This format is likely to suit many contexts, as young people can complete the instrument prior to the appointment, leaving more time to discuss the relevant issues within the session. The contexts and locations in which the instruments had been used varied widely, although it was encouraging to see that half had been used in multiple environments, as it has been recommended that in the future multidisciplinary teams provide health and mental health care.[39] In terms of psychometric properties, only about a third had documented validity and reliability. The domains covered

by the instruments were varied, although the most common were social relations, education/work, mental health, physical health, emotional distress, harm or violence to self or others, and sexuality – all of which are immediately relevant to the majority of young people.

In terms of acceptability to young people, there is clear evidence for the use of an instrument that is initially self-administered over those delivered via an interview format. This is probably why over 93% of the identified instruments used this method of administration. In terms of whether self-administration should occur by pen-and-paper or computer-assisted formats, the evidence is varied. However, it should be noted that the articles examining the relationship between form of administration and disclosure rates are at least 5–6 years old – technology use has increased dramatically over this period, and young people are likely to be much more familiar and comfortable with computer-assisted formats. Thus, future studies should readdress this issue and extend their investigation into different computer-assisted formats, such as completing the form on a smartphone or tablet device, which are likely to be more private than completing the form on a large desktop computer as was used in the studies identified by this review.

This review provides some evidence that the use of a psychosocial instrument can improve engagement between health professionals and young people, mostly by giving health professionals a legitimate reason to ask difficult questions that otherwise may not have been raised. Unfortunately, much of the support for using psychosocial assessment instruments is derived from the anecdotal views of clinicians, whose jobs they make easier, not from the young people who have to respond to them or from empirical evidence. Additionally, it is very concerning that in four studies, all of which use different instruments, clinicians failed to discuss with the young person some of the most serious risks they had identified. Most concerning is that these studies took place in general practices and community health centers. While it is well recognized that GPs are often time poor,[38] it is also known that for young people, a GP is often the first professional they turn to for help.[40] Physicians need to respond to all the risks identified by the young person in a confidential and caring manner, as a negative past experience, such as telling a professional about an issue and not receiving an appropriate response, will significantly reduce the likelihood of a young person seeking future help.[41] Therefore, if a health professional decides to use an assessment instrument, they must follow-up on any risks that it identifies, not just those they have time for or those they feel comfortable addressing.

Interestingly, there is a significant gap in the literature regarding the ability of psychosocial assessment instruments to predict future psychological disorders or risky behaviors, with only the study by Jacob[37] mentioning the predictive ability of an instrument – the OSIQ. While it is likely that this evidence is lacking because none of the studies were longitudinal, it is also possible that health professionals are simply not providing long-term follow-up. Having an instrument that clinicians can use to identify possible future issues will reduce rates of morbidity and mortality only if preventative measures are implemented and follow-up is undertaken. Future studies should be prospective to determine whether the instrument has predictive ability and whether health professionals provide the necessary preventive supports.

Overall, the most appropriate instrument in terms of acceptability, engagement, and disclosure is one that is self-administered and then appropriately followed-up by the clinician. It should ask about domains that are relevant to all young people and prioritize those that are immediately relevant, such as social interaction, education and/or employment, mental health and emotional distress, harm to self or others, and sexuality. The currently available instruments that address these domains, are available in a self-administered format, and have been shown to increase engagement and disclosure include the AHR, Adquest, and GAPS. The AHR is the only instrument of these three that has also been tested in multiple contexts.

Limitations

While the thorough search strategy employed by this review identified a large number of psychosocial assessment instruments and evaluative papers for each, a systematic search of every published article for each of the instruments was not conducted. Therefore, it is possible that there is published evidence related to the psychometric properties of some of the instruments that has not been reported.

Conclusion

Psychosocial assessment instruments are essential tools for health care professionals working with young people because they improve detection of risks and engagement by helping clinicians to broach difficult issues. However, if a health professional decides to use a psychosocial instrument and the young person indicates a risky behavior or emotional concern, it is imperative that the health professional makes time to deal with it appropriately.

Self-administered instruments are most acceptable to young people, although it has not been determined whether

pen-and-paper or computer-assisted formats are preferred. Only one instrument has been shown to be useful in predicting any type of future risk.

Which tool is most appropriate for a clinician will depend on the domains they are most interested in, their preferred mode of delivery or available resources, available time frame, and whether they work in a multidisciplinary environment. The only tool which is currently available in a self-administered format, covers all domains relevant to most young people, has been tested in multiple contexts, and can be completed in a short period, is the AHR.

Future research should focus on conducting longitudinal studies to determine the predictive utility of these instruments. It would also be beneficial to determine whether there is any empirical evidence to support the anecdotal statements from clinicians concerning levels of engagement and whether young people themselves feel the instruments help them disclose and engage. Additionally, research should be conducted to determine the suitability for instruments such as the GAPS in multidisciplinary contexts, and to determine whether any of the instruments delivered currently by interview, such as the HEADSSS, could be transformed into a self-administered format to increase its acceptability to young people. Such research has the potential to provide clinicians with a wider choice of appropriate instruments to suit their individual and organizational needs.

Disclosure

The authors report no conflicts of interest in this work.

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