Child Health and Illness Profile - Adolescent Edition (CHIP-AE)


Purpose: The CHIP-AE is a self-administered generic adolescent health status and health-related quality of life (HRQoL) questionnaire.

Format, Administration, and Scoring: The CHIP-AE contains 107 items plus an additional 46 items that are specific to disease or injury. It was initially intended for use with adolescents from 11 through 17 years of age, and has more recently been effectively used in young adult populations. The CHIP-AE comprises 6 domains and 20 subdomains that were conceptually derived and supported by factor analysis.

The domains and subdomains include:

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<thead>
<tr>
<th>Domain</th>
<th>Subdomain</th>
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<th>Subdomain</th>
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<tbody>
<tr>
<td>Satisfaction</td>
<td>Satisfaction with Health</td>
<td>Risk Avoidance</td>
<td>Individual Risks</td>
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<td>Self-esteem</td>
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<td>Threats to Achievement</td>
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<td>Discomfort</td>
<td>Physical Comfort</td>
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<td>Peer Influences</td>
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<td></td>
<td>Emotional Comfort</td>
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<td>Family Involvement</td>
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<td>Limitations of Activity</td>
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<td>Problem-solving</td>
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<td>Disorders</td>
<td>Acute Minor Disorders</td>
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<td>Physical Activity</td>
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<td></td>
<td>Acute Major Disorders</td>
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<td>Home Safety and Health</td>
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<td>Recurrent Disorders</td>
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<td>Achievement</td>
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<td>Long-Term Medical</td>
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<td>Academic Performance</td>
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<td>Long-term Surgical</td>
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<td>Work Performance</td>
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<td></td>
<td>Psychosocial</td>
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Symptoms and signs of illness and health protective behaviors are reported as the number of days they occurred in the past 4 weeks on a five response format (“no days to 15-28 days”). Other scales are in a four or five point Likert format. Scores for each subdomain are obtained by computing the average of the individual item responses. Domain scores are obtained by averaging the subdomain scores. Higher scores indicate more of the measured construct. The full CHIP-AE can be completed in about 30 minutes.

Psychometric Information: CHIP-AE items were generated on the basis of literature reviews, focus groups with children, adolescents, and parents, and consultation with several dozen health professionals and researchers. The initial measure was piloted, revised, and then administered to 3,451 urban and rural youths in four geographic locations (2 predominantly Black urban Baltimore samples; 1 predominantly White rural Maryland sample; 1 predominantly Black rural Arkansas sample). Two samples of parents (n=400) in Baltimore also completed the parent version of the CHIP-AE.

Internal consistency reliability analyses yielded Cronbach's alphas exceeding .70 for all subdomains (except Academic Performance) in at least two out of four samples. Subdomain alphas for each of the domains ranged as follows: Satisfaction (.68 to .87), Discomfort (.63 to .93), Disorders (not computed), Risks (.70 to .89), Resilience (.76 to .85), and Achievement (.53 to .78). Test-retest reliability (1-week) showed good stability (.60 intraclass correlation or Pi coefficients and .60 Pearson correlation or Spearman's correlation coefficients) for 19 of 20 subdomains (exception was Home Safety and Health subdomain in Resilience domain).

To assess criterion validity, parent-adolescent correspondence on the CHIP-AE was examined using chance-corrected measures of agreement. As expected, modest correlations were observed, with a better agreement on more observable measures of health. Convergent validity was demonstrated for the subdomains of Emotional Discomfort and Family Involvement by comparing them with known measures of these constructs (correlations between .59-.68). Hypothesized age, gender, and socioeconomic differences were found in virtually every case, providing further evidence of construct validity of the CHIP-AE.
Comment: The CHIP-AE is a potentially useful adolescent-specific measure of general health. Its evaluation on large, culturally and geographically diverse samples is a significant strength. The conceptually derived and empirically refined subdomains are cohesive and demonstrate adequate levels of reliability and validity. The CHIP-AE requires ½ hour to complete, less time if the optional Disorders module is not needed. Several studies demonstrate the measure’s utility with medical and psychiatric samples. The CHIP-AE may be particularly useful in evaluating community and health services programs. This research group has developed a method for reporting health status of groups of adolescents that characterizes a youth in terms of one of thirteen profiles or patterns of health. These profiles may have utility in health resources planning and policy. (See publications.)

Publications


*Denotes the primary psychometric/methodological publications.

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