

Rates of mental health service utilization by children and youth across service settings: A meta-analysis



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BACKGROUND

- Rates of mental health disorders in children and adolescents are at historically high rates and rising
- Yet, a minority of youth who would benefit from mental health intervention actually access treatment
- There is a clear need for national, state, and local strategies that guide how to finance, manage, and support provision of accessible, effective mental health services (Hoagwood et al 2018).

BACKGROUND

- Youth access mental health treatment from many sources beyond specialty mental health:
 - Primary care
 - Schools
 - Juvenile Justice
 - Child protective services
 - Other human service agencies

BACKGROUND

- Reliable information on rates of access and utilization across service sectors can guide decision-making:
 - Which segments of the workforce to target
 - Specific prevention and treatment strategies
 - Collaboration required across sectors
 - Information sharing and management functions in which to invest.
- Many studies over the past 30 years have investigated how children and youth actually use mental health services and in what settings

PAST RESEARCH

- Past research has yielded a range of conclusions:
 - That certain systems serve as the “de facto” MH service system for youths
 - That services are distributed equitably across sectors
- Variation can be explained by methodological or sampling differences:
 - Population-based surveys
 - Public service system data
 - Evaluation data from national service programs
- Results of studies may also be influenced by national/local policies and shifts in policies
 - Introduction of SCHIP, expansion of Medicaid
 - Recession of 2008 and subsequent cuts to MH funding

THE CURRENT STUDY

- Systematic review and meta-analysis of U.S. studies of service utilization rates across settings
- Primary aim was to estimate proportions of youth receiving services across sectors for samples drawn from:
 - General population (“universal”)
 - Youth already receiving services or enrolled in a system of care (“at risk”/”targeted”)
- Also aimed to explore study variables that might explain variance in utilization estimates

METHOD

- Electronic searches in Ovid Medline, PsycInfo, and Cumulative Index to Nursing & Allied Health
- Years: 2000 to present
- Search terms: Focused on mental health, health services, pediatric populations AND
- A range of service settings (e.g., “school* or charter school* or elementary school* or high school* or institutional schools* or junior high schools* or kindergartens* or middle schools*”).

METHOD

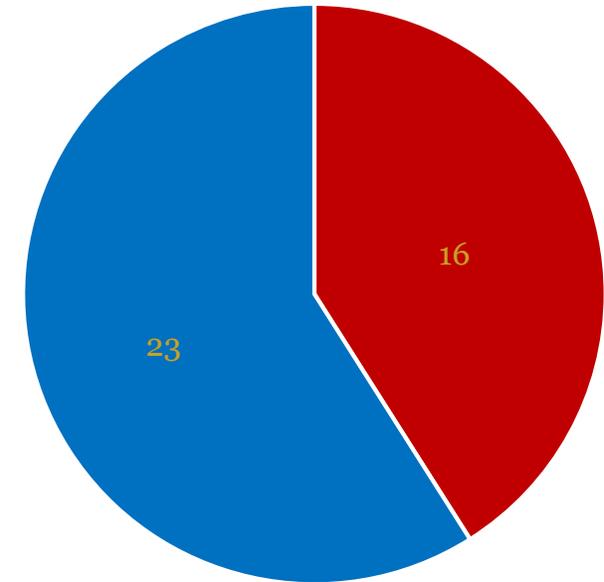
- Eligibility criteria:
 - Empirical article (Reviews, study protocols, and news articles excluded)
 - Publication in peer-reviewed journals, books/book sections, theses and dissertations, conference proceedings, or government reports.
 - Conducted in the United States.
 - Study sample included children, defined as 5-18 years old or grades K-12.
 - Results provided estimates of mental health service utilization in at least two settings.

Search yielded **1452** titles

STUDY AND SAMPLE CHARACTERISTICS

- This screening process yielded
 - 39 distinct samples drawn from 32 manuscripts
 - **16 samples** from general population (**166,137** youth total)
 - **23 samples** of at-risk / targeted youth (**285,334** youth total)

Number of samples



- General pop
- High risk/targeted

CODING INFORMATION FROM STUDIES

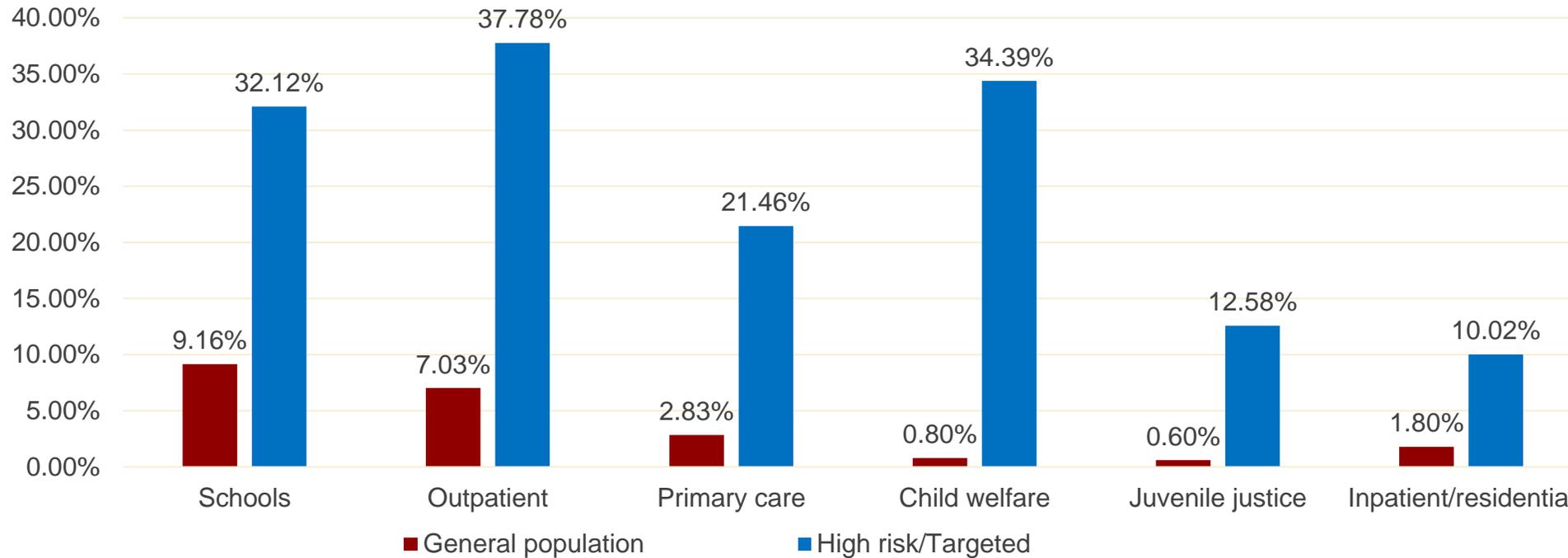
- Settings coded: All settings included in at least 2 studies
 - Outpatient, inpatient, primary care, school, juvenile justice, child welfare, “other”
- Study moderators coded:
 - Region of country, year of publication, type of sample, urbanicity, insurance status, sex, age, race/ethnicity
- Four trained coders coded all studies
- Reliability of coding:
 - ICCs (continuous variables) ranged from .83 to 1.00 (**M = .96**).
 - Kappas (categorical variables) ranged from .74 to .83 (**M = .78**)

DATA ANALYSIS

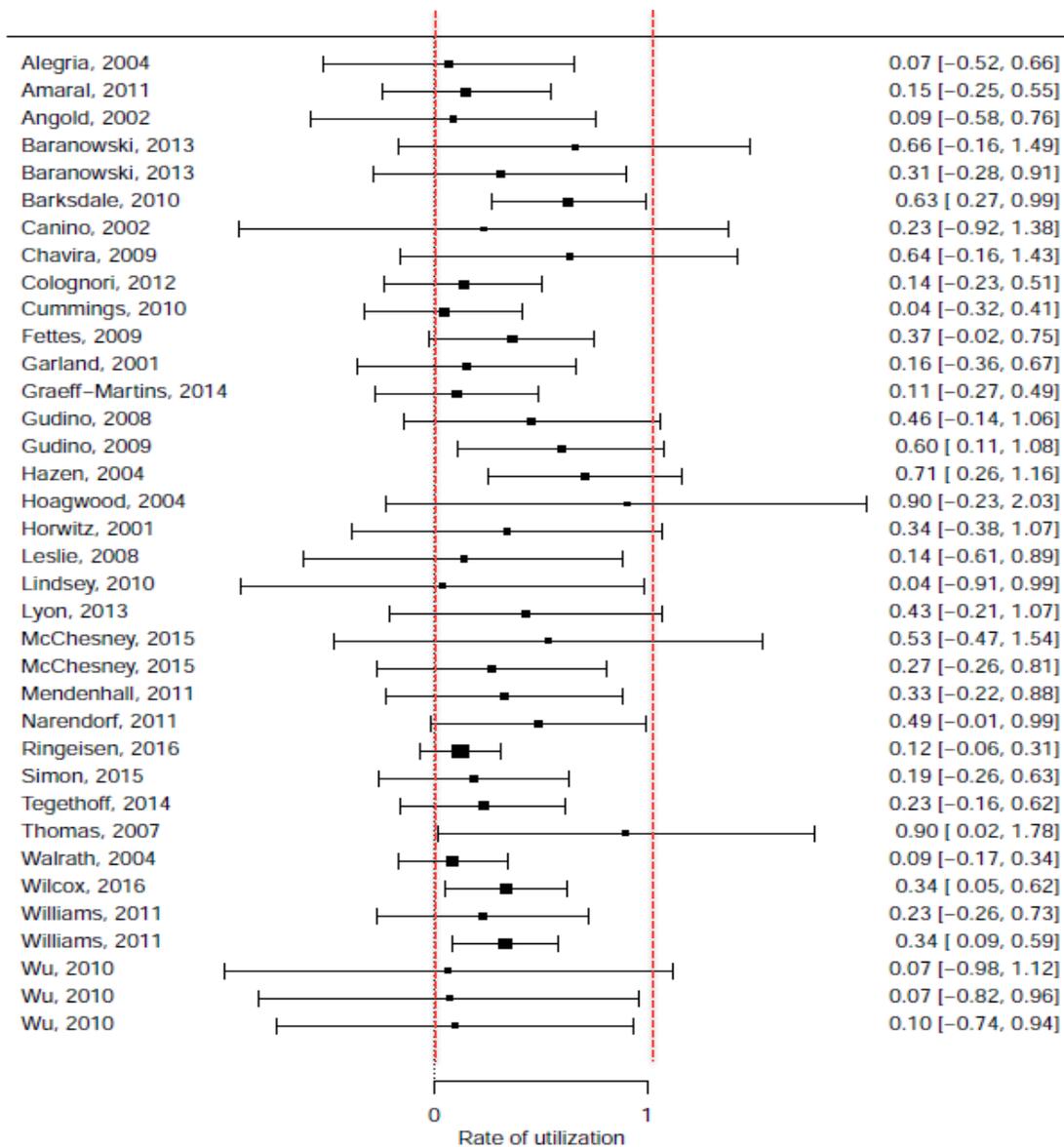
- Because of between-study variation in sampling and methodology, a random effects meta-analytic model was used.
- Proportions were logit transformed prior to analyses and then transformed back into proportions for presentation and interpretation of results
- Mixed effects meta-regression models were used to test moderators of service utilization rate estimates
- To assess publication bias, funnel plots of ES by standard errors with Egger's regression tests for asymmetry.
 - Final effects sizes will be adjusted for funnel plot asymmetry using Duval and Tweedie's trim and fill method

PRIMARY FINDINGS: RATES OF UTILIZATION BY SETTING

Proportions of youth receiving MH services across care settings from **16 general population samples** (166,137 youth total) and **23 high-risk/targeted samples** (285,334 youth total)



ESTIMATED PROPORTION OF YOUTH SERVED IN SCHOOLS



MODERATOR ANALYSIS

Moderator	estimate	SE	p	k	Q	p
Study Methods						
Year of publication				34	0.0601	0.81
Intercept	25.1504	106.54	0.8134			
Year of publication	-0.0130	0.0530	0.8063			
Characteristics of Sample						
Sample sex (% male)				38	0.0634	0.80
Intercept	- 1.2378	0.4894	0.0114			
Sample % male	.1848	0.7338	0.8012			
Sample age				32	0.2532	0.61
Intercept	- 0.6602	0.9187	.4724			
Sample mean age	-0.0345	0.0687	0.6149			
Sample race				62	0.2650	0.60
Intercept	0.9060	0.2178	<.0001			
% Caucasian in sample	0.2038	0.3959	0.6067			

Note: This analysis based on proportion of youth in school-based services

SUMMARY OF FINDINGS

- Is there really a *de facto* service system for children and youth?
 - Schools were the most common service setting for all children and youth (9% versus 7% for outpt), however...
 - Among youth with elevated symptoms or already enrolled in a service system, outpatient services were most common (38% versus 32% for schools)
- Moderator analysis did not find study variables with significant influence on rates (but small N of studies)

SUMMARY OF FINDINGS

- Schools may be most likely to be first point of receipt of service or entry to service systems. However:
 - Outpatient care is still quite prevalent among all youth
 - Outpatient is also more common once children are “known to systems”
 - A large proportion of youth with identified need are served in JJ, CW, and residential/inpatient settings

IMPLICATIONS?

- The current study clarifies that youth are served across all these service settings
- Schools likely need most attention for building surveillance, screening, early engagement and treatment efforts
 - But many other settings clearly do as well
- Primary care is an obvious setting to invest as well, but results suggest it lags in current utilization
 - This despite primary care's promotion as a point of screening and prevention as well as integration of care

IMPLICATIONS?

- Given the low relative rates of youth in CW and JJ (against the prevalence of MH problems among US youth), relative rates of utilization via these systems appears quite high
 - Many youth continue to have to experience abuse/neglect or commit offenses to access MH services
 - However, this may be a result of a relatively low N of studies (only 4) with both CW and school data

LIMITATIONS

- Data limited to what is available in original empirical articles and may be non-representative
 - Many of the articles on children involved in services are of youth with serious and complex needs
 - 3/4 studies with CW rates conducted by 1 team in San Diego Co.
- Unable to assess the overlap across service settings or movement between settings by individual children/youth

CONTINUED RESEARCH DIRECTIONS

- More research needed:
 - Community/state level variation
 - Overlap among systems through which kids access services
 - More on how youth travel through and across these systems over time

FOR MORE INFORMATION

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