Psychopathology in Young People Experiencing Homelessness: A Systematic Review

Understanding mental health issues faced by young homeless persons is instrumental to the development of successful targeted interventions. No systematic review of recent published literature on psychopathology in this group has been completed.

We conducted a systematic review of published research examining the prevalence of psychiatric problems among young homeless people. We examined the temporal relationship between homelessness and psychopathology. We collated 46 articles according to the PRISMA Statement.

All studies that used a full psychiatric assessment consistently reported a prevalence of any psychiatric disorder from 48% to 98%. Although there was a lack of longitudinal studies of the temporal relationship between psychiatric disorders and homelessness, findings suggested a reciprocal link. Supporting young people at risk for homelessness could reduce homelessness incidence and improve mental health. (*Am J Public Health.* 2013;103:e24–e37. doi:10.2105/AJPH.2013.301318)

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PREVIOUS ESTIMATES INDICATE that 1% of Americans have experienced homelessness in any single year and as many as 1.35 million of those people are young people or children.[1] Exploring mental health difficulties that are found to be highly prevalent among young people with experiences of homelessness is central to understanding the relationship between psychopathology and youth homelessness. Youth homelessness and the characteristics associated with these phenomena have not been well documented. This is partly because of the transient or sometimes hidden nature of homelessness alongside the often chaotic lifestyles of young people living in temporary accommodation or on the streets. Understanding the role of psychopathology in this area may lead to the development of interventions that could reduce the incidence of debilitating psychiatric disorders. It is important that interventions tailored to the needs of young people could also have an impact on the occurrence of homelessness and improve housing outcomes for those who do become homeless.

The prevalence of psychiatric disorders among homeless persons has been shown to be high.[2,3] However, research has not always distinguished between psychopathology among young people experiencing homelessness and that of older people. This is important because the causes of homelessness and the type and duration of support required by young people in this situation differ from that among adults. For example, family relationship breakdown, a reliance on insecure forms of accommodation, leaving care, and living with a step-parent have each been shown to be related to youth homelessness.[4] By contrast, some of the strongest risk factors for adult homelessness are eviction, loss of employment, and breakdown of relationship with a partner.[5] We performed a review to address the gap in the literature and distinguish the psychopathology found among young people with experiences of homelessness. This will aid the development of services for young people, enabling more focused targeting of resources to combat issues particular to young homeless people.

The concept of "youth" has been defined by the United Nations as a person aged between 15 and 24 years.[6] "Youth" is a period often temporally linked to the age at which a person ceases to be the responsibility of his or her legal guardians, becoming more psychologically and economically autonomous. For some, this period is accompanied by experiences of homelessness.[7,8] Periods of homelessness at a young age have been linked to homelessness later in life.[9] Mental health difficulties may be central to explaining this link. Mental health can have an impact on the problem-solving skills necessary for coping when homeless, with implications for the ability to move out of homelessness successfully.[10]

Only a very limited number of systematic reviews examining psychopathology among young homeless people have been completed. These have focused on research from 1 country,[11] did not specifically focus on mental health,[12] have examined the homeless population in general rather than young people in particular,[2] or have been completed more than 10 years ago.[13]

Furthermore, researchers studying the etiology of youth homelessness have published their findings across a range of disciplines including public health, psychology, psychiatry, social policy, and human geography. Indeed, because research has been published in a range of journals it is difficult for service providers to gain a clear impression of the extent of the association between experiences of homelessness and psychopathology. This systematic review collates findings providing an overview of recent international research focused on psychiatric disorders prevalent among this group. A second aim was to consider evidence in relation to the direction of effects linking experiences of homelessness and psychopathology. Mental health issues may precede homelessness or, alternatively, symptoms may be exacerbated or elicited by homelessness.

METHODS

We designed and reported this systematic review according to the PRISMA statement, an internationally recognized 27-item method ensuring the highest standard in systematic reviewing.[14] We undertook an electronic search of articles published between 2000 and 2012 with Web

of Science, PubMed, and PsycINFO, using the keywords shown in Table 1.

We derived the search terms via consultation with a psychiatrist, psychologist, and youth homelessness professional. We also used the search criteria of previous relevant review articles. We carried out a citation search and identified additional articles from citations yielded by the electronic search. We postulated exclusion criteria before the search. We excluded articles if titles or abstracts indicated that studies focused on animal research; a study sample exclusively outside the 16- to 25-year age range; exclusively physical health, substance misuse, sexual health, social relationships, sexuality, criminality, or trauma; or nonhomeless or at-risk-for-homelessness samples.

For the purposes of this review, we defined homelessness as being without suitable or permanent accommodation. This included street-dwelling homeless samples, those in shelter accommodation, those in temporary accommodation such as bed and breakfast or supported accommodation, those staying with friends, or those staying in unsuitable accommodation.

Drug and alcohol misuse and dependence in the context of youth homelessness have been extensively researched. For that reason we did not include these behaviors in the search criteria. We refer the reader to relevant research from the United States,[15] United Kingdom,[16] and Australia.[17] However, where research in this review reports on substance and alcohol misuse alongside other psychiatric conditions, we have included it in the analysis.

Two independent researchers screened titles and abstracts of the articles gathered during the search against the exclusion criteria. The first author read the full articles in detail and excluded them if they focused on any excluded topic (Figure 1).

We read the final articles in full and extracted numeric data detailing prevalence of psychiatric disorder. We collated information on the country where research was conducted, size of the sample, sampling strategy, age range of participants, study design, measures used, diagnostic criteria used, and prevalence information. In addition, we assessed each article for information pertaining to the direction of effects between psychopathology and homelessness. We also recorded where articles contained information on the relationship between mental health and homelessness.

RESULTS

We included 46 articles in the review. The majority of the publications examined homelessness in the United States (n = 34) followed by Canada (n = 8), Australia (n = 6), United Kingdom (n = 2), Switzerland (n = 1), and Sweden (n = 1). These figures include some cross-cultural studies of more than 1 location. Most of the studies used a cross-sectional research design (n = 29), a few were longitudinal (n = 11), and the remainder consisted of literature reviews (n = 4), population studies (n = 1), and retrospective studies (n = 1). Full psychiatric interviews using the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition*[18] *or Fourth Edition*[19] *(DSM-III* or *DSM-IV)* or *International Classification of Diseases 10*[20] *(ICD-10)* criteria were undertaken in 10 studies. Other studies used subscales that were based on *DSM* or *ICD* criteria. The remaining studies that involved interviewing participants used scales such as the Brief Symptom Inventory,[21] which are not based on diagnostic criteria.

Definition of Homelessness

Homelessness was defined in a number of different ways. Many studies involved interviews with young people who had resided in homeless shelters (n = 17). The duration of homelessness varied considerably across studies, from a few hours since arriving at a shelter or hostel[22] to more than 6 months.[23] Two studies focused solely on street homelessness and others took a broader definition including young people living in temporary accommodation (supported housing or staying with friends), street homeless, or in a shelter (n = 11). One term frequently referred to in the literature

TABLE 1—Specification of Search Parameters for Systematic Review of Published Research on Prevalence of Psychiatric Disorders Among Young Homeless People

Operator	Definition
1. Keywords	homeless OR roofless OR fixed abode OR bed and breakfast OR hostel OR shelter OR street dwell OR hotel OR sofa surfing OR tramp OR housing benefit OR vagrant OR refuge OR couch surfing OR street
2. Keywords	young people OR youth OR adolescent OR young OR teenage OR young adults OR young men OR young women OR young person
3. Keywords	mental* OR psych* OR depress* OR schizophrenia OR bipolar OR manic OR hypomanic OR mania OR anorexia OR bulimia OR anxiety OR attention deficit hyperactivity disorder OR posttraumatic stress disorder OR trauma OR stress OR psychotic OR anger OR mood OR emotion OR phobia OR panic OR internalizing OR externalizing OR agoraphobia OR suicide OR obsessive OR compulsive OR melancholic OR dysthymia OR disorder OR dysfunction OR behavior OR self-harm OR hyperkinetic OR oppositional defiant
4. Boolean operator	1 AND 2 AND 3
5. Limits language	English language
6. Limits date	Years 2000–2012
7. Limits kind of studies	classical article OR comparative study OR evaluation studies OR journal article OR review
8. Limits subjects of studies	(male OR female) AND (humans)
9. Boolean operator	4 AND 5 AND 6 AND 7 AND 8
10. Selection	Removal of duplicates and manual exclusion of articles not conforming to desired criteria

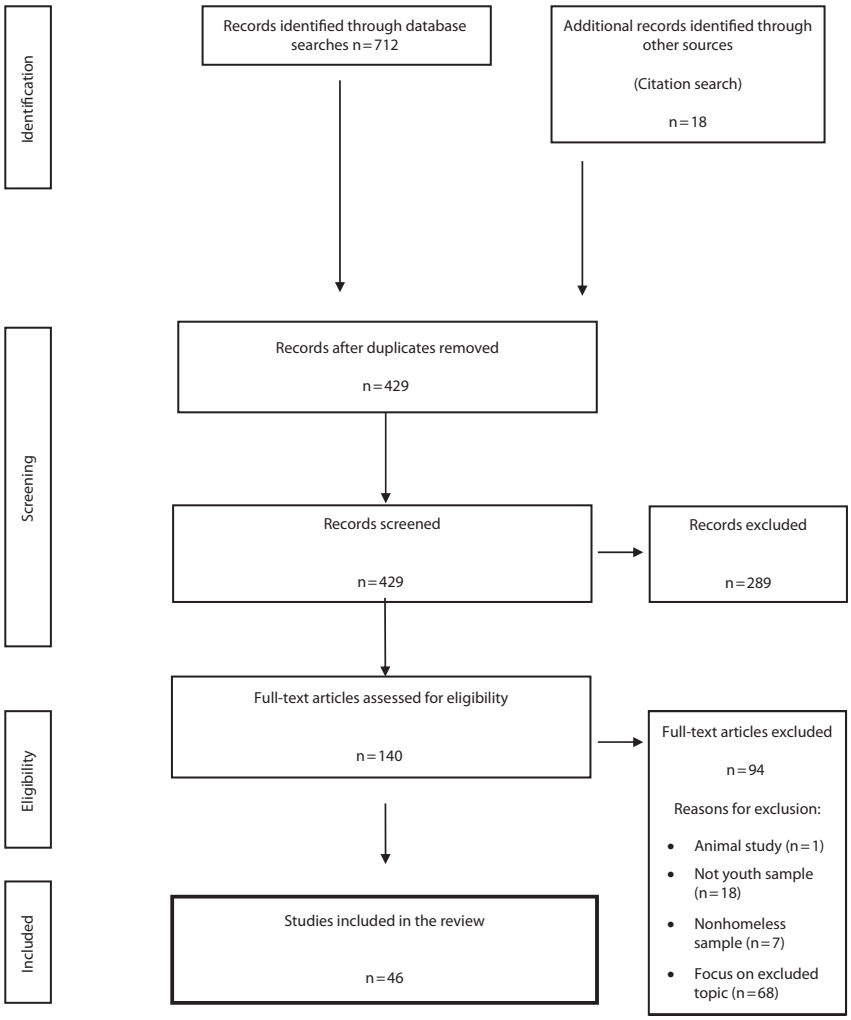

FIGURE 1—Flow diagram of study selection for systematic review of published research on prevalence of psychiatric disorders among young homeless people.

was "runaways" (n = 8). This term was often not clearly defined and was used interchangeably to mean a young person who is homeless or a young person who has run away from home overnight. Our interpretation of the findings from studies using this term in the context of this review was cautious because of this variability; however, they have been included.

We examined the studies according to the aims of the review and have divided them into tables according to our 2 aims, but there is some duplication where articles addressed both topics.

Prevalence of Psychopathology in Homeless Young People

Thirty-eight studies examined the prevalence of psychopathology among young homeless people (Table 2). Ten studies (26.3%) that used a full psychiatric diagnostic interview and reported the total prevalence of psychiatric conditions indicated that psychiatric disorder was present in more than 48.4% of homeless young people.[11,26,27,29,41,42] The percentage of *DSM* and *ICD* disorders identified by the research reviewed ranged from 48.4%[11] to 98%.[41] Most studies used *DSM* criteria but some used *ICD*. Table 3 presents the findings of 3 population studies of psychiatric disorders among young people in the general population. The prevalences are considerably lower than those found among the young homeless population.

Most studies did not consider comorbidity. However, in a review of Australian literature, Kamieniecki[11] found levels of comorbidity among young homeless people to be at least twice as high as those for housed counterparts. A handful of other studies have also found very high rates of comorbidity—Slesnick and Prestopnik,[47] 60%; Whitbeck et al.,[58] 67.3%; and Thompson et al.,[67] 40%—of young people with substance abuse disorders had comorbid posttraumatic stress disorder (PTSD). The most common comorbidities found by these studies were those involving substance misuse disorders and another psychiatric disorder (particularly PTSD). However, Yoder et al.[63] found that clinically high levels of externalizing disorders and internalizing disorders were associated with suicidal ideation indicating links between nonsubstance psychiatric disorders. Research assessing comorbidity within this population is sparse; studies that did examine the phenomenon appeared to reveal rates that were high compared with those in the general population.

Eleven studies did not use full diagnostic interviews to assess psychiatric disorder. These studies provide an indication of the prevalence of mental health issues among young homeless people, but the full picture of psychiatric conditions was not revealed. For example, Hughes et al.[7] found clinically high levels of internalizing symptoms (withdrawal, depression or anxiety, and somatic complaints: 20%) and externalizing problems (delinquent and aggressive behaviors: 40%). The co-occurrence of internalizing symptoms and externalizing behavior was found among 48% of shelter-based youths. Fournier et al.[30] examined behaviors related to eating disorders and found that youths with experience

TABLE 2—Prevalence of Psychopathology in Systematic Review of Published Research on Prevalence of Psychiatric Disorders Among Young Homeless People, 2000–2012

Author	Country	Sample Size	Sampling Strategy	Age Range, Years	Design	Measures	Diagnostic Criteria	Prevalence of Mental Health Results
Bearsley-Smith et al.[24]	Australia	Homeless: 137; At risk for homelessness: 766; Not at risk for homelessness: 4844	Shelter, school support, health services	Nonhomeless: 14–17; Homeless: 13–19	Cross-sectional	Self-report questionnaire measure; SMFQ	Depression assessed with *DSM-III*[18] criteria	Depressive symptoms: 16%
Beijer and Andreasson[25]	Sweden	1704	Homeless persons and a housed comparison group	20–92[a]	Cross-sectional	Health service information	*ICD-10*[20]	Psychiatric conditions not reported by age group
Bender et al.[26]	US	146	Street dwelling, shelter, drop-in center	18–24	Cross-sectional	Full psychiatric assessment: the Mini International Neuropsychiatry Interview	*DSM-IV*[19]	Depression: 28.1%; Hypomanic: 30.1%; Manic: 21.2%; Alcohol addiction: 28.1%; Drug addiction: 36.3%; PTSD: 24%
Cauce et al.[27]	US	364	Street dwelling, shelter, temporary accommodation	13–21	Cross-sectional	Full psychiatric assessment: the DISC-R.	*DSM-III-R*	CD/ODD: 53%; ADD: 32%; MDD: 21%; Mania or hypomania: 21%; PTSD: 12%; Schizophrenia: 10%
Coward Bucher[23]	US	422	Street dwelling without current stable residence who have not lived with parent or guardian > 30 d in past 6 mo	< 21	Cross-sectional	Not reported	Not reported	NA
Craig and Hodson[28]	UK	161	Shelter	16–21	Longitudinal	Full psychiatric assessment: CIDI	*DSM-III-R*	(1 mo prevalence) substance abuse only: 11%; Substance dependency only: 19%; Mental illness only: 13%; Mental illness and substance abuse: 1%; Mental illness and substance dependency: 11%
Crawford et al.[29]	US	222	Street dwelling, shelter, drop-in center young homeless women	16–19	Longitudinal	Full psychiatric assessment: CIDI and DISC-R	*DSM-IV*	MDD: 32.5%; CD: 65.1%; PTSD: 51.8%; Drug abuse: 34.9%; Alcohol abuse: 20.5%; Alcohol dependence: 22.9%
Folsom and Jeste[2]	US	NA	Systematic review, 33 articles	NA	Systematic review	NA	NA	Not reported

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TABLE 2—*Continued*

Fournier et al.[30]	US	3264	School students	14–18	Cross-sectional	Disordered weight-control behaviors were assessed	NA	Purging: 11.7%; Fasting: 24.9%
Frencher et al.[31]	US	Homeless: 326 073; Low socioeconomic status: 1 202 622	Hospitalized homeless and low socioeconomic status persons	0.1–≥ 65[a]	Cross-sectional population study	Medical records examined	Not reported	NA
Gwadz et al.[32]	US	85	Street dwelling, shelter, sofa surfing, at risk for homelessness (inadequately housed)	16–23	Cross-sectional	Interview Post-Traumatic Stress Diagnostic Scale	*DSM-IV* Post Traumatic Stress Diagnostic Scale	PTSD: 8.3%
Hadland et al.[33]	Canada	495	Street dwelling	14–26	Cross-sectional	Assessment of suicide attempts and risk of suicide	NA	9.3% suicide attempt past 6 mo; 36.8% lifetime suicidal ideation
Hughes et al.[7]	Canada	60	Shelter	16–24	Cross-sectional	Youth self-report measures (Achenbach and Edelbrock[34]) and adult self-report measures (Achenbach and Rescorla[35]))	NA	In clinical range for internalizing symptom: 22%; In clinical range for externalizing symptoms: 40%
Kamieniecki[11]	Australia	NA	NA	12–25	Comparative review	NA	NA	Studies using full psychiatric assessments found > 48.4% prevalence of psychiatric conditions
Kidd[36]	Canada and US	208	Street dwelling, temporary accommodation	14–24	Cross-sectional	Structured interviews	NA	Suicide attempt lifetime: 46%
Kidd and Carroll[37]	Canada and US	208	Street dwelling, temporary accommodation	14–24	Cross-sectional	Structured interviews	NA	Same sample as Kidd[36]
Kirst et al.[38,39]	Canada	150	Street dwelling, shelter	Unknown	Longitudinal	Full psychiatric assessment	*DSM-IV*	Comorbid substance use and mental health problems: 25%; Suicidal ideation: 27%
Kulik et al.[12]	Canada	NA	NA	< 25	Literature review	NA	NA	Not reported
McManus and Thompson[40]	US	NA	NA	NA	Literature review	NA	NA	Trauma symptom: 18%
Merscham et al.[41]	US	182	Shelter	16–25	Retrospective study	Archival assessment of past psychiatric diagnosis	*DSM-IV*	Psychosis: 21.4%; Bipolar: 26.9%; Depression: 20.3%; PTSD: 8.2%; Polysubstance dependence: 6%; ADHD: 4.4%; Other diagnosis: 11%

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TABLE 2—*Continued*

Milburn et al.[42]	US and Australia	American n = 617; Australian n = 673	Street dwelling, shelter, drop-in center, support services (representative sample)	12–20	Cross-sectional cross-cultural	BSI	BSI based on Symptom Checklist 90	Newly homeless: Recent suicide attempt: 11.5%; Lifetime suicide attempt: 32.1%; Overall mental health issues: 30.9% Experienced homeless: Recent suicide attempt: 8.8%; Lifetime suicide attempt: 40.7%; Overall mental health issues: 32.9%
Rohde et al.[43]	US	523	Street dwelling, shelter	Adolescents < 21	Longitudinal	Diagnostic interview used to identify major depression and related conditions	*DSM-IV*	MDD: 12.2%; Dysthymia: 6.5%; Depression: 17.6%; Suicide attempt (lifetime): 38%
Rosenthal et al.[44]	US and Australia	358	Street dwelling, shelter	12–20	Longitudinal cross-cultural	Interview measure of substance misuse and BSI	*DSM-IV* to assess drug dependency.	US: Baseline drug dependence: 11%; Comorbidity: 5% Australia: Baseline drug dependence: 20%; Comorbidity: 6%
Ryan et al.[45]	US	329	Homeless drop-in center	13–20	Cross-sectional	Full psychiatric assessment: Computerized Diagnostic Interview Schedule for Children (CDISC)	*DSM-III-R*	Depression or dysthymia: No abuse group: 14.8%; Physical abuse group: 10.9%; Sexual abuse group: 14.3%; Both types of abuse group: 35.2% History of suicide attempt (lifetime): No abuse group: 22.7%; Physical abuse group: 41.3%; Sexual abuse group: 53.6%; Both types of abuse group: 68.2%
Shelton et al.[46]	US	14 888	High-school students	11–18 at baseline; 18–28 at follow-up	Longitudinal population-based	Structured interview: no diagnostic measure	NA	Self-report depression: 26.4%
Slesnick and Prestopnik[47]	US	226	Shelter (in treatment of substance abuse)	13–17	Cross-sectional	Full psychiatric assessment (CDISC)	*DSM-IV*	Substance use disorders: 40%; Dual substance and mental health diagnosis: 34%; Substance use and 2 or more mental health diagnoses: 26%; CD or ODD: 36%; Anxiety disorders: 32%; Affective disorders: 20%

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TABLE 2—*Continued*

Stewart et al.[48]	US	374	Street dwelling, shelter, drop-in centers	13–21	Cross-sectional	Diagnostic measure of PTSD	*DSM-IV*	PTSD: 14%
Taylor et al.[49]	UK	150	Shelter	16–25	Cross-sectional	Interview measured characteristics and types of behavior: Health of the Nation Outcome Scales (Wing et al.[50])	NA	Depressed mood: 66%; Emotional symptoms associated with trauma: 30%; Alcohol or drug problems: 30%; Panic attacks or anxiety: 23%; Suicidal thoughts or behaviors: 20%; Self-harm: 20%; Problems with eating: 12%; Psychotic symptoms: 14%; Personality disorder: 8%; Obsessive compulsive: 2%; Social phobia: 1%
Tompsett et al.[51]	US	363 adolescent homeless; 157 younger homeless adults	Shelter	Adolescents 13–17; Younger adults 18–34[a]	Cross-sectional comparative	BSI	NA	Alcohol abuse: Adolescents: 10.9%; Young adults: 47.4%
Tyler et al.[52]	US	199	Street dwelling, shelter, temporary accommodation	19–26	Cross-sectional	Structured interview: Deliberate Self-Harm Inventory (Gratz, 2001[53]); PTSD Impact of Event Scale (Horowitz et al.[54])	Not stated	Repeated self-harm: 19%; PTSD: 61%
Tyler et al.[55]	US	428	Street dwelling, shelter (homeless and runaway youths)	16–19	Cross-sectional	Diagnostic assessment (CIDI)	*DSM-III-R*	Self-harm: 69% Other prevalence not reported
Votta and Farrell[56]	Canada	174	Shelter (homeless women) and a housed group	16–19	Cross-sectional	BDI	*DSM-IV*	Suicidal ideation: 31%
Votta and Manion[57]	Canada	170	Shelter (homeless young men) and housed group	16–19	Cross-sectional	Youth self-report; Behavioral problems (externalizing and internalizing) based on CBCL; BDI	*DSM-III* criteria for substance abuse disorders; CBCL uses *DSM*-orientated scales	Suicide attempt (lifetime): 21%; Suicidal ideation: 43%

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TABLE 2—*Continued*

Whitbeck et al.[58]	US	366	Street dwelling, shelter (homeless and runaway youths)	16–19	Cross-sectional comparative	Diagnostic assessment of conduct disorder, depression, PTSD, alcohol abuse and drug abuse, and suicidal attempts and ideation (CIDI)	*DSM-III-R*	Homosexual: MDD: 41.3% PTSD: 47.6%; Suicide ideation: 73%; Suicide attempt: 57.1%; CD: 69.8%; Alcohol abuse: 52.4%; Drug abuse: 47.6% Heterosexual: MDD: 28.5%; PTSD: 33.4%; Suicide ideation: 53.2%; Suicide attempt: 33.7%; CD: 76.7%; Alcohol abuse: 42.2%; Drug abuse: 39.2%
Whitbeck et al.[59]	US	602	Street dwelling, shelter, drop-in center (homeless and runaway youths)	12–22	Cross-sectional	Depression symptom checklist (CES-D[60]).	*DSM-IV*	Depression: 23%
Whitbeck et al.[61]	US	428	Street dwelling, shelter (homeless and runaway youths)	16–19	Cross-sectional	Diagnostic measure of PTSD (CIDI)	*DSM-III-R*	PTSD (lifetime): 35.5%; PTSD (12 months): 16.1%; Comorbidity: PTSD and MDE: 48%; PTSD and CD: 80.9%; PTSD and alcohol abuse: 51.3%; PTSD and drug abuse: 48.7%
Whitbeck et al.[62]	US	428	Street dwelling, shelter (homeless and runaway youths)	16–19	Cross-sectional	Diagnostic assessment of conduct disorder, depression, PTSD, alcohol abuse, and drug abuse (CIDI)	*DSM-III-R*	Lifetime: MDD: 30.3%; CD: 75.7%; PTSD: 35.5%; Alcohol abuse: 43.7%; Drug abuse: 40.4% 12-month prevalence: MDD: 23.4%; CD: NA; PTSD: 16.8%; Alcohol abuse: 32.7%; Drug abuse: 25.7%; Comorbidity: ≥ 2 disorders: 67.3%

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TABLE 2—Continued

Yoder et al.[63]	US	428	Street dwelling, shelter, temporary accommodation (homeless and runaway youths)	16–19	Cross-sectional	Diagnostic interview conduct disorder (DISC-R), depression, PTSD, alcohol abuse, drug abuse (CIDI)	*DSM-III-R*	MDE: 30.4%; PTSD: 36.0%; CD: 75.7%; Alcohol abuse: 43.7%; Drug abuse: 40.4%

Note. ADD = attention-deficit disorder; ADHD = attention deficit/hyperactivity disorder; CD = conduct disorder; CIDI = Composite Diagnostic Interview; DISC-R = Diagnostic Interview Schedule for Children Revised; MDD = major depressive disorder; MDE = major depressive episode; NA = not applicable; ODD = oppositional defiant disorder; PTSD = posttraumatic stress disorder; SMFQ = short mood and feelings questionnaire.
[a]Where sample contained participants outside the age category "youth," only the results pertaining to the youth element of the sample are presented.

of homelessness were more likely to have disordered weight-control behaviors compared with housed counterparts. Coward Bucher[23] showed evidence of several needs-based groups, including minimal needs (18.5%), focus on addiction (21%), focus on behavioral issues (21.5%), and finally a group with complex comprehensive needs (including addiction, behavioral issues, experiences of abuse, and criminality: 38%). These studies indicated high levels of a range of mental health difficulties.

One study, however, reported low levels of mental health problems in young homeless persons. Rosenthal et al.[44] reported a rate of 17% at baseline and 8% of any conditions at follow-up, which is considerably lower than that in the other studies reviewed here. The authors suggested that their finding may be explained by the fact that the young people in their study were newly homeless, and had not yet developed many difficulties. There may have also been a bias in the sample attributable to self-selection into the study. Young people with fewer psychiatric issues may have been more inclined to take part. In comparison with other age groups, Tompsett et al.[51] found lower rates of mental health difficulties among young homeless people compared with older homeless groups; this study compared 13- to 17-year-old people with 18- to 34-year-old and 35- to 78-year-old homeless people.

Homelessness and Psychopathology

Fifteen studies explored the relationship between homelessness and psychopathology (11 used a longitudinal design; Table 4). Two studies (1 longitudinal) examined psychiatric inpatient samples and found a strong link between serious psychopathology and homelessness. Of young people admitted to psychiatric hospital in Switzerland, 24.9% were homeless before admission.[72] A comparison with the nonpsychiatric population cannot be made as there was no accurate data on the proportion of homeless persons. Embry et al.[70] found that 33% of adolescents discharged from psychiatric care experienced homelessness in the subsequent 5 years.

Among youths at a shelter, Craig and Hodson[28] found that 70% of young people diagnosed with a psychiatric disorder remained symptomatic 12 months later. Experience of rough sleeping, in particular, was linked with persistent disorder. Similarly, substance abuse disorders were also associated with poorer housing outcomes. Fowler et al.[71] found in a sample of care leavers that those with emotional or behavioral problems were more likely to have less stable housing trajectories 2 years later and were more likely to have experienced homelessness or to have lived in unsuitable or temporary accommodation. Martijn and Sharpe[73] identified that all participants who had psychological disturbances or an addiction before they became homeless had developed further psychological disturbances, addictions, or criminal behavior since they became homeless. Whitbeck et al.[59] found that family abuse and street experiences such as victimization and risky street activity predicted adolescent depression. Rohde et al.[43] identified depressive symptoms as commonly occurring before first instances of homelessness in 73% of their sample suggesting that this form of psychopathology was liable to precede homelessness.

Bearsley-Smith et al.[24] compared psychological profiles of young people experiencing homelessness and young people with risk factors for homelessness. The young people with risk factors for homelessness were shown to have higher levels of depressive symptoms indicating that mental health problems may precede homelessness. However, this study was cross-sectional in design, which limits the ability to make inferences on direction of causality.

Some research has also begun to investigate whether certain types of disorders, such as substance abuse and PTSD, appear to worsen or are triggered by homelessness.[48,72,73] These studies showed that young people were vulnerable to trauma once they became homeless and this was associated with PTSD. For example, Stewart et al.[48] found that 83% of the youths in their sample were victims of physical or sexual assault after becoming homeless and 18% went on to develop PTSD. Self-harm behavior has also been positively associated with having ever spent time on the street.[55]

DISCUSSION

In this systematic review, we examined the role of psychopathology in youth homelessness. Collectively, these findings indicate a reciprocal relationship, whereby psychopathology often precedes homelessness and can prolong episodes of homelessness. Homelessness, in turn, appears to both compound psychological issues and increase the risk of psychopathology occurring. More prospective longitudinal research is required to support this conclusion.

TABLE 3—Prevalence of Psychiatric Disorder Among General Population in Systematic Review of Published Research on Prevalence of Psychiatric Disorders Among Young Homeless People, 2000–2012

Disorder	Prevalence of Psychiatric Disorder in Past Week, Housed 16- to 24-Year-Old People in United Kingdom (n = 560): NHS Information Centre[64]	Lifetime Prevalence of Psychiatric Disorder, 18- to 29-Year-Old People in United States (n = 2338): Kessler et al.[65]	3-Month Prevalence of Psychiatric Disorder, 16-Year-Old People in United States (n = 6674): Costello et al.[66]
Any diagnosis	32.3%	52.4%	12.7%
Anxiety	Mixed anxiety and depressive disorder: 10.2%; Generalized anxiety disorder: 3.6%	Agoraphobia without panic: 1.1%; Generalized anxiety disorder: 4.1%	1.6%
Mood disorders	Depressive episode: 2.2%	Major depressive disorder: 15.4%; Dysthymia: 1.7%; Bipolar I–II disorders: 5.9%	Any depression: 3.1%
All phobias	1.5%	Specific phobia: 13.3%; Social phobia: 13.6%	. . .
Panic disorder	1.1%	4.4%	. . .
OCD	2.3%	12.0%	. . .
PTSD	4.7%	6.3%	. . .
Impulse control disorders	. . .	Conduct disorder: 10.9%; Intermittent explosive disorder: 7.4%; ODD: 9.5%	Conduct disorder: 1.6%; ODD: 22%
Suicidal thoughts	Past y: 7%	. . .	. . .
Suicide attempts	Past y: 1.7%; Lifetime: 6.2%	. . .	. . .
Self-harm	Lifetime: 12.4%	. . .	. . .
Psychosis	0.2%		. . .
ADHD	13.7% (diagnosis did not require childhood ADHD)	7.8%	0.3%
Eating disorder	13.1% (when BMI is not taken into account)	. . .	. . .
Alcohol dependence	Past 6 mo: 11.2%	6.3%	All substance use disorders: 7.6%
Alcohol abuse	Past y: 6.8% (harmful drinking)	14.3%	
Drug dependence	Past y: 10.2%	3.9%	
Drug abuse	. . .	10.9%	
Comorbidity	12.4%	≥ 2 disorders: 33.9%; ≥ 3 disorders: 22.3%	. . .

Note. ADHD = attention deficit/hyperactivity disorder; BMI = body mass index; NHS = National Health Service; OCD = obsessive–compulsive disorder; ODD = oppositional defiant disorder; PTSD = posttraumatic stress disorder.

Prevalence of Psychopathology

We found high levels of psychiatric disorder across all studies that used a full psychiatric assessment, indicating a strong link between psychopathology and youth homelessness. We found conduct disorder, major depression, psychosis, mania, hypomania, suicidal thoughts or behaviors, PTSD, and attention deficit/hyperactivity disorder to be particularly prevalent, indicating types of disorder that may be associated with the condition. The prevalence of some disorders found among homeless youths was greater than those found in community samples (Table 3). These results are supported by studies that used subscale or inventory measures that indicate mental health issues such as internalizing or externalizing symptomology. All but 1 of these studies also found high levels of psychopathology.

Comorbidity was examined in 4 studies. These studies suggested that the presence of multiple disorders is high within this population.[11,41,47,58] Comorbidity has most often been examined between alcohol or other substance use disorders and nonsubstance psychiatric conditions. Only 2 studies[58,63] looked at comorbidity of other psychiatric disorders, suggesting a link between other forms of psychopathology (Table 2). More research into the presence of multiple diagnoses among young homeless people is important. It will reveal the extent of complicated mental health issues within this group compared with nonhomeless samples, with implications for service use delivery.

Psychopathology and Homelessness

Only 11 studies used a prospective, longitudinal research design. The dearth of research using this approach limits insight on the issue of direction of effects. However, existing research suggests a reciprocal relationship between homelessness and psychopathology. Psychopathology appears to make

TABLE 4—Studies Examining the Relationship Between Homelessness and Mental Health in Systematic Review of Published Research on Prevalence of Psychiatric Disorders Among Young Homeless People, 2000–2012

Author	Country	Sample Size	Sampling Strategy	Age Range, Years	Design	Key Findings
Baker et al.[68]	US	166	Shelter (runaways)	12–18	Longitudinal	Youth emotional problems were associated with recidivism for repeat runaways.
Bao et al.[69]	US	602	Street, shelter, drop-in center (homeless and runaways)	12–22	Cross-sectional	Support from friends on the street was associated with reduced depressive symptoms. Association with deviant peers was associated with increased depressive symptoms.
Bearsley-Smith et al.[24]	Australia	Homeless: 137; At risk for homelessness: 766; Not at risk for homelessness: 4844	Shelter, school support, health services	Nonhomeless: 14–17; Homeless: 13–19	Cross-sectional	Adolescents at risk for homelessness showed at least equivalent levels of depressive symptoms to adolescents who were already homeless. Those at risk for homelessness also showed higher levels of depression than those not at risk for homelessness.
Craig and Hodson[28]	UK	161	Shelter	16–21	Longitudinal	Two thirds of those with a psychiatric condition at index interview remained symptomatic at follow-up. Persistence of psychiatric disorder was associated with rough sleeping. Persistent substance abuse was associated with poorer housing outcomes at follow-up.
Embry et al.[70]	US	83	Adolescents discharged from psychiatric inpatient facility	Mean = 17	Longitudinal	One third of youths discharged from a psychiatric inpatient facility experienced at least one episode of homelessness. Having a "thought disorder" such as schizophrenia was inversely related to becoming homeless.
Fowler et al.[71]	US	265	Care leavers	Mean = 20.5	Longitudinal	Among foster care leavers those with increasingly unstable housing conditions and those with continuously unstable housing conditions after leaving care were more likely to be affected by emotional and behavioral problems.
Lauber et al.[72]	Switzerland	16 247	Psychiatric hospital	18+	Cross-sectional population study	Among patients admitted to psychiatric hospital, being of a young age (18–25) increased likelihood of being homeless at admission.
Martijn and Sharpe[73]	Australia	35	Street dwelling, shelter, temporary accommodation, supported accommodation	14–25	Cross-sectional	Trauma was a common experience before youths became homeless. Once homeless there was an increase in mental health diagnoses including drug and alcohol issues.
Kamieniecki[11]	Australia	NA	NA	12–25	Comparative review	A number of studies reviewed identified that psychiatric disorder often preceded homelessness particularly PTSD. However, homelessness also appeared to increase risk for development of further mental health difficulties, in particular substance issues and self-injurious behaviors.
Rohde et al.[43]	US	523	Street dwelling, shelter	Adolescents under 21	Longitudinal	Depression tended to precede rather than follow homelessness (73% reported first episode of depression before homelessness).

Continued

TABLE 4—*Continued*

Rosario et al.[74]	US	156 (75 homeless, 81 never homeless)	Lesbian, gay, or bisexual youths	Mean = 18.3	Longitudinal	Homelessness was associated with subsequent mental health difficulties. Stressful life events and negative social relationships mediated the relationship between homelessness and symptomatology.
Shelton et al.[46]	US	14 888	High-school students	11–18 at baseline; 18–28 at follow-up	Longitudinal population-based	Mental health difficulties were identified as a potential independent risk factor for homelessness although it is noted that homelessness could also have preceded mental health issues.
Stewart et al.[48]	US	374	Street dwelling, shelter, drop-in centers	13–21	Cross-sectional	83% of homeless adolescents were victimized while homeless. This increased risk for developing PTSD.
Van den Bree et al.[75]	US	10 433	High-school students	11–18 at baseline; 18–28 at follow-up	Longitudinal population-based	Depressive symptoms and substance use predicted homelessness but not independently. Victimization and family dysfunction were independent predictors of homelessness.
Whitbeck et al.[59]	US	602	Street dwelling, shelter, drop-in center (homeless and runaway youths)	12–22	Cross-sectional	Street experiences, in particular, victimization, increased risk of depressive symptoms as well as co-occurring problems such as depression, substance use, and conduct disorder.

Note. NA = not applicable.

a young person more vulnerable to becoming homeless.[24,64,71] Once a young person has become homeless, the experience appears to compound or trigger psychopathology and, in turn, psychopathology seems to prevent individuals from moving on from homelessness successfully.[28,48,55,72,73]

For some mental health problems the picture is a little more detailed. Experiences of street homelessness appeared to increase risk of PTSD.[48,55,66] The vulnerability of young people who sleep on the street is extreme and these individuals are more likely to experience victimization and serious illness and to feel unsafe. It is interesting that it seems that abuse experiences before leaving home for the first time are also associated with greater risk of revictimization once one becomes homeless.[45,55] This indicates that although psychopathology may or may not precede homelessness, traumatic experiences in the home may lead to further traumatic experiences once one is homeless. This leaves the young person with an increased risk of developing psychiatric disorders including PTSD, depression, suicidal ideation, and substance misuse.[52,58,67,76]

Limitations

The definitions of homelessness used across the range of studies reviewed here limit the generalization of results. Some of the studies reported that young people who had spent time on the street had poorer mental health compared with those who resided only in shelters.[76] This indicates that other studies that have included a range of types of homelessness may have masked the extent of psychopathology among street homeless youths.

Another issue of definition is the use of the term "runaway." Findings from these studies may not be generalizable to the rest of the youth homeless population. However, the levels of psychiatric disorder found among the studies examining runaways are comparable to those examining homeless youths.[77,78] The issues of definition prevent the calculation of effect sizes as the samples used across studies cannot be compared systematically.

The length of time a young person has spent homeless also varied considerably among samples. The length of homelessness may have an impact upon the severity of psychopathology. For example, Milburn et al.[42] found higher rates of psychiatric disorder and substance misuse among those with longer homelessness experiences. The age of participants is another factor that varies widely across studies (12 years[77] to 26 years[33]), which also makes comparisons more difficult.

A major caveat of the research in this field is the lack of full psychiatric assessments used to profile participants' mental health. Therefore, the findings of high prevalence of certain types of disorder[26,27,29,73,76] by some of the studies is not supported by other studies that used less comprehensive measures. Another key difference between studies is the use of differing diagnostic criteria. Varying use of the *DSM-III*[18] versus *DSM-IV*[19] may also account for some variability between studies.

Implications for Future Research and Practice

This review demonstrates the vulnerability of young homeless people in terms of psychopathology and reveals the need for greater levels of support and prevention work. Intervening before homelessness by identifying those at risk could reduce incidence of homelessness as well as mental

health difficulties. Providing support for those who do become homeless is essential because of the almost universally high levels of psychiatric disorder found in this population. However, it is important to note that despite the obvious need for mental health services shown by the review, young homeless people rarely access the support that they require.[79,80] Psychiatric screening programs for youths in shelters and other temporary accommodation, followed by availability of targeted services tailored to address potential comorbid psychopathology, may go some way to addressing this issue. Intervention efforts need to be accessible to this underserved population and work around the chaotic nature of their lives and their mental health needs.

A great deal of further research is required for intervention efforts to be successful. More must be done to examine the psychiatric profile of young homeless people to gather an accurate and full overview of the forms of psychiatric disorder that are common among this group, including research to establish patterns of comorbidity. More longitudinal research and examination of those in the general population at risk for homelessness is required to disentangle the temporal relationship between psychopathology and youth homelessness. This systematic review reveals a picture of extensive psychopathology among young people with experiences of homelessness. It also begins to unravel the complex reciprocal relationship between the 2 phenomena and identifies numerous areas for future inquiry. ■

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Contributors

All authors are in agreement regarding the content of the article. All authors have contributed to the conceptualization, design, and analysis, and all were involved in drafting and reviewing the article. K. J. Hodgson took overall responsibility for the conceptualization and design of the review, collating the articles, analyzing the data, and writing the article. K. H. Shelton and M. B. M. van den Bree were involved in conceptualization and design of the review as well as writing and editing the article. F. J. Los searched for the articles in the review, assessed them for relevance, and was involved in reviewing and editing the final article.

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