Outcomes of Interventions for Youth Experiencing Homelessness in Stable Housing, Permanent Connections, Education, Employment, and Well-Being: A Systematic Review

Systematic Review of Interventions

3/40 BLUEPRINT

The individuals depicted in this report are models and the images have been used solely for illustrative purposes.

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3/40 Blueprint: Systematic Review of Interventions

Introduction

Background and Significance

National studies estimate there are between 1.6 million and 1.7 million youth ages 12 to 17 who experience homelessness each year (Toro, Dworsky, & Fowler, 2007). Among those youth, it is estimated up to 40% identify as lesbian, gay, bisexual, transgender, and/or questioning (LGBTQ; Ray, 2006). While family conflict is common across all runaway and homeless youth (RHY), research indicates LGBTQ youth are more likely than youth who were not LGBTQ to report family rejection and being kicked out of their homes due to their sexual orientation or gender identity (Durso & Gates, 2012). In addition to family rejection, abuse may contribute to homelessness for LGBTQ youth. In one study, homeless LGB youth were 1.5 times as likely to have been abused by family members when compared to LGB youth who are not homeless (Walls, Hancock, & Wisneski, 2007). In addition to homelessness, higher levels of family rejection among LGBTQ youth lead to other negative health outcomes such as depression, substance abuse, and risky sexual behavior (Ryan, Huebner, Diaz, & Sanchez, 2009).

Age and developmental stages of LGBTQ youth may also play a role in their risk for homelessness. LGBTQ youth may be at particular risk for homelessness because they come out at a young age (Ray, 2006). Undergoing earlier sexual identity development may also lead to LGBTQ youth becoming homeless because they are cognitively less developed and running away from home is used as a coping strategy. In one study, LGBTQ homeless youth developed their sexual identity

approximately one year before those that did not become homeless (Rosario, Schrimshaw, & Hunter, 2012).

Although all homeless youth face challenges to their well-being, LGBTQ youth face even greater challenges, including victimization, substance abuse, mental health issues, and risky behaviors. Compared to homeless youth who are not LGBTQ, LGBTQ homeless youth have significantly higher levels of depressive symptoms (Cochran, Stewart, Ginzler, & Cauce, 2002) and are at higher risk of suicide attempts. In one survey, 62% of LGBTQ homeless youth had a history of suicide attempt as compared to only 29% of other homeless youth (Van Leeuwen et al., 2006). LGBTQ homeless youth use substances more often (Cochran et al., 2002; Noell & Ochs, 2001) and are more likely to experience sexual victimization

than other homeless youth (Van Leeuwen et al., 2006; Whitbeck, Chen, Hoyt, Tyler, & Johnson, 2004). Furthermore, a greater number of LGB youth report participating in survival sex (e.g., trading sex for food, shelter, or a place to stay) than heterosexual youth (Van Leeuwen, 2006; Whitbeck et al., 2004).

Another factor that distinguishes LGBTQ homeless youth is the discrimination they may face during contact with RHY providers. Due to discrimination, after becoming homeless, LGBTQ youth are more likely to live on the streets than utilize housing services (Berger, 2006).

Transgender Youth

Studies estimate that up to one in five transgender individuals either needs housing or is at risk of losing housing (Minter & Daley, 2003). When transgender youth experience homelessness, they may be particularly vulnerable to exclusion or discrimination by systems (Spicer, Schwartz, & Barber, 2010). Issues including bed assignment, bathroom use, and safety require special consideration when providing services to transgender RHY (Yu, 2010), yet the extent to which providers have addressed such issues is unknown.

Youth of Color

Studies have identified that LGBTQ RHY are disproportionately youth of color. For example, a recent survey of youth in New York found that among the homeless youth who identified as LGBTQ, 44% were Black and 26% were Hispanic (Freeman & Hamilton, 2008). LGBTQ youth of color may be at increased risk of family rejection due to homophobia in their ethnic communities, or when their gender identity conflicts with accepted gender roles (Reck, 2013). They may also face discrimination upon contact with providers, particularly from those located in predominantly White communities (Reck, 2009).

The 3/40 Blueprint: Creating the Blueprint to Reduce LGBTQ Youth Homelessness

This systematic review and evidence synthesis was conducted as part of a larger project, *The 3/40 Blueprint: Creating the Blueprint to Reduce LGBTQ Youth Homelessness.* That project

was funded as a collaborative agreement with the Family and Youth Services Bureau of the Administration for Children, Youth, and Families to build the capacity of transitional living programs that serve LGBTQ youth who are homeless. As a part of this project, a Technical Expert Group (TEG) was assembled to provide ongoing consultation and input on all tasks throughout the project's four years. The TEG consisted of 14 national experts in the RHY and LGBTQ fields, including LGBTQ RHY providers, consumers/youth, advocates, and researchers.

Objective of the Systematic Review

The objective of this review is to identify and synthesize empirical studies which address factors that contribute to outcomes of interventions for LGBTQ youth experiencing homelessness. For the purpose of this review, the outcomes of interest are those identified by the United States Interagency Council on Homelessness (USICH, 2013) Unaccompanied Homeless Youth Intervention Model: stable housing, permanent connections, education, employment, and well-being. The desired outcome is to provide information to transitional living programs (TLPs) and other RHY providers, and facilitate positive outcomes for LGBTQ homeless youth. This review will also identify existing gaps in the literature.

This systematic review is the second of two conducted as part of the larger *3/40 Blueprint.* The first focuses on non-intervention factors contributing to outcomes of stable housing, permanent connections, education, employment, and well-being for LGBTQ youth experiencing homelessness.

Research Question

The Funding Opportunity Announcement provided by the Family and Youth Services Bureau requested that a review of the literature be conducted for the following:

- Epidemiological studies that attempt to discover what factors make homeless youth more or less prone to certain outcomes, and
- Intervention studies that test whether certain programs or approaches increase a youth's likelihood of success

This systematic review addresses the second of those two topics. Through discussions with our federal project officers and TEG, we agreed this review would be inclusive of studies addressing LGBTQ youth and youth who are not LGBTQ, given the lack of literature on interventions for LGBTQ homeless youth.

Thus, in response to the Funding Opportunity Announcement, and consultation with team members and federal project officers, the following research question was considered in this review:

- What are the outcomes of interventions for youth experiencing homelessness for stable housing, permanent connections, education, employment, and well-being?

What are the outcomes of interventions for youth experiencing homelessness for stable housing, permanent connections, education, employment, and well-being?

Methodology

The Cochrane Collaboration guidelines (Higgins & Green, 2011) provided a foundation for the planning and execution of this project. Resources on design and analysis that were also helpful included Grimshaw, 2010; Littell, Corcoran, and Pillai, 2008; Popay et al., 2006; and Schünemann et al., 2008. Additional guidance was sought from our TEG and federal project officers. Their input was used throughout the course of this project from the conceptualization of the study design to the completion of this document.

Focus of the Search

To ensure relevancy to the field, the search focused on studies published after 1990. In order to identify all relevant studies, the search included published literature, as well as published and unpublished grey literature.

Inclusion and Exclusion Criteria

Two reviewers independently applied the inclusion/exclusion criteria to all potential studies. Any disagreements were resolved by discussion, referring to a third party when necessary. Reviewers were not blinded to any features of the studies including authorship, however, inclusion/exclusion decisions were made prior to detailed scrutiny of the results.

INCLUSION CRITERIA: POPULATION

- Currently homeless youth
- Youth through age 24

INCLUSION CRITERIA: TOPIC FOCI

- Studies that tested interventions used with homeless youth

INCLUSION CRITERIA: TYPES OF STUDIES

- Research studies, broadly defined to include both quantitative and qualitative investigations
- Credible grey literature (e.g., technical reports from government agencies or scientific research groups, working papers from research groups or committees, unpublished dissertations)

INCLUSION CRITERIA: TIME, PLACE, AND LANGUAGE

- Literature dating from 1990
- Literature from the United States and Canada
- Literature in English

EXCLUSION CRITERIA:

- Commentary or opinion publications
- Literature that did not include currently homeless youth (i.e., studies that examined risk factors for becoming homeless among stably housed youth)
- Literature focused on homeless adults (i.e., over age 24)
- Literature about homeless youth that were not unaccompanied (i.e., part of a homeless family)

Search Strategy

DATABASE SEARCHES

The search strategy was developed in consultation with an information scientist from the University at Illinois at Chicago. The final design was the product of an iterative process, depending to some extent on what was found in initial searches. A list of key search terms was developed by project team members in consultation with the TEG. Final search models and search terms are included in Appendix 3. The database search was conducted in February 2014 (see Appendix 4 for details of specific database searches). The following databases were searched:

- MEDLINE
- EMBASE
- CINHAL
- EBSCO (including Academic Search Premier)
- PsycINFO
- Social Sciences Citations Index
- Sociological Abstracts

In addition to traditional database searching, reference and cited reference searching (backward and forward) were conducted for each accepted paper. We also hand searched key journals to ensure papers were not overlooked.

GREY LITERATURE SEARCHES

Grey literature searches were also undertaken to ensure the inclusion of government reports, white papers, and unpublished dissertations. The searches were limited to sites that disseminated or collected literature related to the topic of interest, and were identified through members of the TEG and project team's familiarity with the literature, and internet searches using select key terms. Searches were conducted using combinations of the following terms:

"runaway and homeless youth," "runaway youth," "gay," "lesbian," "transgender," "transsexual," "LGB," "LGBT," "LGBTQ," "GLB," "GLBT," "GLBTQ," "queer," "runaway," "unaccompanied youth," "runaway and homeless youth LGBT," "~gay AND ~homeless," "~LGBTQ," "~homelessness," "unaccompanied youth," "sexual identity," "sexual orientation"

Primary sources often linked to other sources, which were also searched. Each identified source (e.g., website, clearinghouse, or database) was searched for research reports or other documents using the inclusion and exclusion criteria. Documents were collected from each site and reviewed for duplication. Sources included in the grey literature search are provided in Appendix 5.

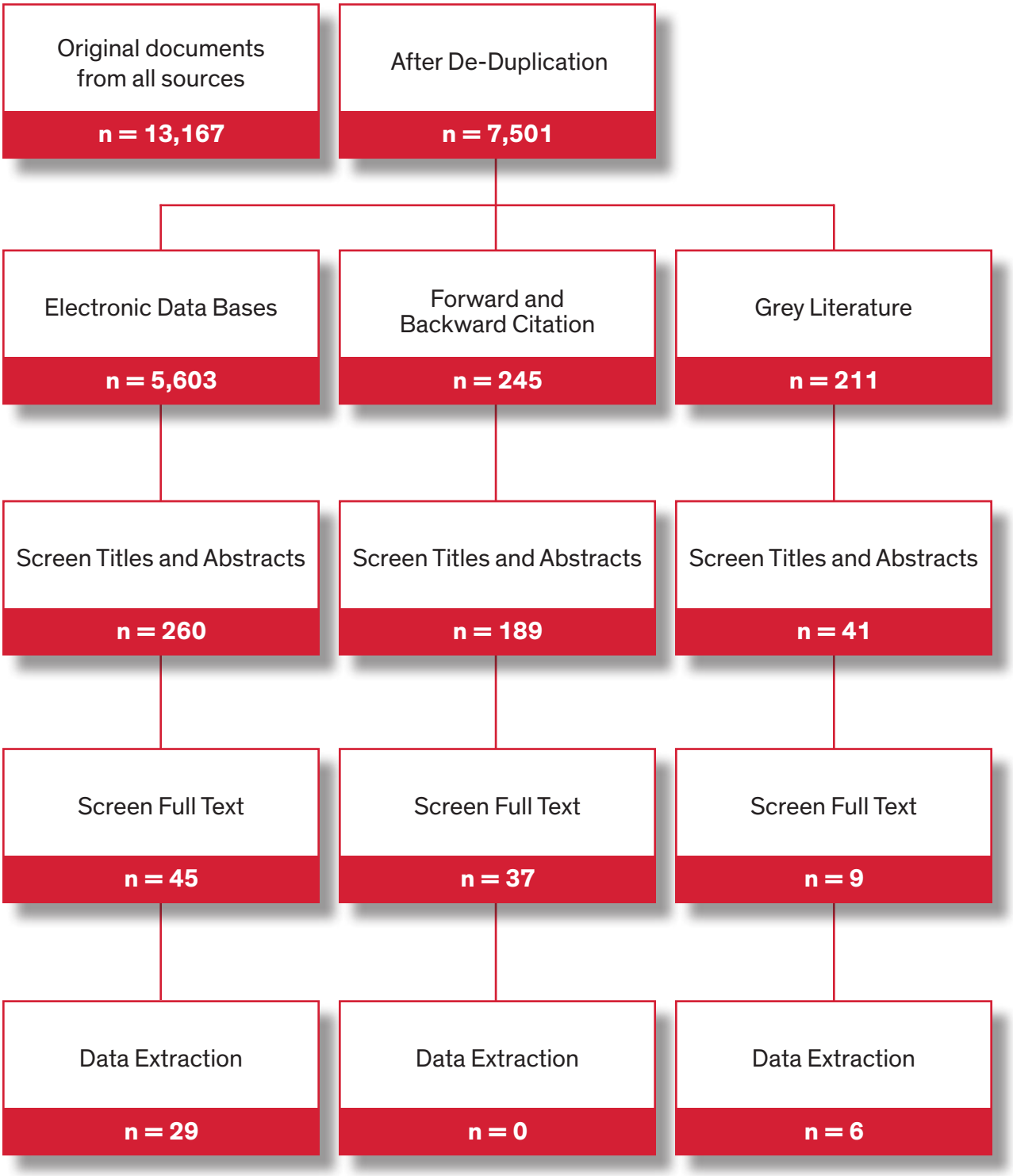
Appraisal and Extraction Strategy

Screening occurred in three steps. The initial screen used titles and abstracts to eliminate documents that clearly did not meet the project's inclusion criteria. Through that review, the screening criteria were further developed and clarified. The second screen used the full text of each article and applied a more fully clarified screening criteria to identify documents that clearly met the strictest interpretation of the inclusion criteria. The third screen occurred during data extraction wherein a study could be eliminated, if upon more thorough review, it was deemed to not meet the inclusion requirements.

For the first phase, a screening tool was created, uploaded, and tested using Qualtrics software. The final version of the screening tool is provided in Appendix 6. Two reviewers conducted the screening tasks. The reviewers independently applied the criteria to several sets of the same articles (e.g., double rating the same set of 100 articles). They compared notes and resolved disagreements via discussion, which further refined the understanding of the inclusion and exclusion criteria. During this phase, inter-rater reliability was determined using an online Cohen's Kappa calculator (http://faculty.vassar.edu/lowry/kappa.html) for reviewers' inclusion/exclusion decision agreement. Once agreement between reviewers remained consistently above 0.9, they began independently screening separate sets of articles.

After the first phase of selection, the articles were read in full, using the more fully clarified screening criteria, and included or excluded accordingly. The more explicit guidelines for inclusion and exclusion in the full text screening included, for example, the inclusion of data on outcomes experienced by currently homeless youth versus factors that contribute to youth becoming homeless. The most common reasons for screening out at the time of the full text review were the inability to isolate outcomes for youth (i.e., the study included all adults over 18), the population included youth at risk of homelessness rather than youth currently experiencing homelessness, and specific outcomes of interventions were not reported. A flowchart detailing the selection process and stages, with numbers of sources at each stage, is provided in Figure 1 (adapted from Moher, Liberati, Tetzlaff, Altman, and The PRISMA Group, 2009).

FIGURE 1: MAPPING OF DOCUMENT SELECTION PROCESS



SEARCH RESULTS

In total, 13,167 documents were located in the search. The database search returned the following total documents (n = 11,269). After de-duplication, 5,603 documents remained.

MEDLINE	2,404 documents
EMBASE	1,011 documents
CINHAL	1,115 documents
EBSCO	2,162 documents
PsycINFO	2,321 documents
Social Sciences Citations Index	1,755 documents
Sociological Abstracts	501 documents

An additional 245 documents were identified through backward reference and forward citation searching of the 29 articles that were retained from electronic databases. Backward reference searching is the process of identifying the references provided in the retained documents. Forward citation searching is the process of identifying documents that cited the retained documents. Of the 245 documents identified through this process, 189 additional documents were identified for screening, of which none were retained for analysis. The grey literature search identified 211 potential resources for screening, with 41 documents identified for screenings and six retained. References for each of the 35 included documents are provided in Appendix 1.

DATA EXTRACTION

During the screening phase, a data extraction tool for conducting full reviews of articles was created and piloted. A full description of all components included in the data extraction tool is provided in Appendix 7. Broad categories included in the data extraction tool included the following:

- Details of the study population and baseline characteristics
- Details of the setting
- Study methodology
- Study outcomes
- Quality assessment

ANALYSIS AND SYNTHESIS STRATEGY

Using a standard database, articles identified for inclusion were abstracted and analyzed with respect to their findings, methodological rigor, and generalizability. Specific questions asked as part of this analysis included:

- How did the study measure or ask about homelessness?
- How was each variable measured?
- Did the study use standardized instruments?
- Did the study look at gender differences between groups?
- Was the research grounded in theory?
- What are the strengths and limitations of the study?

After the analyses, findings were synthesized across studies and organized according to the outcomes of stable housing, permanent connections, education, employment, and well-being. A narrative summary of this analysis and synthesis is presented in the following section. The desired outcome of this review and synthesis is to provide information to TLPs, and other RHY providers, about outcomes of interventions for homeless youth in order to guide policy and program improvements for LGBTQ homeless youth.

The desired outcome of this review and synthesis is to provide information to transitional living programs, and other runaway and homeless youth providers, about outcomes of interventions for homeless youth in order to guide policy and program improvements for LGBTQ homeless youth.

Findings

Findings are reported according to the outcomes identified by the United States Interagency Council on Homelessness (USICH, 2013) Unaccompanied Homeless Youth Intervention Model: stable housing, permanent connections, education, employment, and well-being. There are limited studies addressing these areas; thus, most will be discussed repeatedly throughout this review. Thirty-five studies that addressed outcomes of interventions for youth experiencing homelessness in stable housing, permanent connections, education, employment, and well-being have been included. Many of the research studies included examine more than one of those topic areas. Thus, not all components of each study have been detailed in each section if they have already been discussed in a prior section. Appendix 2 can be used to identify which article addresses which particular topic area.

Stable Housing

The USICH (2013) Framework to End Youth Homelessness defines stable housing as "a safe and reliable place to call home." Stable housing answers an essential and basic need for homeless youth and is fundamental to facilitating positive outcomes across a range of other life events. Conversely, a lack of stable housing exposes youth to a significant number of risks on the streets that may reduce the likelihood of positive outcomes in those other areas.

EMERGENCY SHELTER

Barber, Fonagy, Fultz, Simulinas, and Yates (2005) interviewed youth age 18 to 21 post-discharge who had been receiving crisis services at a homeless shelter for transition-aged youth. Housing outcomes were assessed related to type of housing at discharge (n=156), 3 months later (n=139), and 6 months later (n=183). The housing types included: independent/peer, family, stable supported living, short-term shelter/hotel/hospital, and street/incarcerated. Between discharge and 3 months there were increases in the percentage of youth in independent/peer and family housing; there were decreases in the other three categories. There were decreases across all categories between discharge and 6 months. Between discharge and 6 months there were increases in independent/peer and family housing; alternatively, there were decreases between discharge and 6 months in the remaining housing outcomes. At the 3-month follow-up, youth were asked how safe they felt: 15% did not feel safe, 43% felt "somewhat safe," and 42% felt safe. No individual predictors (i.e., history of service placement, level of social support, runway history, educational attainment, work history, internalizing problems, substance use, history of arrest, level of conscientiousness, support from faith, race, gender, services received, and length of stay) were significant in predicting youth housing outcomes.

Research suggests accessing emergency crisis shelter services are associated with positive housing outcomes.

Larkin Street Youth Services (2011b) provided intensive case management, meals, and access to clothing, showers, and extra-curricular activities to youth (n=116) for one year. Females comprised 52% of the youth. At intake, 28% had experienced out-of-home placement, 15% were in a stable living situation, 34% had been arrested, and 13% had been in jail. At the conclusion of program participation, 71% had transitioned into stable housing and 30% had transferred to a different Larkin Street housing program.

Pollio, Thompson, Tobias, Reid, and Spitznagel (2006) examined outcomes for youth (n=371) from 11 shelters in Federal Region VII (Missouri, Iowa, Nebraska, and Kansas: MINK) who were providing short-term shelter, crisis services, and counseling. They tracked the number of days youth were on the run post-discharge. Interviews were administered at baseline, 6 weeks, 3 months, and 6 months post-discharge. The number of

days significantly decreased across all three time periods when compared to baseline measures. Additionally, using substance abuse treatment services post-discharge between 3 to 6 months, and/or receiving employment services post-discharge between 6 weeks and 3 months, was associated with a decrease in the number of days youth were on the run when compared to youth who did not access either service. Alternatively, accessing mental health services and health services was associated with an increase in the number of days youth were on the run when compared to youth who did not receive either service.

SUPPORTIVE HOUSING

Supportive housing programs generally provide youth with safe, secure, and affordable housing and the additional supports of health and mental services, outside referrals, employment and education services, job and life skills training, and counseling. There were no clear restrictions, but most programs reviewed expressed a desired age range for their clients. In addition, some programs did not evict residents based on age or the length of stay.

Harder + Company (2014) examined the experiences and outcomes reported by young adults in permanent housing. Data was gathered from transition-aged youth (n=82), ages 18 to 26, and 52% male. They reported the primary goal for many youth was finding secure housing. Thus, gaining access to a supportive housing program provided them with an immediate sense of security; of those who accessed supportive housing, 84% felt safe and secure. Additionally, 95% felt their current stable housing situation contributed to their well-being.

Supportive housing was identified as the link between unstably housed youth and their improving health outcomes. Findings showed all four previous tenants secured stable housing after exiting, and securing stable housing allowed youth extra time to organize their lives and work toward additional goals. Youth discussed feeling relieved when a program allowed them to stay for an extended period of time. When asked the components of a good supportive housing program, youth mentioned “safety” and “feeling like home.” Results did indicate a lack of objectivity in rule enforcement, and high staff turnover created a sense of instability for youth in the program.

TRANSITIONAL LIVING PROGRAMS

The structures of TLPs vary; however, they typically provide safe and secure long-term permanent housing for youth between 16 and 22 years of age. TLPs must provide, or refer youth out for: housing, life skills courses, interpersonal skill building, educational opportunities, employment support, and mental and physical health care.

Larkin Street Youth Services (2011a) targeted youth ages 18 to 24 (n=30) who were 43% female, 50% male, and 3% transgender, and able to work at least 32 hours a week. At intake, 38% had been in a stable living situation, 23 % had been in out-of-home placements, and 17% had been in jail. The program, a non-specialized TLP, also provided case management, vocation services, and recreation opportunities, and met material needs. After completing the program, 93% transitioned into stable housing situations with an average length of stay of 11 months.

In contrast, the Green Chimney's Program TLP in New York primarily worked with unstably housed LGBTQ youth ages 17 to 21. They provided single-occupancy bedrooms in mixed-gender apartments and vocation services. Nolan (2006) examined why youth were discharged and where they were discharged to. Results showed 20% were discharged to independent living programs: 47% moved into private residences (they were not the primary renter but lived with family, friends, or partners); 5% began college and moved into dormitories; 5% entered the military; 5% returned to the streets; and 18% left for unknown locations. Youth who stayed in the program longer were less likely to be discharged for repeated or significant rule violations. There were also positive transitional housing outcomes for education, housing, and permanent connection; there were mixed outcomes for employment.

SHORT-TERM SHELTER WITH EMPOWERMENT-BASED PRACTICE

Dostaler and Nelson (2003) assessed outcomes for young women (n=40) ages 12 to 20 at an emergency shelter that used an individualized approach and overarching goal of increasing independence. They interviewed participants at baseline measures and conducted follow-up

interviews at 3 months (n=30). They examined outcomes associated with a short-term shelter that utilized empowerment-based practices including: emergency shelter, medical, dental, and short-term counseling. They examined staff and residents' shelter experiences, investigated whether staff utilized an empowerment approach during the implementation of the various services offered, and explored whether participant outcomes improved after exiting the shelter.

Results showed proportionally more women lived in private houses and apartments during the follow-up interviews than prior to them entering the shelter. Fewer youth were also staying with friends after leaving, compared to when they entered the shelter. Feelings of stability improved and women began focusing on employment and/or education. Age discrimination and prejudice were cited as potential factors for housing situations remaining unchanged or worsening for some women. The experiences of women who moved back in with parents varied. Youth showed improvements in housing, independence, and life satisfaction. Shelter staff also helped youth secure housing and develop skills to live independently.

Winland, Gaetz, and Patton (2011) focused on Family Reconnect, a program designed to help youth who were at risk of or were currently homeless by facilitating reengagement with families and communities. The program staff provided case management and counseling (e.g. individual and family with and without the youth). Additionally, youth received mental health, addiction, and disability services. Study participants included 16- to 25-year-olds who were 53% female. Of program participants, 42% reported an improvement in their housing, and when delineated by gender, 47% of all males and 39% of all females reported an improvement. When examined by age, 38% of those 15 to 17, 47% of those 18 to 20, and 44% of those 21 to 25 reported an improvement in their housing outcomes. Reports of housing outcomes worsening: 3% of youth overall; 4% of males; 1% of females; and 4% of 18 to 20 year olds; 7% of youth 21 to 25 year olds; and no youth ages 15 to 17.

NON-HOUSING INTERVENTIONS THAT ADDRESS HOUSING OUTCOMES

Crisis Services. Home Free is a crisis intervention program offered by Greyhound Lines and the National Runaway Switchboard, designed to reunite youth with their parents or legal guardian. The aim is to help youth rebuild their relationships with family members, friends, and other positive and caring adults. Youth ages 18 to 20 also qualify for transportation to TLPs or independent living programs. Harper and Tyler (2012) found 99% of youth returned home after using Home Free. At follow-up, of those who returned home, 62% of youth were living with parents, guardians, or other family members, and 77% did not leave home again after participating. Additionally, 83% of parents indicated a decrease in their youth leaving home following a new crisis after participating in Home Free.

Drop-In Center. While Slesnick and Kang (2008) did not identify the specific interventions used, they did highlight the various services offered at their site. The drop-in center was open every Monday through Friday from 10:00 am to 7:00 pm and served approximately 40 youth per day. Participants (n=180) had access to laundry, showers, recreation, a place to rest, food, and clothes. For some, health care was accessible. A nurse practitioner and an assistant were available twice a week, providing routine examinations and treatment for a range of health concerns. GED tutoring was also provided by onsite volunteers and a local AIDS task force offered once-a-week, onsite HIV testing and counseling. Those youth who had higher percentages at baseline of days receiving education also had a tendency to show a higher rate of being housed at baseline. The percent of days youth were housed did change significantly over time: females had a higher percentage of days at follow-up than at baseline and when compared to males, the percentage of days girls were housed increased significantly over time.

SUMMARY OF INTERVENTIONS THAT ADDRESS STABLE HOUSING

The results from the studies about emergency shelters indicated emergency crisis shelters provide short-term benefits for youth including access to employment, education, housing, mental health services, permanent connections, health care, and legal support as well as establishing relationships and/or contact with family members, and decreasing substance use over the long term. Although the programs provided youth with short-term support, research examining the long-term impacts of emergency crisis shelters was inconclusive.

The results from studies about supportive housing programs indicated they provided youth with feelings of stability which enabled youth to focus on their needs or goals. Overall, youth who entered supportive housing programs described increases in their happiness, improvements in mental and physical health, and decreased rates of substance use. Additionally, youth also described forming positive staff and peer relationships. Research about supportive housing programs suggested that youth may benefit immediately from entering supportive housing programs. TLPs may also contribute to youths' positive educational, employment, and housing outcomes and help youth foster positive relations with staff.

The research examining outcomes from a short-term shelter was limited to one study which utilized empowerment-based practices. The researchers examined staff and resident shelter experiences, whether staff utilized an empowerment approach during service provision, and whether participant outcomes improved post-discharge. Results indicated youth improved their housing, independence, and life satisfaction outcomes.

The results from non-housing interventions that addressed housing outcomes included a crisis intervention program designed to reunite youth with their parents or legal guardian, a drop-in center which offered various services, and a family reunification program that helped homeless, at-risk youth by facilitating re-engagement with youths' families and communities. Overall results were positive. The majority of youth who participated in the reunification program successfully returned and remained home. For youth who engaged in services at the drop-in center, females had more positive outcomes than males. Finally, the program geared toward family reunification demonstrated positive results with higher percentages of youth showing an improvement in housing outcomes overall, particularly when examined by age and gender.

Permanent Connections

USICH (2013) identifies permanent connections as "ongoing attachments to families, communities, schools, and other positive social networks" (p. 15). These connections provide access to opportunities for youth that are useful for facilitating positive outcomes in other critical areas. They also provide a safety net for youth in an effort to reduce the likelihood of re-entering homelessness. This section details the interventions in housing settings that sought to create permanent connections for RHY.

EMERGENCY SHELTER

Pollio et al. (2006) examined outcomes for youth from 11 shelters providing short-term shelter, crisis services, and counseling. Interviews were administered at baseline, 6 weeks, 3 months, and 6 months post-discharge. Permanent connections were assessed through the operationalization of

family relationships: family contact was measured by participant self-reports as to whether family contact had occurred during each observation period. Perceived family support was assessed through responses to a four-point, Likert-type scale. The proportion of family contact and perceived family support increased significantly at each follow-up relative to baseline. Family contact increased significantly at the 6 week and 3 month observations, while perceived family support increased significantly at all follow-ups relative to baseline.

Winland, Gaetz, and Patton (2011) studied youth ages 16 to 25 and 53% female in an emergency shelter that provided services to youth currently living in the shelter and on the street. Services included referrals, family and individual counseling, and psychological assessments. Results showed 63% of youth who received services specifically geared toward family reconnection reported they were actively involved with a family member with whom they had not been previously engaged. In addition, 15% reported having repaired damaged relationships with family due to their program participation. The percentage of females (15%) to report these outcomes was higher than it was for males (13%).

SUPPORTIVE HOUSING

Ogden (2013) explored the impact of supportive housing on male youth (n=9) in a supportive housing program. They used qualitative interviews to assess the impact of the program on youth. Overall, they reported feeling positive about their relationships with staff; although some did report occasionally feeling as if staff members did not listen to them. Youth reported forming positive connections and developing trust with their fellow peers in the program and felt as if the program was a community. Notably, some youth even described peers and staff as family. They expressed a sense of gratitude because they had a place to stay. The researcher suggested one way for staff and youth to have positive relationships was for staff to allow youth to feel comfortable voicing their opinions and needs.

Harder + Company (2014) examined the experiences and outcomes of young adults in permanent housing. Data was gathered from transition-aged youth (n=82), ages 18 to 26 and 52% male. They reported youth initially struggled with maintaining prior social networks and developing new networks with peers within the program. Results indicated 39% reported they did not connect with other youth, and staff noted supportive housing seemed isolating for some youth. This occured particularly when youth attempted to simultaneously maintain connections with their street families, sometimes causing tension in their ability to maintain those relationships and abide by the supportive housing rules. Youth were able to develop a rapport with staff, but there was some tension with property managers due to perceptions of enforcement of unfair rules, harsh treatment of tenants, and untimely responses to tenant requests.

TRANSITIONAL LIVING PROGRAM

Nolan (2006) presented findings about the experience of developing permanent connections as a result of a transitional housing program. Permanent connections were not a specific outcome of the program. From surveys with currently enrolled youth (n=7) and former clients (n=4), eight participants reported they had learned interpersonal skills. For example, one youth said, “I am realizing what it takes to be a family” (p. 400). Staff members who were interviewed believed clients learned how to be accountable to their roommates and came to believe they were people who cared about them. Despite lacking definitive findings about developing permanent connections, learning to create relationships was a key component to being in this transitional living program.

NON-HOUSING INTERVENTIONS ADDRESSING PERMANENT CONNECTIONS

Harper and Tyler (2012) evaluated the Home Free Program (HFP), implemented by the National Runaway Switchboard and Greyhound Line. HFP provided crisis intervention services aimed at reuniting runaway youth with family and rebuilding relationships. Results showed after receiving transportation and referral services, almost all of the youth (99%) returned home and more than half (62%) were living with parents or other family members at the time of the survey.

Additionally, 85% of parents reported the issues that led to youth leaving home were somewhat, mostly, or completely resolved one month after the evaluation. Services were not ongoing, thus it was not possible to know whether those changes would have occurred if youth had not accessed the program.

Slesnick and Prestopnik (2005) compared youth receiving Ecologically Based Family Therapy (EBFT; n=65) to a control group who received services as usual (SAU; n=59) to explore reducing drug and alcohol usage over 12 months. Participants were 41% male, ages 12 to 17. Measures focused on: 1) family functioning using the Family Environment Scale (FES) which measures social-environmental characteristics and conflict and cohesion subscales; 2) verbal aggression and physical violence engaged in by youth and the primary caretaker using the Conflict Tactics Scale; and 3) the parent-child relationship using the Parental Bonding Instrument. There were four assessment time periods: pretreatment, posttreatment, 6 months posttreatment, and 12 months posttreatment. There were no differences between groups in family functioning, however, females demonstrated significantly higher levels of family conflict and lower family cohesion than males. Overall, both groups improved, although no statistically significant differences were found across time periods between groups.

In a subsequent study, Slesnick and Prestopnik (2009) compared treatment outcomes for Functional Family Therapy (FFT; n=40), Ecologically Based Family Therapy (EBFT; n=37), and services as usual (SAU; n=42). Participants were age 12 to 17, 45% male, and all primary alcohol users. FFT was office-based and focused on changing the dysfunctional family patterns that contribute to problem behaviors such as alcohol abuse and running away. EBFT was home-based and focused on using time-limited, intensive, therapeutic services to meet a family's needs. SAU consisted of informal meetings or therapy as well as case management. Assessments occurred at baseline, 3 months, 9 months, and 15 months. Family functioning was measured using the Family Environment Scale (FES) and parental bonding was measured by examining perceived parental care versus rejection and control versus autonomy. At baseline, there were no differences in family functioning. Results showed an improvement in family functioning across the three groups in verbal aggression, family cohesion, and family conflict with participants in EBFT and FFT showing significant improvement.

Saewyc and Edinburgh (2010) conducted a study comparing participants ages 12 to 15 in the Runway Intervention Program (RIP) and the 2004 Minnesota Student Survey (MSS). RIP is a home visiting and case management program specifically designed for sexually assaulted or exploited young girls who had run away. RIP provided at baseline a health examination, a comprehensive forensic assessment, health care, health education, home visiting, case management by advanced practice nurses, and access to an optional weekly girls empowerment group for 12 months. Participants (N=68) had been receiving services for at least 6 months between 2006 and 2007 and all had histories of incest or extrafamilial abuse and incest. MSS is a survey of girls (N=12,775) residing in Minnesota. This study used MSS as a comparison group of ninth-grade girls who resided in the seven counties around Minneapolis and St. Paul. To compare the RIP and MSS girls, they were divided into separate groups based on self-reported no abuse, incest only, extrafamilial abuse only, or extrafamilial abuse and incest (there were no RIP girls who reported no abuse or incest only). Family connectedness was measured by: general family connectedness, whether participants felt they could talk to their mothers or fathers, and feeling like family members cared about them. RIP participants showed statistically significant improvement between the start of program participation to 6 months for all measures of family connectedness. When comparing program entry to 12 months, there was only statistically significant improvement related to talking to their mothers. Results also revealed 6-month family connectedness scores were significantly higher for the RIP intervention group than the MSS group who had experienced extrafamilial abuse, although their scores were lower than those who had not experienced abuse. At 12 months, RIP participants demonstrated sustained improvement in family connectedness

and experiencing caring by adults. School connectedness was also a variable of interest in the RIP program. At both 6 and 12 months, girls in the program had statistically significant improvement in liking school and self-reported grades. There was also significant improvement in school connectedness measures at 6 months; but results were not significant at 12 months. Analyses revealed that RIP participants' school connectedness scores were higher than MSS girls who reported both types of abuse.

Ferguson and Xie (2008) sought to assess the feasibility of a social enterprise intervention (SIE) at a homeless youth agency. For the SEI group, they recruited 16 youth, ages 18 to 24, who were homeless and receiving integrated clinical services and comprehensive vocational training. For the comparison group, they recruited 12 youth from a local drop-in center for homeless youth. Family support was measured with one item about the frequency of contact the youth had with their intermediate family. Peer social support was measured using the Friends subscale of the Adult Self Report. Regarding family support, results showed SEI participants had a statistically significant increase in their contact with family from baseline to completion, while the comparison group experienced a decrease. Regarding peer social support, both groups experienced improvements, but not statistically significant improvements.

Finally, McCay et al. (2011) conducted a pilot study with homeless youth (n=15) who were receiving services from one of two agencies. They were between the ages of 16 and 26, and 33% female. The intervention group (n=9) engaged in a relationship-based intervention which focused on developing positive relationships, building strengths and self-esteem, and interrupting the mental health challenges often experienced by homeless youth; the remaining participants were in a comparison group (n=6). The intervention group engaged in six sessions lasting 1.5 hours each, focused on positive relationships. Outcomes were measured at baseline and 6 weeks post-baseline (immediately post-intervention).

Permanent connections were evaluated using the Social Connectedness Scale-Revised (SCS-R), a 20-item measure designed to assess belongingness. At baseline, participants showed low levels of social connectedness. At the 6-week follow-up, the intervention group demonstrated significant improvement in social connectedness; the comparison group did not demonstrate those same gains.

SUMMARY OF INTERVENTIONS THAT ADDRESS PERMANENT CONNECTIONS

Results indicated some positive outcomes for youth over time; however, the specific types of connections made varied between program staff, family members, and peers. Challenges were noted when youth were balancing relationships within and outside of their programs. While some studies demonstrated an improvement in family connection across time, in most cases, the improvement could not be solely attributed to the program. Furthermore, what constituted a family connection was different in each program; thus, it would be important to consider which types of family connections are most beneficial for youth in relation to long-term positive change. Finally, while connections were made, not all of the studies investigated the quality or meaning of these connections to youth. Ultimately, it was clear that a program might be able to positively impact permanent connections, yet further research is needed.

Education

USICH (2013) categorizes education as including "high performance in and completion of educational...activities" which will strengthen youths' abilities to support themselves and not re-enter homelessness (p. 15). Two articles were identified that explored factors that contribute to the educational outcomes of LGBT RHY.

EMERGENCY SHELTER

Pollio et al. (2006) assessed outcomes for youth in 11 emergency shelter programs. The educational variable of interest in this study was school behavior, which measured whether a participant had recently received detention, been suspended, or expelled. Interviews with 371 eligible youth occurred at intake and 6 weeks, 3 months, and 6 months post-discharge. At intake, 45% of youth who reported being in school disclosed experiencing a negative school event within the past 3 months: 31% received detention, 27% had been suspended, and 8% were expelled. Although there was a significant decrease in the proportion of youth experiencing any negative school event between 6 weeks and 3 months, no significant differences were found at any other point between baseline and the 6-month follow-up. There was also no consistent pattern or change for any individual, negative school event.

Barber, Fonagy, Fultz, Simulinas, and Yates (2005) combined education and employment outcomes into one variable. The combined variable was measured by whether youth were: 1) not in school or working; 2) in school or working part-time; or 3) in school or working full-time. At intake, 20% of youth had their high school diplomas, 14% had their GEDs, 65% reported working a year before intake, and 16% were working at the time of intake. At 3 months post-discharge, 55% reported not working or being in school, 12% were working either part-time or full-time, and 33% were working and/or going to school full-time. At the 6-month post-discharge follow-up, 48% of youth surveyed were not working or in school, 12% were employed or in school part-time, and 40% reported working or going to school full-time. Statistical significance was not assessed; however, the results suggested improvement in employment and education outcomes with minimal decreases post-discharge.

Dostaler and Nelson (2003) assessed educational outcomes for a convenience sample of young women (n=40) at an emergency shelter in Ottawa, by comparing baseline measures to 3-month follow-up measures. In addition to short-term housing, the program provided goal-oriented short-term counseling. The definition and operationalization of educational outcomes were unclear; nevertheless, there was no significant improvement or change in outcomes.

SUPPORTIVE HOUSING

The findings about educational outcomes (which were combined with employment outcomes) for youth in supportive housing were limited to one

study by Ogden (2013). Interviews with former and current tenants of a supportive housing program revealed three of four former tenants were able to find employment and/or continue their education while in the program and maintained their status post-discharge (Ogden, 2013). Five current tenants also reported finding jobs or continuing education while in the program. One participant did comment that the program's lack of school attendance requirements influenced his decision to cease attending once he began the supportive housing program.

TRANSITIONAL LIVING PROGRAMS

Nolan (2006) was the only study to evaluate the educational outcomes of youth in a transitional housing program. Participant outcomes were assessed by examining case files for 40 LGBTQ youth that exited a TLP between 2000 and 2005. School was a priority for some residents and while school attendance was not required by the program, youth who did not possess a high school diploma or GED were encouraged to work toward earning one or the other. Educational levels of residents at intake were not reported; however, 17 out of 40 were considered educational successes due to an increase in their level of education from intake. Of those 17, six obtained their GEDs and nine enrolled in college. In addition, two youth who were not in high school at intake were regularly attending school by discharge. This study was limited by a lack of tests of statistical significance and post-discharge data. Thus, the lasting impact of the transitional living programs on educational outcomes is unknown.

The authors found at both 6- and 12-months, girls in the program had statistically significant improvement in liking school and self-reported grades.

NON-HOUSING INTERVENTIONS ADDRESSING EDUCATION

Saewyc and Edinburgh (2010) measured the educational aspirations and self-reported grades of young adolescent female runaways (n=68) at baseline, 6 months, and 12 months. Participants were in the Runaway Intervention Program (RIP), a hospital-based program that provided strengths-based home visiting, case management, and group support to females ages 12 to 15 with histories of sexual exploitation or abuse. Educational aspirations were measured by responses to a five-point, single-item question about school plans ranging from quitting to pursuing graduate or professional school. Grade point average was measured by self-reports of each respondent's two most frequently earned grades. When compared to baseline responses, there were no significant improvements in educational aspirations at 6 months; however, educational aspirations were significantly higher at 12 months. Self-reported grades improved at both 6 months and 12 months when compared to baseline. The authors also compared data collected from the RIP to data from a general survey of ninth-grade female students in the 2004 Minnesota Student Survey and found no significant differences.

Slesnick, Prestopnik, Meyers, and Glassman (2007) recruited youth ages 14 to 22 from a drop-in center and randomly assigned them to an intervention group to receive a community reinforcement approach plus HIV education (CRA; n=96) or a control group to receive treatment as usual (TAU; n=84). Intervention participants received 12 therapy sessions and four HIV education/skills sessions. Participants in the control group were able to access services through the drop-in center which included a place to rest, showers, clothing, and case management. Youth were assessed at baseline, 3 months, and 6 months. At baseline, 14% of the CRA group were

enrolled in school, as were 10% of the TAU group. Education was included in a measure of social stability which was calculated by the percent of days at work, enrolled in school, housed, and seen for medical care. There was an increase in social stability for the CRA group at significantly higher rates than the TAU group; education was not assessed separately, so impact could not be assessed.

SUMMARY OF INTERVENTIONS THAT ADDRESS EDUCATION

The research evaluating educational outcomes for youth in housing and non-housing settings was sparse, lacked rigorous evaluation, and offered mixed results. It is possible housing settings may improve educational outcomes by: 1) reducing negative school events and 2) increasing the educational levels attained by residents. However, neither consistent nor long-term impacts were shown. Ultimately, there was not strong statistical evidence of improvement in educational outcomes. Outcomes were not measured uniformly and without consistent measures of educational variables, it was difficult to compare results and make strong conclusions about the impact of housing programs on educational outcomes.

Employment

USICH (2013) categorizes employment as including "high performance in and completion of... training activities especially for younger youth, and starting and maintaining adequate and stable employment, particularly for older youth" (p. 15). Achieving these accomplishments will strengthen a youth's ability to support themselves and prevent re-entering homelessness.

EMERGENCY SHELTER

Pollio et al. (2006) examined data gathered from 11 urban, suburban, and rural agencies that provide emergency shelter and crisis services for RHY in Federal Region VII (Missouri, Iowa, Nebraska, and Kansas: MINK). Participants were RHY (n=371) who had been discharged for 6 months. Interviews were conducted at admission, 6 weeks, 3 months and 6 months post-discharge. They measured employment by the percentage of youth employed and by tracking the percentage that were fired between follow-ups. At intake, 10% had been fired directly preceding entry into shelter and only 13% of youth were employed. Research about the relationship between emergency shelter and employment outcomes for RHY generally indicated positive trends; however, there was not significant, lasting improvement. Relative to baseline data, there was a significant increase in the percentage employed at 6 weeks and 3 months; however, 6-month data revealed a decrease in the percentage employed and an increase in the percentage fired relative to 6-week and 3-month follow-up data. Overall, the percentage of youth employed at 6 months was lower than at baseline.

Dostaler and Nelson (2003) assessed outcomes for young women (n=40) ages 12 to 20 at an emergency shelter, comparing baseline measures to 3-month (n=30) follow-up measures. In addition to short-term housing, the program provided goal-oriented short-term counseling. It was unclear how employment was defined and operationalized; nevertheless, no significant improvement or change in employment was found.

Vocational outcomes for youth in another emergency shelter indicated some improvement at 3- and 6-month follow-up. Barber, Fonagy, Fultz, Simulinas, and Yates (2005) combined education and employment outcomes into one variable which was measured by whether youth: 1) were not in school or working; 2) were in school or working part-time; or 3) were in school or working full-time. At intake, 20% of youth had their high school diplomas, 14% had GEDs, 65% had been working a year prior to admission, and 16% were working at the time of admission into the program. At the 3-month follow-up, 55% of those surveyed reported not working or being in school, 12% were working either part-time or full-time, and 33% were working and/or going to school full-time. At the 6-month follow-up, 48% were not working or in school, 12% were employed or in school part-time, and 40% of youth reported working or going to school full-time. Statistical significance was not assessed, but the results suggested improvement in employment and education outcomes with minimal decreases post-discharge.

SUPPORTIVE HOUSING

Steele and O'Keefe (2001) evaluated the outcomes of a healthcare program implemented in a comprehensive residential treatment program for RHY ages 16 to 21. The program consisted of healthcare services, case management, and behavioral therapy focused on drug and sexual risk behaviors. All participants were also provided weekly counseling, legal assistance, and employment assistance (case managers arranged employment opportunities for all participants). Participants included females (n=74) and males (n=32). Upon admission, none of the participants were employed, but at the end of 9 months, full-time or part-time employment increased to 42%. For 3 months or longer, the time in residence at the shelter, 30% had obtained and maintained full-time employment, and part-time employment was secured by 12%. Of the remaining participants, 41% began jobs but did not maintain their employment. The authors noted 17% of the participants were considered unemployable, although the criteria used to make that determination was not provided.

Steele, Ramgoolam, and Evans (2003) evaluated the same program using data collected from youth in the shelter between 1995 and 2002. Participants included 4,005 adolescents, 74% female and 32% male. Results indicated 63% of participants obtained full-time jobs and worked at their jobs for at least 9 months.

TRANSITIONAL LIVING PROGRAMS

Nolan (2006) evaluated employment as an outcome of a TLP for 40 LGBTQ youth exiting the program. Participants were required to work at least 20 hours per week and received job coaching. Results indicated that 57% of all participants were employed at discharge. Lengthier stays were associated with even higher rates of employment. Approximately 69% of youth who remained in the program for more than 6 months were employed at discharge. Levels of significance were not provided. It was also not possible to determine lasting impact on employment post-discharge.

NON-HOUSING INTERVENTIONS ADDRESSING EMPLOYMENT

Slesnick et al. (2008) assessed the impact of non-housing interventions on employment outcomes for RHY. The study evaluated the outcomes for youth (n=172) ages 14 to 24 and 41% female at a drop-in center. Study participants self-selected to participate in community reinforcement approach (CRA) and receive case management. Participants received, on average, five CRA sessions and eight case management sessions with a therapist. Measures were assessed at baseline, 6 months, and 12 months. The authors evaluated whether the intervention would lead to an increased likelihood of being employed. At 6 months, 73% participated and at 12 months, 76%. Results indicated no significant change in percent of days employed.

SUMMARY OF INTERVENTIONS ADDRESSING EMPLOYMENT

The findings from the studies examining the impact of interventions on employment indicate improvement in outcomes for youth can occur in housing and non-housing settings. Some interventions included short-term counseling that focused on goal setting, while others emphasized preparation for employment through resume creation, job interview coaching, and appropriate attire, and provided occasional vocational training programs. In some instances, the length and intensity of program participation was not reported, or there was a short-term follow-up period and the sustainability and long-term impact on employment was unclear. Another major limitation of the studies was knowing whether the changes in employment were statistically significant. Finally, it was difficult to assess lasting impact and the potential for change in the programs. Further research is needed with stronger statistical methods, longer-term follow-up, and greater attention paid to the types of programs targeting employment across all settings, including the extent to which youth utilize such programs.

Well-Being

The USICH Framework to End Youth Homelessness refers to well-being as "the social and emotional functioning of homeless youth". This includes the development of key competencies, attitudes, and behaviors that enable youth to avoid risk and achieve success in other outcome areas, including education, employment, and permanent connections. This review identified articles that address well-being in the following domains: a) sexual risk behaviors, b) HIV risk behaviors, c) substance abuse, and d) mental health.

SEXUAL RISK BEHAVIORS

One indicator of well-being is sexual health, including the minimization of sexual risk behaviors such as having frequent sex, survival sex, unprotected sex, or a large number of sexual partners. The minimization of sexual risk behaviors may include practicing safe sex, as well as obtaining knowledge and skills to negotiate and navigate sex safely.

Pollio et al. (2006) examined outcomes for participants in 11 Midwest emergency shelters. Participants (n=371) were interviewed at admission and 6 weeks, 3 months, and 6 months after leaving the shelter. Sexual activity was measured dichotomously by asking participants if they were currently sexually active. The follow-up data indicated a significant increase in sexual activity for youth at 6 months relative to baseline. There were no significant changes at 6 weeks or 3 months. The positive reduction in sexual activity during shelter stays dissipated over time.

Steele and O'Keefe (2001) examined the effectiveness of a healthcare initiative in supportive housing which included a focus on sexual risk behaviors. Of 106 participants, 70% were female. At admission, 60% of participants had STDs, and at the end of 9 months, medical records confirmed a 7% decrease in new or recurring STDs. In addition, at admission, only 12% had received the hepatitis B vaccine and at follow-up the percentage had increased to 59%. The study did not report whether results were statistically significant.

Steele, Ramgoolam, and Evans (2003) performed a prospective evaluation of a healthcare initiative implemented in a residential program which provided services to RHY ages 16 to 21. Analysis was based on a random sample of participants (n=106) from a larger population of adolescents (N=4,005) that entered the shelter between 1995 and 2002. At admission, 54% of participants had STDs and at follow-up or completion, there was a 9% decrease in new or recurring STDs; statistical significance was not reported.

NON-HOUSING INTERVENTIONS ADDRESSING SEXUAL RISK BEHAVIORS

Participants ages 12 to 17 and 78% female in the Support to Reunite, Involve, and Value Each Other (STRIVE) program, a short-term, family-based intervention (n=68), were compared to a control group receiving services as usual (SAU; n=83) from community agencies (Milburn et al., 2012). Baseline reports indicated the average number of sexual partners reported by participants across both groups was less than one, and 47% had not yet engaged in sexual activity. There was no significant intervention effect on whether participants had protected or unprotected sex nor the number of times they had sex. A statistically significant effect was found for the variable number of partners, with the average number decreasing for the intervention group and increasing for the control group.

Edinburgh and Saewyc (2009) studied Runaway Intervention Program (RIP), a family-

based, home-visiting intervention for young females, ages 10 to 14, who had been sexually assaulted. They investigated changes in sexual activity and behaviors, as well as level of knowledge about reproductive health and accessing birth control. At baseline, 55% of participants had chlamydia infections and none had accessed reproductive healthcare or were using hormonal birth control. By 6 months, the rate had reduced to 15% and by 12 months, to 5%. Furthermore, at 12 months, all participants demonstrated knowledge regarding how to access reproductive health resources and were utilizing some form of hormonal contraception. Statistical significance was not reported.

Saewyc and Edinburgh's (2010) study compared girls in RIP (N = 68), ages 12 to 15, to ninth-grade girls in the Minnesota Student Survey (MSS; N=12,775) at baseline and post-baseline at 6 and 12 months for changes in risky sexual behaviors. The results revealed that at 6 and 12 months, the intervention group demonstrated statistically significant change. At 6 months, 50% of RIP participants showed statistically significant improvement in condom use since last having sex, and at 12 months, 56% showed improvement. RIP participants also demonstrated significant decreases in the number of sexual partners and used contraception more effectively at 6 and 12 months. When comparing RIP and MSS participants at 6 months, there were no significant differences related to using condoms during their last sexual encounter. At 12 months, the RIP and MSS participants who had not experienced abuse were not significantly different related to condom use.

Auerswald, Sugano, Ellen, and Klausner (2006) implemented a different intervention designed to test the efficacy of a street-based STD testing and treatment program with youth recruited from street sites. Participants (n=218) were homeless, 34% female, and between the ages of 12 and 24. They were all screened for gonorrhea or chlamydia, with 8% testing positive and 94% of them being treated. Six months later, a random sample was chosen for follow-up (n=157) including 14 of the original 17 youth who had tested positive. Of the 14 who were positive at baseline, six were retested and none had subsequent infections. In addition, of the 157 youth in the follow-up sample, 87 were tested, and of those 7 tested positive for STDs. Information regarding whether results were statistically significant was not provided.

Finally, Ferguson and Xie (2008) recruited 16 youth, ages 18 to 24, who were homeless and receiving integrated clinical services and comprehensive vocational training. For the comparison group, they recruited 12 youth from a local drop-in center for homeless youth. They conducted a study of the social enterprise intervention (SEI), which focused on vocational training and mental health services for high-risk behaviors. Participants in the intervention group experienced a 0.50-unit increase in the number of different sexual partners during the past 30 days, while the comparison group demonstrated a 2.33-unit decrease; there was a statistically significant difference between groups. The authors attributed the difference to an increase in participant's self-confidence.

HIV RISK BEHAVIORS

This section will cover findings specific to interventions designed to reduce HIV risk behaviors. The majority of interventions addressing HIV risk behaviors were implemented in non-housing settings. The target was focused on building knowledge and changing risky sexual and drug behaviors.

Street Smart was the only housing intervention reviewed that was an HIV prevention program. Rotheram-Borus et al. (2003) evaluated Street Smart by comparing its implementation over 2 years with participants (n=167) in two intervention shelters versus participants (n=144) in two control shelters. Participants were ages 11 to 18 and 49% female. The intervention included four components: training for youth, training for shelter staff, providing condoms, and offering access to health resources. Small groups of youth received an intervention which focused on role-playing, creating support for beliefs about safe sex and substance use abstinence, and maintaining networks of positive support that could lead to sustained behavior change. The groups were held three days a week. Staff participated in 10 days of training over a 6-week period and any staff that

were replaced engaged in booster training. Access to health care was provided on a weekly basis. The sessions covered HIV information and social skills, while individual sessions were designed to address individual barriers to safe sex. Change was measured through a structured interview focused on sexual risk behaviors and substance abuse. Follow-ups occurred post-baseline at 3, 6, 12, 18, and 24 months. Analyses were conducted using propensity score analysis. Different trajectories were noted for male and female participants and analyzed separately. When females in the intervention group were compared to those in the control group, the average number of recent sexual partners was lower at 24 months for those in the intervention group. Regarding the average number of unprotected sexual acts, female participants in the intervention group had lower numbers at 3 months, and were significantly lower at 24 months when compared to those in the control group. There were also differences for females when examining rates of abstinence: there were higher rates at 18 months for females in the intervention group than the control group. At none of the other time points were there statistically significant changes in risky sexual behaviors. Unlike the results for the female groups, there were no statistically significant differences for male participants in the control versus intervention group at any time point.

NON-HOUSING INTERVENTIONS ADDRESSING HIV RISK BEHAVIORS

Using a cross-sectional design, Booth, Zhang, and Kwiatkowski (1999) evaluated a program focused on reducing risk behaviors that included a train-the-trainer model so youth could learn how to train other youth. Study participants were runaway adolescents recruited from a community drop-in center serving high-risk youth divided into two groups, an intervention group (n=72) and a comparison group (n=75). Participants were 12 to 19 years old and 51% male. The intervention group received a 2-day, 8-hour training which included information about HIV risk factors, health beliefs, intention to change risky behaviors, and the skills to needed to accomplish change. Youth were assessed through structured interviews about drug use, sexual risk, HIV/AIDS knowledge, runaway history, and abuse history. Interviews

were conducted at baseline, two days after completing training for those in the intervention, and 3 months later. Areas of interest included change in AIDS knowledge, number of sex partners, and number of drugs used. At baseline, no significant differences were found between the intervention and comparison groups in the areas of interest. There was one exception, however. Participants in the intervention group had a higher level of substance use at 3 months prior to baseline than the comparison group. Analyses showed that knowledge of AIDS risk behaviors and prevention to reduce risk were not significantly different for the two groups at baseline. However, there was significantly more knowledge by those in the intervention versus the comparison group at 2 days and 3 months. There was a significant difference for participants in the level of high-risk sex and the number of sex partners for the intervention group, although not the comparison group, between baseline and 3 months. In addition, between baseline and 3 months, neither group showed significant differences related to their use of heroin and cocaine or the number of drugs used. Behaviors were further examined for the participants in the intervention. Those receiving the intervention demonstrated greater knowledge about AIDS between follow-up at 2 days and follow-up at 3 months. Notably, lower concerns about risk of HIV infection was associated with high-risk behaviors and there was a statistically significant relationship showing higher levels of AIDS knowledge was associated with a greater likelihood of reporting high-risk sex behaviors. There were also statistically significant relationships between lower levels of concern about HIV infection and using heroin or cocaine, as well as between the perception of having a greater than 50% chance of becoming infected with HIV and using heroin or cocaine.

There were also statistically significant relationships between lower levels of concern about HIV infection and using heroin or cocaine, as well as between the perception of having a greater than 50% chance of becoming infected with HIV and using heroin or cocaine.

Slesnick and Kang (2008) conducted a study to examine the impact of community reinforcement approach (CRA), an integrated individual cognitive-behavioral treatment combined with four HIV education sessions, on HIV risk behaviors with youth at a drop-in center for homeless youth. Participants ranged in age from 14 to 22 and were 64% female. Participants in the intervention group (n=96) received 12 CRA sessions, and those in the control group (n=84) received services as usual (SAU) through a drop-in center including a place to rest during the day, food, showers, clothing, free HIV testing, and referrals and case management that linked youth with community resources at the youth's request. The Health Risk Questionnaire was used to assess overall HIV knowledge, overall risk behavior, and condom attitudes. Females were more likely to engage in high-risk sexual behaviors, use condoms less, and have sex with high-risk partners. When comparing baseline and 6 months post-baseline, all groups demonstrated an increase in condom usage; however, the intervention group showed the greatest improvement. Youth also reduced the number of sexual partners regardless of which group they were in. Overall, findings showed high-risk behaviors in which youth engaged at baseline were stronger predictors of change in HIV risk behaviors than was treatment engagement.

Carmona, Slesnick, Guo, and Letcher (2014) examined community reinforcement approach (CRA; n=93), motivational enhancement therapy (MET; n=86), and case management (CM; n=91). CRA was an operant-based, substance use disorder treatment provided over 12 sessions. MET was adapted from motivational interviewing and designed to increase an individual's intrinsic motivation. CM included 12 sessions that linked

participants to supports which could address their basic, legal, mental and physical health, education, and employment needs. Youth in each group also received two sessions of an HIV intervention. Participants were homeless, ages 14 to 20, and 47% female. Changes in behavior and knowledge were assessed with the Health Risk Questionnaire. Results showed an increase in youth always using condoms from baseline to 6 months, but not from baseline to 12 months. Those who had a higher frequency of drug use at baseline, and who also attended more treatment sessions, were less likely to reduce their use of condoms and more likely to show increased condom usage at the 6-month follow-up. From baseline to 12 months, HIV knowledge significantly increased and the number of sex partners significantly decreased, but HIV risk behaviors did not change.

Nyamathi et al. (2013) carried out a pilot study comparing the impact of a nurse-led HIV/AIDS and hepatitis health promotion (HHP) program and an art messaging (AM) program on improving HIV knowledge, hepatitis knowledge, and mental health. Participants were homeless youth (n=156) ages 15 to 25 who were using drugs and frequented a homeless youth drop-in agency. The HHP program included three to four 45-minute group sessions led by a research nurse over a 6-month period; while the AM program included three to four 2-hour group sessions led by faculty at California Institute of Arts. HIV/AIDS knowledge was measured at baseline and during a 6-month follow-up by a modified 21-item CDC knowledge and attitudes questionnaire for HIV/AIDS. Results revealed HIV/AIDS total knowledge scores increased from baseline to 6 months. The cognitive and transmission knowledge subscale scores showed significant improvement. Similar improvements in hepatitis B virus and hepatitis C virus knowledge were found. For both groups, knowledge generally increased; however, it was more pronounced for the HHP group. Regarding HIV/AIDS cognitive knowledge, only the HHP group improved.

Slesnick and Prestopnik (2005) randomly assigned youth (n=124) ages 12 to 17 and 59% female who had runaway into an Ecologically Based Family Therapy (EBFT) group (n=65) or services as usual (SAU) group (n=59). There were

four assessment time periods: pretreatment, posttreatment, 6 months posttreatment, and 12 months posttreatment. At pretreatment when compared to males, females had higher HIV risk scores, but did not differ in their knowledge of HIV information. Over time, there was significant improvement in HIV knowledge by both groups and they maintained a relatively low level of engaging in high-risk behaviors throughout the three follow-up periods.

Gleghorn et al. (1997) conducted interviews to evaluate an HIV prevention program which combined traditional street outreach, HIV prevention services in a youth center, and youth-specific activities and educational materials created specifically for the targeted population. Participants were split into intervention and comparison sites at two different time periods (Time 1: intervention group [n=246] and comparison group [n=183] and Time 2: intervention group [n=392] and comparison group [n=325]). Measures focused on participant condom use, new needle/syringe use, and use of HIV-related health referrals. Before implementation of the intervention there were no meaningful differences between the groups. Higher levels of contact with outreach workers led to a higher likelihood of following through when receiving HIV-related referrals and using new needles/syringes. Condom use was not impacted by outreach or needle/syringe usage.

SUBSTANCE ABUSE

There were no studies examining substance use in TLPs; however, there was research examining interventions designed to impact substance use in emergency shelters.

Steele and O'Keefe (2001) evaluated a healthcare initiative which was implemented in a short-term shelter where 106 participants, 70% female, were provided weekly counseling, legal assistance, and employment assistance. The shelter also provided healthcare services, case management, and behavioral therapy focused on drug and sexual risk behaviors. Results revealed a significant decrease for participants in substance abuse between admission and the end of 9 months.

Steele, Ramgoolam, and Evans (2003) performed a prospective evaluation in a residential program which provided services to RHY ages 16 to 21. Their analysis was based upon a random sample of participants (n=106) from a larger population of adolescents (N=4,005) who entered the shelter between 1995 and 2002. Results indicated drug dependence was reduced from 47% at admission to 4% at follow-up. Information was not provided regarding whether results were statistically significant between admission and follow-up.

Rotheram-Borus et al. (2003) studied participants (n=167) in two intervention shelters versus participants (n=144) in two control shelters over a 2-year period. Participants were ages 11 to 18 and 49% female. Small groups received an intervention which focused on role-playing, creating support for beliefs about safe sex and substance use abstinence, and maintaining networks of positive support that could lead to sustained behavior change. The groups were held three days a week. Change was measured through a structured interview focused on sexual risk behaviors and substance abuse. Follow-ups occurred post baseline at 3, 6, 12, 18, and 24 months. Analyses were conducted using propensity score analysis. Different trajectories were noted for male and female participants and analyzed separately. Significant long-term improvements in substance use were not found after implementing Street Smarts. Prior to analysis of the intervention's outcomes, propensity scores were used to identify comparable subgroups of youth in the intervention (n = 101) and control conditions (n = 86). Analyses revealed the participants from the four shelters were different. When changes in substance use in the intervention group were compared to the control group, statistically significant results were identified. Alcohol use at baseline tended to be different between matched intervention and control participants: 69% of the intervention group used alcohol in their lifetime compared to 80% of the control group. However, lifetime substance use was similar between the intervention and control group participants. For the 3 months prior to baseline, both alcohol and marijuana use for the intervention group remained significantly lower than for those in the control group. The number of drugs used was also lower for the intervention group. Among female adolescents, alcohol use tended to be lower in the intervention group than in the control group at the 12-month follow-up. Marijuana use was also significantly lower for the intervention group at the 6-month and the 12-month follow-up. The number of drugs used was lower by participants in the intervention group for female adolescents at the 6-month and 12-month follow-ups, and tended to be lower at the 3-month follow-up. Youth who reported the highest and lowest risk scores were removed from the analysis; therefore the intervention impact for those youth is unknown.

Pollio et al. (2006) examined data gathered from 11 agencies that provide emergency shelter and crisis services for runaway homeless youth in Missouri, Iowa, Nebraska, and Kansas. Assessment occurred post-discharge at 6 weeks, 3 months, and 6 months. The baseline data indicated lifetime substance use was highly prevalent across a wide range of substances: marijuana (94%), alcohol (76%), cocaine (17%), and inhalants (13%). There were significant differences at all three follow-up periods when compared to baseline (77%) for levels of current substance use: 6 weeks (41%), 3 months (53%), and 6 months (40%). When comparisons were made between 6 weeks and 3 months, there was a significant decrease to 12%; between 3 and 6 months there was a 13% increase; between

6 weeks and 6 months there was only a 1% decrease, which was not statistically significant.

Slesnick et al. (2013) examined community reinforcement approach (CRA, n = 57), motivational interviewing (MI, n = 61), or Ecologically Based Family Therapy (EBFT, n =61), with randomly assigned runaway adolescents who used substances. Urine screens and the Form 90, a semi-structured questionnaire that yields total number of days of all drug use, including alcohol in the past 90 days, were used to assess adolescents and primary caregivers at 3, 6, 9, 12, 18, and 24 months post-baseline assessment. There was a statistically significant reduction of substance use over time across CRA, MI and EBFT. Three group treatment trajectories were identified: decreasing (76%), where the majority of participants showed a decrease and then a slight increase in substance use over time; fluctuating high users (14%), where youth showed high levels of substance use despite some patterns of increase and decrease over time; and u-shaped (11%), where participants demonstrated a steep decrease and then a sharp increase in their substance use at follow-ups. A decreasing pattern was demonstrated by 63% of adolescents in EBFT, 82% of adolescents in CRA, and 82% of adolescents in MI. Substance use continued to decrease at 18 months for participants in EBFT, but then increased at 24 months. Similarly, adolescents in the CRA group reported the lowest frequency of substance use at 18 months, with an increase at 24 months. Substance use was reduced over time in the MI group at 12 months, but increased at 18 and 24 months. Overall adolescents in all treatment conditions showed improvement in their substance use over time. Intervention type did not affect treatment outcomes.

Fors and Jarvis (1995) evaluated the effectiveness of a Drug Prevention in Youth risk reduction program implemented by shelters for RHY. The intervention included four 1-hour sessions focused on why people use drugs, the effects of drug use and abuse, various techniques for intervening in someone's drug use, and where

to get help for drug abuse. This study used peer-led groups in seven shelters with 173 participants and adult-led groups in two shelters with 34 participants as the intervention groups, and 14 participants from two shelters as the non-intervention group. Posttest measures occurred following the fourth session (no more than 14 days from the start of program participation). Regarding knowledge about drug categories, intention to help friends use community agencies for a drug problem, and willingness to accept responsibility for drug use, the peer-led intervention group was the only one to demonstrate a significant difference between pretest and posttest (the authors encouraged interpreting the results very conservatively). Finally, none of the groups showed a significant change related to their intention to help a friend whom they believed had a drug problem.

Only one study, conducted by Kisely et al. (2008), measured substance use outcomes for youth residing in supportive housing for a minimum of 3 months (n=15) against a control group using a drop-in center (n=30). Participants were ages 16 to 25 and 71% male. Both groups had access to counseling, case management, drop-in services, employment search support, and education. Results indicated youth engaged in supportive housing had significantly lower rates of substance use when compared to youth in the control group using drop-in services.

NON-HOUSING INTERVENTIONS ADDRESSING SUBSTANCE ABUSE

Slesnick et al. (2008) examined the impact of a community reinforcement approach (CRA) and case management on youth receiving services in a drop-in program. At baseline, the average percentage of days that youth reported using drugs or alcohol was 31%. Among those youth, 22% reported not using any alcohol or drugs during the prior 90 days. The remaining 79% reported using drugs or alcohol on at least one day during that period. Females had significantly less alcohol and drug use at baseline than males, and those who had a higher percentage of days being in school had significantly lower baseline of alcohol and drug use. Of the youth that had some level of substance use at baseline, there was a significant reduction in drug and alcohol use over time. Finally, youth with a greater percentage of days housed over the 6-month follow-up period demonstrated a greater decrease in drug and alcohol use.

Slesnick et al. (2007) compared a community reinforcement approach (CRA) to treatment as usual (TAU) for youth ages 14 to 22 recruited from a drop-in center. Youth were randomly assigned to an intervention group to receive CRA plus HIV education (n=96) or a control group to receive treatment as usual (TAU; n=84). Youth in the CRA intervention had a significantly greater reduction in percentage days using drugs between baseline and 6-month follow-up when compared to TAU. Both groups also showed improvement over time in percentage of days using drugs (except tobacco) and in number of categories of drugs used.

Bartle-Haring et al. (2012) examined the impact of adding a mentoring program to community reinforcement approach (CRA) as an intervention for changing substance use behaviors, problem consequences of use, depressive symptoms, and internalizing/externalizing problem behaviors. Participants were homeless youth ages 14 to 20 receiving services at a drop-in center; they were randomly assigned to intervention (n=48) and treatment as usual groups at the drop-in center (n=42). Adolescents were assessed at baseline, 3 months, and following the completion of treatment at 6 months post-baseline. The number of CRA sessions, the number of mentoring sessions, nor the interaction of the two were predictive of variance in substance use during the course of the study. Regardless of the number of CRA or mentoring sessions attended, participants showed a decrease in substance abuse frequency. Furthermore, decreases in the consequences of substance use were more dependent on the interaction of treatment and mentoring sessions.

McCay et al. (2011) studied an intervention group (n=9) who received a program designed to build relationships and strengths, and mitigate negative mental health outcomes versus a comparison group (n=6). Substance abuse was measured by the adolescent MAST (Michigan Alcoholism Screening Test), with 19 yes-or-no items focused on alcohol and drug use. At

baseline, 78% of the intervention group and 67% of the comparison group had MAST scores indicative of a serious level of alcohol and drug use. At the 6-week follow-up, there were no significant differences between the groups in MAST scores.

Peterson, Baer, Wells, Ginzler, and Garrett (2006) conducted a study by recruiting homeless youth from drop-in centers. Participants were ages 14 to 19, 45% female, and had experienced at least one binge drinking episode. Participants were randomly assigned to a one-session brief motivational enhancement intervention group (ME; n=92) or one of two control groups: either an assessment only (AO; n=99) or an assessment at follow-up only (AFO; n=99). Measures were assessed at baseline, 1 month, and 3 months. The outcome variables were binge drinking, number of days using alcohol in the past 30 days, standard drink units, number of days using marijuana and number of days using other than alcohol or marijuana in the past 30 days. Results did not indicate a significant reduction in alcohol use at any time point for the ME group. The ME and AO groups reduced their use of marijuana between baseline, 1 month, and 3 months. Regarding number of days using illicit drugs, the ME group demonstrated a decrease between baseline and 1 month, with a slight increase between 1 month and 3 months. The AO group demonstrated a decrease in days using illicit drugs across the three time periods. There was a greater reduction in illicit drug use for the ME group compared to the AO group at 1 month but not 3 months. The AFO group was assessed at the 1-month follow-up period and there were no significant differences in outcomes for youth across the three groups in alcohol or marijuana use. Measures of days of illicit drug use other than marijuana were not significantly different between the ME, AO, or AFO groups.

Baer, Garrett, Beadnell, Wells, and Peterson (2007) conducted a study with homeless youth, ages 13 to 19, 44% female, who had engaged in at least one binge drinking episode or used illicit drugs at least four times in the past 30 days, had not received treatment in the past 30 days, and were receiving services from a drop-in center. Participants were randomly assigned to an intervention group (n=66) to receive four sessions of brief motivational interventions (BMI) or a control group (n=61) to engage in treatment as usual (TAU). Those in the BMI group received information regarding patterns and risks related to substance use as well as personal feedback. Measures were taken at baseline, 1 month, and 3 months. The BMI group demonstrated a decrease in alcohol and marijuana use between baseline and 1 month, but an increase at 3 months (still lower than baseline). The TAU group experienced a significant decrease in alcohol use between baseline, 1 month, and 3 months. They also experienced a decrease in marijuana use between baseline and 1 month with a very slight increase at 3 months. Regarding other illicit drugs, the BMI group experienced a decrease across the three time points and the TAU group experienced a decrease from baseline to 1 month with an increase at 3 months, although not to the levels demonstrated at baseline. There was a significant reduction in alcohol use at 3 months, but not at 1 month. In addition, there was a reduction at both follow-up time points for marijuana use and other drug use for the TAU group.

Cauce et al. (1994) implemented and evaluated an intensive mental health case management program for homeless adolescents ages 13 to 21 and 57% male. Youth were randomly assigned to intensive case management (n=55), or "regular" case management (n=60). Measures were taken at baseline and a 3-month follow-up. Results indicated significant differences between the baseline and the 3-month follow-up assessments across the two groups for substance use.

Slesnick and Prestopnik (2005) compared Ecologically Based Family Therapy (EBFT) to services as usual (SAU). Participants received services in one of two shelters for runaway youth, were ages 12 to 17, 64% female, and had a primary drug problem. They were randomly assigned to the EBFT group (n= 65) or SAU group (n=59). At baseline, participants reported using alcohol or drugs on 50% of the assessment days with no differences between the EBFT and SAU groups. Overall, the EBFT group demonstrated a larger reduction in overall substance use when compared to the SAU group. Regarding percentage of days using drugs (excluding

tobacco), the EBFT group demonstrated a reduction from pretest to 6 months, followed by an increase to levels higher than pretest at 12 months. Conversely, the SAU group demonstrated increases from pretest to 6 months, followed by a slight reduction from 6 months to 12 months.

Slesnick and Prestopnik (2009) compared home-based Ecologically Based Family Therapy (EBFT; n=37), office-based Functional Family Therapy (FFT; n=40), and services as usual (SAU; n=42) which was primarily informal meetings or therapy arranged by staff. Participants were youth with a primary alcohol problem, and their caretakers, recruited from one of two runaway shelters. Assessments were conducted at baseline and post-baseline at 3, 9 and 15 months. Substance use was measured by percent days of alcohol or drug use, percent days drug use, percent days alcohol use, average number of standard drinks, number of substance use diagnoses according to the Computerized Diagnostic Interview Schedule for Children (CDISC), score on the Adolescent Drinking Index, and number of problem consequences as determined by the POSIT. There were significant results for the percent days of alcohol or drug use which significantly decreased during the assessment period for EBFT and FFT; however, the SAU group use returned to levels near their baseline. There were also areas which did not show a change between groups over time: percent days of drug use, percent days of alcohol use, and problem consequences. At the 3-month follow-up, participants in FFT did have significantly fewer substance use diagnoses than youth in the SAU group. Percent days of drug and alcohol use decreased significantly for males and females in EBFT, slightly for males in FFT, and for neither males or females in the SAU group. Regarding age, percent days of alcohol use significantly decreased for all ages in EBFT; however, FFT was only effective in reducing use for older youth and SAU was not successful for either group.

Milburn et al. (2012) compared Support to Reunite, Involve, and Value Each Other (STRIVE), a short-term, five-session family intervention administered to youth and their parents to services as usual (SAU). Findings indicated participants in the STRIVE group significantly decreased their alcohol use, as measured by the number of times they consumed alcohol, when compared with the SAU group. Estimates of hard drug use (e.g. cocaine, crack, amphetamines, ice/smoked speed, heroin, nonprescription methadone, other opiates, narcotics, painkillers, barbiturates, tranquilizers, inhalants, party drugs, or other drugs) also decreased significantly for the STRIVE group when compared to the SAU group. Regarding marijuana use, STRIVE participants showed an increase during the 3-month period while the SAU group showed a decrease in the number of times of used.

Edinburgh and Saewyc, (2009) assessed a family-based, home-visiting intervention, Runaway Intervention Program (RIP). Participants (n=20) were ages 10 to 14, had a history of sexual exploitation, and were runaways. Assessments were conducted at baseline and 12 months. At baseline, 90% reported a history of substance use, primarily alcohol, but also crack cocaine, marijuana, and crystal methamphetamine. At the 12-month assessment only 20% reported ongoing use of alcohol or drugs.

Saewyc and Edinburgh (2010) further investigated RIP. They compared female participants in RIP, ages 12 to 15 (N=68), to ninth-grade girls included in the Minnesota Student Survey (MSS; N=12,775) who were classified as abused and not abused. Assessments were conducted at baseline, 6 months, and 12 months. Participants demonstrated significant change at the 6- and 12-month follow-ups in alcohol use, smoking, using other drugs during the past month, frequency of marijuana use during the past month, and use of crystal methamphetamine, ecstasy, and cocaine. Participants in the intervention group reported significantly higher levels of alcohol use, marijuana, and other drug use at baseline when compared to MSS participants. At the 6-month follow-up, the MSS participants who were not abused still demonstrated lower rates of alcohol and drug use, but at 12 months, the differences between MSS participants who were not abused and RIP participants were not statistically significant.

MENTAL HEALTH

Pollio et al. (2006) evaluated outcomes across 11 emergency shelters for RHY (n= 371). Interviews were conducted at admission, 6 weeks, 3 months, and 6 months. Participants demonstrated significant improvement in self-esteem at 6 weeks but there was a subsequent decrease between 6 weeks and 3 months. The 3-month scores were significantly lower than baseline scores. Self-esteem scores for 6-month follow-up were not reported. Results for self-esteem indicated receiving employment services between baseline and 6 week follow-up was associated with significantly greater increases in self-esteem scores for those receiving services than for those who did not. Receiving legal services was associated with a significant decrease in scores compared to those who did not receive services.

Barber, Fonagy, Futlz, Simulinas, and Yates (2005) recruited participants (n=202) ages 18 to 21 and 59% female who were receiving crisis services at a homeless shelter for youth. The Young Adult Self Report (YASR) Total Problems scales were used to assess psychological functioning at baseline and 6 months later. Participants showed a significant decrease in behavioral and emotional problems for internalizing, externalizing, and total problems between intake and 6 months. Receiving individual services was not a significant predictor for the final YASR Total Problems score.

Harder + Company (2014) examined the experiences and outcomes of young adults in permanent housing. Data was gathered from transition-aged youth (n=82), ages 18 to 26, and 52% male. Most had been referred to the program by mental health service providers and had a history of experiencing trauma and homelessness. At baseline, 82% self-reported having had a mental health challenge, and 71% reported an improvement in their mental health symptoms after entering the program.

Kisely et al. (2008) examined youth engaged in supportive housing (n=15) and compared them to youth in a control group (n=30). Participants were ages 16 to 24 and 71% male. Participants who had access to supportive housing were less likely than youth in the control group to feel like their emotional problems prevented them from accomplishing tasks. Furthermore, when the sample was stratified by education, individuals who had supportive housing and reached twelfth grade were less likely to report emotional problems as a barrier to accomplishing goals or tasks.

Winland, Gaetz, and Patton (2011) evaluated Family Reconnect, an Eva's Initiatives program designed to help youth who are at risk or currently homeless by facilitating reengagement with families and communities. Study participants included 16- to 25-year-olds who were 53% female. At intake, 40% of the total group presented with mental health issues: 43% of female respondents, 47% of male respondents, 29% of those ages 15 to 17, 44% of those ages 18 to 20, and 54% of those ages 21 to 25. Participants reported that receiving services though Family Reconnect resulted in the improvement, worsening, or no change of their symptoms. Regarding improvement: 17% of the total; 18% of male respondents; 17% of female respondents; 17% of those ages 15 to 17 and 18 to 20; and 19% of those 21 to 25. For participants who stated their symptoms worsened: 6% of the total; 5% of males; 7% of females, those 15 to 17, and those 18 to 20; no one in the 21 to 25 age group reported worsening symptoms. Finally, no change was reported by: 25% of the total; 24% of males; 26% of females; 30% of those 15 to 17; 20% of those 18 to 20; and 26% of those 21 to 25. There were no tests of significance in this study.

NON-HOUSING INTERVENTIONS ADDRESSING MENTAL HEALTH

Slesnick et al. (2007) compared community reinforcement approach (CRA) plus HIV education/skills as an intervention to treatment as usual (TAU) with youth ages 14 to 22, 64% male, and homeless (not living in a shelter but on the streets). Participants were recruited from a drop-in center and randomly assigned to CRA (n=96) or TAU (n=84). Measures were taken at baseline and a 6-month follow-up. Internalizing and externalizing symptoms were measured with the Youth Self Report (YSR) and the Coping Inventory for Stressful Situations (CISS). The Beck Depression Inventory was used to identify symptoms of depression and the Computerized Diagnostic Interview Schedule for Children (CDISC) was used to diagnose mental health disorders. Results showed the CRA group had a significant decrease in levels of depression and internalizing symptoms when compared to TAU group. Overall, both groups improved between baseline and the 6-month follow-up related to depression, internalizing symptoms, and externalizing symptoms. Age was found to moderate outcomes related to depression; both the younger and older participants in the CRA group showed a significant decrease in symptoms. For the TAU group, only younger participants showed a decrease in depressive symptoms.

Bartle-Haring, Slesnick, Collins, Erdem, and Buettner (2012) compared the impact of a community reinforcement approach mentoring program combined with substance abuse treatment (CRA; n=48) as an intervention and treatment as usual (TAU) with a control group (n=42). There were many instances of participants in the CRA group not attending CRA or mentoring sessions, but remaining in the intervention group. Participants were ages 14 to 22, homeless, and had to meet criteria for an alcohol or other psychoactive substance use disorder as assessed by the Computerized Diagnostic Interview Schedule for Children (CDISC). Notably, 58% of the entire sample reported a history of physical abuse, sexual abuse, or both. Assessments of depressive symptoms were made at baseline, 3 months, and 6 months using the Beck Depression Inventory – Second Edition (BDI-II), and internalizing and externalizing symptoms were assessed using the Youth Self Report (YSR). At baseline, there were no significant relationships between the number of mentoring sessions attended and the measures used. Youth reports of physical abuse predicted lower symptoms of depression, whereas their reports of sexual abuse did show a decrease in symptoms, although not as large. For externalizing symptoms, males who attended fewer CRA sessions did not show a decrease; however, attending more CRA sessions led to a decrease in symptoms, regardless of the number of mentoring sessions attended. Female participants demonstrated a decrease regardless of the number of CRA sessions, although the greater the number of sessions the greater the decrease in symptoms. For internalizing behaviors, a history of physical abuse, gender, and being in the CRA group were significant predictors of change. When participants had mentoring without

CRA or attended fewer CRA sessions, there was not an impact on internalizing symptoms. Finally, the more CRA and mentoring sessions attended, the larger the decrease in depressive symptoms.

Slesnick and Prestopnik (2005) compared Ecologically Based Family Therapy (EBFT; n=65) to a control group receiving services as usual (SAU; n=59) for reducing drug and alcohol usage over 12 months. Participants were 41% male and ages 12 to 17. Results showed an improvement over time in the SAU and EBFT groups related to internalizing and externalizing measures on the Youth Self Report and the Beck Depression Inventory. There were no significant differences between the EBFT and SAU groups.

Slesnick and Prestopnik (2009) compared treatment outcomes for Functional Family Therapy (FFT; n=40), Ecologically Based Family Therapy (EBFT; n=37), and services as usual (SAU; n=42). Participants were ages 12 to 17, 45% male, and all primary alcohol users. Assessments occurred at baseline, 3 months, 9 months, and 15 months. Psychological functioning was assessed using the Youth Self Report (YSR) and the Beck Depression Inventory (BDI). Diagnoses were made using the Computerized Diagnostic Interview Schedule for Children (CDISC). None of the indicators showed a significant difference between groups, but all three groups experienced an overall decrease over time. The only significant difference to emerge between time and a specific modality was at 3 months when the FFT group had significantly fewer diagnoses than the SAU group.

Nyamathi et al. (2013) carried out a pilot study comparing the impact of a nurse-led HIV/AIDS and hepatitis health promotion (HHP) program and an art messaging (AM) program on improving HIV and hepatitis knowledge and mental health. Participants were homeless youth (n=156) ages 15 to 25 who were using drugs and frequented a homeless youth drop-in agency. Assessments were made at baseline and a 6-month follow-up. Symptoms of depression were measured using the Centre for Epidemiologic Studies Depression Scale (CES-D) and psychological/emotional well-being was measured using the Mental Health Index (MHI). Results indicated psychological well-being scores in the total sample rose. Well-being scores also increased for the HHP group, with a significant increase from baseline to follow-up. The AM group did not experience an improvement in well-being. No significant changes were noted in depressive symptoms.

Cauce et al. (1994) implemented and evaluated an intensive mental health case management program for homeless adolescents ages 13 to 21 and 57% male. Youth were randomly assigned to intensive case management (n=55) and "regular" case management (n=60). The Youth Self Report (YSR) was used to measure internalizing and externalizing symptoms. The Reynolds Adolescent Depression Scale (RADS) was used to measure depressive symptoms. The Problem Behavior Scale (PBS) measured antisocial problem behaviors. The Rosenberg Self-Esteem Scale (RSES) was used to measure self-esteem. The Life Domains Scale was used to measure satisfaction with life. Measures were taken at baseline and a 3-month follow-up. There was an overall reduction across groups between baseline and 3 months in internalizing and externalizing behaviors, somatic complaints, self-esteem, and anxiety/depression. For participants in the intensive case management group, there was a greater reduction in aggression and problem behaviors and increased levels of satisfaction. Quality of life did not show and change over time for either group.

There was an overall reduction across groups between baseline and 3 months in internalizing and externalizing behaviors, somatic complaints, self-esteem, and anxiety/depression.

McCay et al. (2011) compared an intervention group (n=9) who engaged in a program designed to build relationships, strengths, and mitigate negative mental health outcomes versus a comparison group (n=6). Participants were street-involved youth recruited from two community agencies, between the ages of 16 to 24 and 60% male. Mental health symptoms were measured using the Symptom Checklist-90 (SCL-90), depression was measured using the Centre for Epidemiologic Studies Depression (CES-D), hopelessness was measured using the Resilience Scale (RS) and self harm was measured using the Deliberate Self-Harm Inventory (SH). The intervention group received six sessions focused on positive relationships aimed at improving mental health symptoms. There was no significant improvement in the mental health measures for the two groups.

SUMMARY OF INTERVENTIONS THAT ADDRESS WELL-BEING

The findings suggest housing and non-housing interventions addressing well-being do not offer consistent evidence for being able to consistently impact specific risk behaviors. Housing interventions that addressed sexual risk behaviors were in emergency shelters and supportive housing, but not in transitional living programs. Non-housing interventions that addressed sexual risk behavior outcomes included family, home-based, and street-based interventions. HIV interventions were variable due to a number of factors. The majority of interventions addressing HIV risk behaviors were implemented in non-housing settings and the goal was typically to build knowledge and change risky sexual behaviors. Gender and age often played a role in the success of an intervention with trajectories and impact differing depending on demographics. In some instances, there was improvement in levels of knowledge and a greater likelihood of reporting high-risk sex behaviors. In other cases, there was a decrease in the number of sex partners but other HIV risk behaviors did not change. The success of interventions addressing HIV risk behaviors was also mixed. There were no studies examining substance use in TLPS; however, there was research examining interventions designed to impact substance use in emergency shelters. Several studies found evidence of improvement in substance use most often for intervention groups but also for comparison or control groups. Unfortunately, changes were often not sustained at follow-up and in many instances statistical significance was not reported. Access to supportive housing did emerge as associated with positive mental health outcomes for unstably housed youth; although this research was limited and additional research is needed. Overall, findings on mental health outcomes for youth were mixed and most interventions did not demonstrate significantly greater improvement. In this area, the research was limited by small sample sizes, very broad measures of mental health, or a focus on only one dimension. The research was limited in assessing the long-term impact on youth mental health outcomes.

Appendices

Appendix 1: References

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Appendix 2: In Text Citation Guide for Intervention Areas

Key
- ■ Non-Housing Interventions
- ● Housing Interventions

	Stable Housing	Permanent Connections	Education	Employment	Sexual Risk Behaviors	HIV Risk Behaviors	Substance Use	Mental Health
Auerswald, Sugano, Ellen, & Klausner (2006)					■			
Baer, Garrett, Beadnell, Wells, & Peterson (2007)							■	
Barber, Fonagy, Fultz, Simulinas, & Yates (2005)	●		●	●				●
Bartle-Haring, Slesnick, Collins, Erdem, & Buettner (2012)							■	■
Booth, Zhang, & Kwiatkowski (1999)						■		
Carmona, Slesnick, Guo, & Letcher (2014)						■		
Cauce et al. (1994)							■	■
Dostaler & Nelson (2003)	●		●	●				
Edinburgh & Saewyc (2009)					■		■	
Ferguson & Xie (2008)		■			■			
Fors & Jarvis (1995)							●	
Gleghorn, Clements, Marx, Vittinghoff, Lee-Chu, & Katz (1997)						■		
Harder + Company Community Research (2011)	●	●						●
Harper & Tyler (2012)	■	■						
Kisely, Parker, Campbell, Karabanow, Hughes, & Gahagan (2008)							●	●
Larkin Street Youth Services (2011a)	●							
Larkin Street Youth Services (2011b)	●							
McCay et al. (2011)		■					■	■
Milburn et al. (2012)					■			
Nolan (2006)	●	●	●	●				
Nyamathi et al. (2013)						■		■
Ogden (2013)		●						
Peterson, Baer, Wells, Ginzler, & Garrett (2006)							■	
Pollio, Thompson, Tobias, Reid, & Spitznagel (2006)	●	●	●	●	●		●	●
Rotheram-Borus, Song, Gwadz, Lee, Van Rossem, & Koopman (2003)						●	●	
Saewyc & Edinburgh (2010)		■	■		■		■	
Slesnick, Erdem, Bartle-Haring, & Brigham (2013)							■	■
Slesnick & Kang (2008)	■					■		
Slesnick, Kang, Bonomi, & Prestopnik (2008)				■				
Steele & O'Keefe (2001)				●	●		●	
Slesnick & Prestopnik (2005)		■				■	■	■
Slesnick & Prestopnik (2009)		■					■	■
Slesnick, Prestopnik, Meyers, & Glassman (2007)			■				■	
Steele, Ramgoolam, & Evans (2003)				●	●		●	
Winland, Gaetz, & Patton (2011)	●	●						●

Appendix 3: Search Models and Search Terms

YOUTH

- Youth
- Underserved youth
- Young adult
- Children
- Adolescents
- Adolescence
- Teens
- Teenagers

RUNAWAY OR HOMELESS

- Runaway
- Homeless
- Homelessness
- Street youth
- Street children
- Unaccompanied
- Throwaway
- Displaced
- Unstably housed

INTERVENTIONS, PROGRAM, OR PRACTICE

- Intervention
- Effectiveness
- Program
- Treatment
- Reduction
- Decrease
- Improve
- Measures
- Outcomes
- Evaluation
- Randomized controlled trial
- Comparative study
- Pilot
- Control group
- Comparison group
- Clinical trial
- Observational study
- Cohort study
- Case control study
- Longitudinal

1. Note: although some terms are no longer used in the professional literature, they are included here to ensure that all relevant articles dating from 1990 were identified.

Appendix 4: Database Searches

02/27/14

MEDLINE (n=2404)

- youth* OR young adult* OR child* OR adolescen* OR teen*
- runaway* OR homeless* OR street youth* OR street child* OR unaccompanied OR throwaway* OR unstably hous* OR unstable hous*
- intervention* OR effectiveness OR program* OR treatment OR reduction OR effect* OR outcome* OR evaluation OR randomized clinical trial OR decrease OR measures OR improve* OR comparative study OR pilot OR control group* OR comparison group* OR clinical trial OR observational study OR cohort study OR case control study OR longitudinal

EMBASE (n=1011)

- (youth* OR 'young adult' OR 'young adults' OR child* OR adolescen* OR teen*):ab,ti,de AND (runaway* OR homeless* OR 'street youth' OR 'street youths' OR 'street child' OR 'street children' OR unaccompanied OR throwaway* OR 'unstably housed' OR 'unstable housing'):ab,ti,de AND (intervention* OR effectiveness OR program* OR treatment OR reduction OR effect* OR outcome* OR evaluation OR 'randomized clinical trial' OR decrease OR measures OR improve* OR comparative study OR pilot OR 'control group' OR 'control groups' OR 'comparison group' OR 'comparison groups' OR 'clinical trial' OR 'observational study' OR 'cohort study' OR 'case control study' OR longitudinal):ab,ti,de

CINAHL (n=1115)

- youth* OR "underserved youth*"OR "young adult*" OR child* OR adolescen* OR teen*
- runaway* OR homeless* OR "street youth*" OR "street child*" OR unaccompanied OR throwaway* OR "unstably hous*" OR "unstable hous*"
- intervention* OR effectiveness OR program* OR treatment OR reduction OR effect* OR outcome* OR evaluation OR "randomized clinical trial" OR decrease OR measures OR improve* OR "comparative study" OR pilot OR "control group*" OR "comparison group*" OR "clinical trial" OR "observational study" OR "cohort study" OR "case control study" OR longitudinal

EBSCO (INCLUDING ACADEMIC SEARCH PREMIER; n=2162)

- youth* OR "underserved youth*"OR "young adult*" OR child* OR adolescen* OR teen*
- runaway* OR homeless* OR "street youth*" OR "street child*" OR unaccompanied OR throwaway* OR "unstably hous*" OR "unstable hous*"
- intervention* OR effectiveness OR program* OR treatment OR reduction OR effect* OR outcome* OR evaluation OR "randomized clinical trial" OR decrease OR measures OR improve* OR "comparative study" OR pilot OR "control group*" OR "comparison group*" OR "clinical trial" OR "observational study" OR "cohort study" OR "case control study" OR longitudinal

PSYCINFO (n=2321)

- youth* OR "underserved youth*"OR "young adult*" OR child* OR adolescen* OR teen*
- runaway* OR homeless* OR "street youth*" OR "street child*" OR unaccompanied OR throwaway* OR "unstably hous*" OR "unstable hous*"
- intervention* OR effectiveness OR program* OR treatment OR reduction OR effect* OR outcome* OR evaluation OR "randomized clinical trial" OR decrease OR measures OR improve* OR "comparative study" OR pilot OR "control group*" OR "comparison group*" OR "clinical trial" OR "observational study" OR "cohort study" OR "case control study" OR longitudinal

SOCIAL SCIENCE CITATION INDEX (n=1755)

- youth* OR "underserved youth*"OR "young adult*" OR child* OR adolescen* OR teen*
- runaway* OR homeless* OR "street youth*" OR "street child*" OR unaccompanied OR

Appendix 4: Database Searchess

throwaway* OR “unstably hous*” OR “unstable hous*”

- intervention* OR effectiveness OR program* OR treatment OR reduction OR effect* OR outcome* OR evaluation OR “randomized clinical trial” OR decrease OR measures OR improve* OR “comparative study” OR pilot OR “control group*” OR “comparison group*” OR “clinical trial” OR “observational study” OR “cohort study” OR “case control study” OR longitudinal

SOCIOLOGICAL ABSTRACTS (n=501)

- youth* OR “underserved youth*”OR “young adult*” OR child* OR adolescen* OR teen*
- runaway* OR homeless* OR “street youth*” OR “street child*” OR unaccompanied OR throwaway* OR “unstably hous*” OR “unstable hous*”
- intervention* OR effectiveness OR program* OR treatment OR reduction OR effect* OR outcome* OR evaluation OR “randomized clinical trial” OR decrease OR measures OR improve* OR “comparative study” OR pilot OR “control group*” OR “comparison group*” OR “clinical trial” OR “observational study” OR “cohort study” OR “case control study” OR longitudinal

TOTAL DUPLICATED – 11,269
TOTAL DE-DUPLICATED – 5603

Appendix 5: Sources Used in Grey Literature Search

- Administration for Children & Family (ACF)
  http://www.acf.hhs.gov/
- The Annie E. Casey Foundation
  http://www.aecf.org
- Anti-Violence Project
  http://www.avp.org/
- Applied Survey Research
  http://www.appliedsurveyresearch.org/
- Arcus Foundation
  http://www.arcusfoundation.org/socialjustice/research_and_reports/
- Building Changes
  http://www.buildingchanges.org/
- California Homeless Youth Project
  http://cahomelessyouth.library.ca.gov/
- Center for Advanced Studies in Child Welfare
  http://www.cehd.umn.edu/ssw/cascw/
- Center for American Progress
  http://www.americanprogress.org
- Center for Assessment and Policy Development
  http://www.capd.org/publications.htm
- Center for HIV Law and Policy
  http://www.hivlawandpolicy.org/
- Centre for Housing Policy
  https://www.york.ac.uk/chp/expertise/homelessness/
- CentreLink Australian Homelessness Clearinghouse
  https://homelessnessclearinghouse.govspace.gov.au/about-homelessness/agreements-and-initiatives/commonwealth-initiatives/centrelink-services-for-homeless-people-and-those-at-risk-of-homelessness/
- The Child Welfare Information Gateway
  https://www.childwelfare.gov
- Child Welfare League of America
  http://www.cwla.org/
- Common Knowledge
  http://commons.pacificu.edu/
- Covenant House
  http://www.covenanthouse.org/
- CSH: The Source for Housing Solutions
  http://www.csh.org/
- Cream City Foundation
  http://creamcityfoundation.org/
- Empire State Coalition
  http://www.empirestatecoalition.org/
- Equity Project
  http://www.equityproject.org/
- Family Acceptance Project
  http://familyproject.sfsu.edu/home
- Forty to None Project
  http://fortytonone.org/
- Gay, Lesbian, and Straight Education Network
  www.glsen.org
- Gay and Lesbian Medical Association (GLMA
  http://www.glma.org/
- Hollywood Homeless and Youth Partnership
  http://hhyp.org/
- The Homeless Hub
  http://www.homelesshub.ca/
- Homeless Link
  http://homeless.org.uk/
- Homeless Resource Center
  http://homeless.samhsa.gov
- Human Rights Watch
  www.hrw.org
- IMPACT: The LGBT Health and Development Program
  http://www.impactprogram.org/
- Lamda Legal
  http://www.lambdalegal.org/
- Larkins Street Youth Services
  http://www.larkinstreetyouth.org/
- Mathematica Policy Research
  http://www.mathematica-mpr.com/
- Movement Advancement Project
  http://www.lgbtmap.org/
- National Alliance to End Homelessness
  http://www.endhomelessness.org
- National Association for the Education of Homeless Children and Youth
  http://www.naehcy.org/
- National Center for Charitable Statistics
  http://nccsweb.urban.org/nccs.php
- National Center for Children in Poverty
  http://www.nccp.org/
- National Center on Family Homelessness
  http://www.familyhomelessness.org/
- National Center for Homeless Education
  www.serve.org/nche

Appendix 5: Sources Used in Grey Literature Search

- National Clearinghouse on Families & Youth
  http://ncfy.acf.hhs.gov/library
- National Coalition of Anti-Violence Programs
  http://www.avp.org/about-avp/coalitions-a-collaborations/82-national-coalition-of-anti-violence-programs
- National Coalition for the Homeless
  http://nationalhomeless.org/
- National Gay and Lesbian Task Force
  http://www.thetaskforce.org/
- National Network for Youth
  http://www.nn4youth.org/
- National Resource Center for Permancy and Family Connection
  http://www.nrcpfc.org
- National Resource Center for Youth Services
  www.nrcys.edu
- National Runaway Safeline
  http://www.1800runaway.org/learn/research/why_they_run/
- National Runaway Switchboard
  http://www.nrscrisisline.org/
- National Youth Advocacy Coalition
  www.nyacyouth.org
- National Youth Development Information Center
  www.nydic.org
- Office of Minority Health
  http://minorityhealth.hhs.gov/templates/content.aspx?lvl=2&lvlid=209&id=9004
- Pathways 2 Positive Futures
  http://www.pathwaysrtc.pdx.edu/
- Research and Training Center for Children's Mental Health Department of Child and Family Studies Louis de la Parte Florida Mental Health Institute
  http://rtckids.fmhi.usf.edu/
- Sexual Minority Youth Assistance League
  http://www.smyal.org/
- Tides Foundation Out-of-Home Youth Fund
  http://www.tides.org/
- Trevor Project
  www.thetrevorproject.org
- United Way of King County
  http://www.uwkc.org/our-focus/homelessness/ending-youth-homelessness.html
- Urban Institute
  http://www.urban.org/
- U.S. Department of Health and Human Services
  http://bphc.hrsa.gov/policiesregulations/policies/pal200110.html
- U.S. Department of Housing and Urban Development
  http://www.huduser.org/publications/homeless/p6.html
- U.S. Interagency Council on Homelessness
  http://usich.gov/issue/lgbt_youth/lgbtq_youth_homelessness_in_focus
- Youth Catalytics
  http://www.youthcatalytics.org/

Appendix 6: Phase One Screening Tool

1. Reviewer Name
   ❑ Dettlaff ❑ Holzman

2. REF ID of item screened

3. LAST NAME of first author

4. Does the document include LGBTQ YOUTH (through age 24) as part of the population studied?
   ❑ YES ❑ NO ❑ UNCLEAR

5. Does the document include youth who are CURRENTLY EXPERIENCING HOMELESSNESS?
   ❑ YES ❑ NO ❑ UNCLEAR

6. Does the document describe RESEARCH with this population?
   ❑ YES ❑ NO ❑ UNCLEAR

7. Were the answers to questions 4, 5, and 6 YES or UNCLEAR?
   ❑ If YES, continue
   ❑ If NO, stop here

8. Does the document PROVIDE OUTCOMES OF AN INTERVENTION?
   ❑ YES ❑ NO ❑ UNCLEAR

Appendix 7: Data Extraction Components

ARTICLE IDENTIFIERS:
- Title
- Author
- Year

PURPOSE:
- Identify in article and write here.

SAMPLE METHOD:
- Type
  - Probability
    - Randomized
      - Simple/systematic (individuals/families)
      - Stratified/blocked (identified stratifying variables)
      - Yoked pairs (created by timing of enrollment into the study)
      - Matched pairs (identified matching variables)
      - Cluster (group) randomized
  - Non-probability
    - Convenience sample
    - Purposive sample
      - Expert choice
      - Quota
    - Referral sample (can be probability and/or non-probability)
      - Snowball
      - Network
- Location
  - Multiple locations?
  - TLP
  - Name cities and multiple locations
- Time frame
  - When was the data collected?

SAMPLE SIZE:
- Referred to study
- Consented
- Randomly assigned
- Started treatment
- Completed treatment

SAMPLE DEMOGRAPHIC:
- Race
- Age
- Sex and/or gender (% male, female, transgender)
- Sexuality (% breakdown)

HOW DID THE STUDY MEASURE OR ASK ABOUT SEXUAL ORIENTATION/GENDER IDENTITY?
- Uni-dimensionally
- Multi-dimensionally
- Describe

HOW DID THE STUDY MEASURE OR ASK ABOUT HOMELESSNESS
- How did they define homelessness?
- What questions did they ask?
- Uni-dimensionally
- Multi-dimensionally
- Did they require a specific amount of time individuals have to be homeless?
- Were individuals currently homeless?

RESEARCH METHOD/DESIGN
- Interview
  - Semi-structured
  - Structured
- Focus groups
- Survey
- Quasi-Experiment
- Experiment
- Descriptive (understand relationships between things/correlation studies)
- Cross-sectional
- Exploratory
- Longitudinal

AFFILIATED STUDY
- Was this research connected with a larger project?
- If so, which one?

Appendix 7: Data Extraction Components

MEASUREMENT TOOLS

- List variable
- Independent/dependent/control
- How was each variable measured?
    - Was there a standardized tool or assessment?
        - If so, what was the name of the instrument
        - Describe instrument
        - Did they describe how the instrument was constructed?
            - Describe
        - Were statistics or alpha coefficients included?
            - Were coefficients listed for this study or past studies?
    - Name of instrument
    - Description
    - Measurement questions
    - Type of instrument
    - Background information on instrument
        - Populations used for
        - Previously reported coefficients
    - Who completed/used the instrument
        - Self-reported
        - Therapist
        - Staff
    - When was the instrument used
        - Upon arrival

COMPARISON GROUPS:

- What were the key comparison groups?
- Did they look at gender differences between groups?

WAS THE RESEARCH GROUNDED IN THEORY?

- Identify in article and write here.

DATA ANALYSES

- What statistical techniques were used?

FINDINGS RELEVANT TO THE LGBTQ COMMUNITY:

- Identify in article and write here.

LIMITATIONS:

- Identify in article and write here.

STRENGTHS:

- Identify in article and write here.

CONCLUSION:

- Identify in article and write here.

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