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Review

Trauma and homelessness in youth: Psychopathology and intervention

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A B S T R A C T

Youth runaway behavior and homelessness (RHY) in the U.S. is increasingly common, with prevalence estimated at 1–1.7 million youth. RHY have multiple, overlapping problems often including poor physical and mental health, frequent street victimization, and histories of physical and sexual abuse. Further, current street victimization interacts with childhood abuse to produce complex, unique presentations of traumatic symptoms and related disorders in runaway and homeless youth. This review paper explores (1) the role of childhood trauma in the genesis of runaway and homeless behavior, and (2) how childhood trauma interacts with street victimization to create vulnerability to psychopathology. In response to the trauma needs of RHY, we conducted a systematic review of the state of the current literature on trauma-informed interventions for RHY. We conclude that the field currently lacks empirically validated trauma interventions in RHY. However, theoretically plausible frameworks do exist and could be the basis for future research and intervention development.

1. Introduction

There are an estimated 1–1.7 million Runaway and Homeless Youth (RHY) living in the United States each year (Fernandes-Alcantara, 2013). They are one of the most vulnerable populations, whose experiences are defined by reliving the abuses and traumas of their past on the streets without traditional forms of social support. The number of RHY has grown in recent years, and an entire counter culture of youth has emerged that is characterized by values, (e.g. reporting crimes is always undesirable) speech patterns, and attitudes toward social institutions that are distinct from those of other sections of the community (Malone, 2002; McManus & Thompson, 2008). RHY culture can act as a surrogate for absent parental support, and can create significant barriers for healthcare/human services professionals attempting to work with this population. Indeed, RHY are often resistant to conventional methods of assistance such as substance use counseling, HIV prevention, and psychotherapy (Altena, Brilleslijper-Kater, & Wolf, 2010). This reluctance does not diminish the need to develop culturally appropriate, effective interventions for this population. Although, RHY are a diverse group of adolescents, many share a key characteristic – that they have been exposed to and/or are survivors of trauma, abuse and/or neglect. In serving RHY, practitioners need to understand (1) how childhood trauma may play a role in the genesis of RHY behavior, (2) how childhood trauma interacts with victimization on the streets to create vulnerability to psychopathology, and (3) the state of the current literature of trauma-informed interventions for RHY. This paper begins by giving a background of the relevant literature pertaining to abuse and RHY then reports the results of a systematic review of current trauma-informed interventions for this population.

1.1. Runaway and homeless youth

Despite high estimates of the prevalence of RHY behavior, the population is difficult for researchers and policy-makers to study effectively. This is because (1) those who study RHY struggle to arrive at a consensus definition of the population, and (2) residential mobility means that these youth stay in places that are not easily accessible to researchers (Fernandes-Alcantara, 2013). Despite these challenges, a growing body of research has examined this population in an effort to improve their quality of life and outcomes.

Researchers and policy makers struggle to arrive at a uniform definition of RHY because the group's transience, varied presentation and reluctance to access services (De Rosa et al., 1999; Gaetz, 2004). The Runaway and Homeless Youth Act of 1974 (amended 2008) defines RHY as persons who are “not more than 21 years of age…for whom it is not possible to live in a safe environment with a relative and who have no other safe alternative living arrangement.” (The Runaway and Homeless Youth Act, 2008). This definition notably excludes both homeless youth who are accompanied by parents, guardians or relatives. Though this group is vulnerable, psychologists and policy makers have tended to focus on unaccompanied youth, partially because the impact of being separated from a primary caregiver creates unique vulnerabilities which are diminished in accompanied youth (Martijn & Sharpe, 2006; Zide & Cherry, 1992; Zona & Milan, 2011) The movement toward defining

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RHY as unaccompanied youth may have also been driven by the relatively high estimated presence of unaccompanied youth (> 1 million) in comparison to accompanied youth (< 100,000) (Masten, Miliotis, Graham-Bermann, Ramirez, & Neemann, 1993). Reflecting trends in the literature, this review relies on the federal definition of RHY.

1.2. Population characteristics

RHY are a diverse population, but differ from the housed youth population in a number of specific ways. Yates, MacKenzie, Pennbridge, and Cohen (1988) conducted a medical clinic study (n = 765) and found that runaway youth were typically younger and more likely to be Caucasian than housed youth. RHY were at much higher risk for a concurrent medical diagnosis, particularly related to drug abuse and/or risky sexual behavior. Runaways were much more likely to have mental health problems (e.g., depression, recent suicide attempt, or other serious mental health problem). Importantly, RHY were 3 times more likely to be a survivor of any trauma, and four times as likely to be rape survivors. Almost 1 in 5 of these youth had first sexual intercourse before the age of nine (Yates et al., 1988). A recent investigation by the congressional research service found that the characteristics (i.e. race, gender, trauma histories) of RHY are similar today to previous studies (Fernandes-Alcantara, 2013). RHY are more likely to identify as LGQBT individuals than the general population (De Rosa et al., 1999). Trauma survivors (and subsequent PTSD diagnosis) are overrepresented in RHY (McManus & Thompson, 2008). Despite apparent need, RHY consistently underutilize social services. Researchers attribute this to lack of trust in institutions, age restrictions on shelters, restrictive rules in shelters and lack of knowledge of aid systems (De Rosa et al., 1999). RHY face higher risk for most health conditions, but HIV prevalence is especially high, especially due to IV drug use and unsafe sexual behaviors (Gangamma, Slesnick, Toviessi, & Serovich, 2008; Stricof, Kennedy, Nattell, Weisfuse, & Novick, 1991). These findings suggest that RHY are one of the most vulnerable populations in developed countries. They have higher rates of physical and mental health problems and trauma, yet do not utilize the services available to them. Furthermore, studies of prevalence are believed to systematically underestimate the true size of this population, implying that RHY may be a larger problem than current quantitative studies suggest (Fernandes-Alcantara, 2013; Haber & Toro, 2004). Descriptive population findings give researchers cross-sectional understanding of RHY, however, to target RHY with appropriate interventions practitioners must understand the prospective predictors of runaway behavior, and how those predictors affect behaviors on the street.

1.3. Street culture

In addition to having different health, trauma history and lifestyle than housed youth, RHY are also members of a unique cultural group. This group is distinct from adult homeless populations. RHY often report that they are on the street because of the freedoms it offers from adult control, and do not anticipate homelessness to be a long-term condition. As a result, housing is often not expressed as a primary need (as housed individuals often assume; Barry, Ensign, & Lippek, 2002). These youth are also very peer-oriented, more so than housed youth (Barry et al., 2002). As a result, they consistently mistrust adult interactions and the most effective interventions in RHY are often peer led (Booth, Zhang, & Kwiatkowski, 1999). RHY tend to be somewhat homogeneous with respect to values, attitudes, dress, and slang (McManus & Thompson, 2008). However, RHY are still adolescents and struggle with typical concerns of this age group (i.e. self-consciousness regarding their appearance, or intense present temporal orientation (Barry et al., 2002)). Ultimately, RHY view themselves as members of a distinct culture and behave as such. Thus, outreach workers will find their efforts ineffective if they do not account for this cultural gap (Barry et al., 2002).

1.4. Pathways to homelessness

1.4.1. Theoretical perspectives

The ecological-developmental perspective (EDP) of homeless behavior conceptualizes homelessness as the consequence of a combination of factors. These stem from both the individual and the systemic influences on the individual. For example, this model suggests that for RHY, a combination of individual characteristics (e.g. substance abuse disorders, disruptive behavior) interacts with family issues (e.g., instability, maltreatment) and systemic issues (e.g., race, age, availability of support services) to create an increased risk of running away and becoming homeless (Haber & Toro, 2004). EDP highlights a significant challenge with RHY research - the population is so diverse that it is difficult to balance a model's ability to predict outcomes in discrete individuals, while simultaneously accurately reflecting the experiences of all individuals who display RHY behavior. Indeed, the population may be too diverse to achieve a perfect balance. These models can, however, provide a framework for research to understand individual risk as it relates to the larger RHY population. Studies on predictors of RHY behavior are consistent with this model, and often show that a combination of individual and systemic factors combines to create increased risk for runaway behavior and homelessness later in life.

Initial separation from the home is usually the first step in the transition from housed to runaway or homeless status. Youth often separate from their families by running away, being asked to leave by parents, or being removed by child protective services. For each of these pathways, risk is significantly increased by prior exposure to sexual, physical and psychological abuse. Counter-intuitively, a large proportion of RHY have the option to continue to stay with at least one parent, but choose to remain outside the home due to factors such as abuse in the home. This, in combination with high levels of abuse, suggests that many youth run away from home to avoid continued abuse (Maclean, Embry, & Cauce, 1999). Most researchers in this field agree that there is a complex interactional relationship between childhood and adolescent abuse in these youth, leading to perpetuation of runaway, and eventually homeless states (Whitbeck, Hoyt, & Bao, 2015; Whitbeck, Hoyt, & Yoder, 1999). In particular, Whitbeck et al. (1999) proposed a risk amplification model that has gained significant support over the past 15 years of RHY research.

The *Risk Amplification Model* attempts to understand the mechanisms by which RHY progressively accumulate psychological distress, reinforcing a cyclical pattern which progressively decreases the likelihood of returning home. The model hypothesizes that events happening on the street will exacerbate the effects of childhood abuse on risk for victimization and depressive symptoms. In other words, events on the street will amplify the existing risk of victimization bestowed by child abuse, and make these youth at much greater risk for subsequent victimization. This victimization is expected to precipitate depressive symptoms. As defined by the researchers, the specific events on the street which increase abuse risks are substance abuse, deviant subsistence strategies (e.g., panhandling) and risky sexual behavior (Whitbeck et al., 1999). A key component of risk amplification is that each further step outside of the home causes youth to increase identification with street culture, deviant peer groups and patterns of victimization. This causes increasing rejection by non-deviant peers, institutions and lifestyles. Essentially, the reasons that caused youth to take to the streets become part of a consistent cycle of disenfranchisement from conventional society (Tyler, Hoyt, & Whitbeck, 2000a,b).

This model has garnered empirical support in a sample of Midwestern adolescents (Whitbeck et al., 2015) and other RHY populations (Running, Ligon, & Miskioglu, 1999). Additionally, early sexual and physical abuse of RHY consistently predicts experiences of victimization on the streets (Hoyt, Ryan, & Cauce, 1999; Tyler et al., 2000a,b). A community study of the Risk Amplification Model has recognized the model as the only successful attempt at integrating previous trauma into mechanisms of continued victimization and,

ultimately, psychopathology (Bender, Ferguson, Thompson, Komlo, & Pollio, 2010; Gwadz, Nish, Leonard, & Strauss, 2007; Haber & Toro, 2004).

1.4.2. Child abuse in RHY

The risk-amplification trajectory relies on street victimization amplifying pre-existing abuse. The model so predictive, in part, because RHY come consistently from homes of abuse. One study (n = 329) indicated that 48% of RHY come from families that had some kind of intra-familial abuse. The average abused youth had > 1 abuser and was first abused at younger than four years old. More of these youth came from physically abusive (n = 82) than sexually abusive (n = 39) backgrounds. Additionally, RHY who came from extremely abusive backgrounds had internalizing symptoms, supporting the risk-amplification model. These youths also had high levels of externalizing problems. This study is limited by lack of a comparison group (Ryan, Kilmer, Cauce, Watanabe, & Hoyt, 2000). But comparison to other studies of general prevalence of adolescent abuse suggests that RHY are exposed to abuse at substantially higher rate than the general population (Kaplan, Pelcovitz, & Labruna, 1999). Another study of 775 RHY in New York found that 70% of females and 24% of males reported sexual abuse in the home. Prior sexual and physical abuse was the only significant predictors of suicide attempts while homeless (Molnar, Shade, Kral, Booth, & Watters, 1998). Tyler et al., 2000a,b found that in female RHY, 32% had been abused as a child. As such, it is clear that child abuse is a pervasive theme in the genesis of RHY behavior.

1.4.3. Longitudinal predictors of RHY behavior

Examining RHY populations cross-sectionally provides meaningful insight into the pathways that lead youth to run. However, prospective, large sample population research can provide additional insights into the antecedents of runaway behavior on a much larger scale. van den Bree et al. (2009) analyzed data from the US National Longitudinal Study of Adolescent health, which randomly selected high school age individuals (n = 10,433) for at home interviews to assess risk factors for a variety of outcomes. Participants were then interviewed seven years later to assess outcomes. Investigators found that somatic symptoms (e.g., unexplained physical symptoms), depressive symptoms and experiences of victimization (e.g., violent past) were all significant independent predictors of young adult homeless behavior. However, this study has some limitations in its applicability to RHY. The outcome measures were assessed during young adulthood (M = 21.6) meaning that some participants would not meet the federal definition of RHY. The outcome measure assessed was “having ever been homeless” suggesting that the sample includes both accompanied and unaccompanied homeless youth. The sample may additionally include youth that were homeless between 18 and 21. However, since young adult homelessness, accompanied homelessness and RHY behavior are strongly linked (Haber & Toro, 2004), it is probably appropriate to broadly generalize findings about homeless young adults to RHY populations. The study also did not assess whether youth had ever run away, limiting its applicability to short-term runaways (< one week). While these limitations suggest that the population studied was more inclusive than the RHY population, it can still provide important clues to the driving factors causing youth homelessness. The study suggests that trauma and mental health problems are not only characteristics of the existing RHY population, but can predict subsequent RHY behavior in housed youth. Importantly, each of these independent predictors is related to PTSD, suggesting that symptoms of PTSD may also contribute to homeless behavior.

Tyler & Bersani (2008) analyzed longitudinal data, but instead of approaching the antecedents of homelessness directly, they looked at predictors of running away. Running away is often the first step in the development of more serious and chronic homelessness in youth. Tyler & Bersani (2008) found that in a large sample (n = 1579), the strongest predictors of running behavior were being female, school suspension, neighborhood victimization and personal victimization. In this analysis, victimization meant witnessing, or personally being exposed to a significantly traumatizing event (i.e. being shot). Consistent with cross-sectional data, being non-Caucasian is a protective factor for running away. These results confirm that trauma is integrally associated with RHY behavior, even prospectively. Researchers identified that the higher run risk for females could stem from them being at far higher risk for abuse than males.

In a longitudinal sample (n = 4329) of high school youth, Tucker, Edelenm, Ellickson, and Klein (2011) found that running away from home was predicted by lack of parental support, school disengagement, depressive affect and heavier substance abuse. These results are similar to the previous longitudinal studies and add to a growing body of knowledge about the risk and protective factors associated with runaway and homeless behavior. Childhood abuse, other than victimization (e.g. being shot at or robbed) is conspicuously missing from these analyses despite RHY having very high rates of abuse compared to the general population (McManus & Thompson, 2008). Importantly, most risk factors identified by the longitudinal studies are psychological symptoms, which can directly result from childhood trauma. For example, school disengagement, depressive affect and heavier substance abuse can be directly caused by symptoms of PTSD in adolescents (Horowitz, Weine, & Jekel, 1995). The alignment in predictors of runaway behavior and trauma responses may imply that childhood trauma is a mechanism driving youth from their homes in early adolescence.

The Risk Amplification Model predicts that RHY with previous victimization will be both more likely to experience abuse on the streets and suffer more serious psychological consequences. The alignment in longitudinal predictors of runaway behavior and trauma responses may imply that childhood trauma is a mechanism driving youth from their homes in early adolescence (Tucker et al., 2011; van den Bree et al., 2009). This mechanism is further supported by the disproportionately high levels of retrospectively reported child abuse by homeless adolescents (Powers, Eckenrode, & Jaklitsch, 1990). However further research is needed to robustly establish trauma as a mechanism for RHY. This research does suggest that trauma plays an important role in the genesis of RHY behavior and presents a plausible target for intervention.

1.5. Trauma on the streets

Both cross-sectional and longitudinal research has established that trauma in the home markedly increases the chance that a youth will choose to run away, and stay separated from their families. *The Risk Amplification Model* predicts that RHY with previous victimization will be both more likely to experience abuse on the streets and suffer more serious psychological consequences. This model is further confirmed by research conducted on currently homeless youth.

1.6. Trauma on the streets

Once on the streets, youth are also often exposed to physical violence, sexual violence and crime on a daily basis (Whitbeck et al., 1999). Furthermore, RHY typically do not have any of the social support that promotes the resilience typically seen in youth of this age. As a whole, this means that RHY are at much greater risk of experiencing trauma, in addition to having a decreased ability to cope with the psychological results of this abuse.

1.7. Exposure to violence

Both male and female RHY are exposed to violence at higher levels than other adolescent samples. According to one study, 85% of RHY had seen a person physically attacked while on the streets, 69% had seen someone seriously hurt by a violent event or attack, 31% had seen

someone being killed and 24% had seen someone be sexually assaulted (Kipke, Simon, Montgomery, Unger, & Iversen, 1997). Baron, Forde, and Kennedy (2001) find that many kinds of violence are normalized within RHY populations. This sort of violence exposure provides a clear pathway to the development of PTSD in adolescence. For example, Cougle, Resnick, and Kilpatrick (2009) found that exposure to potentially traumatic events predicted development of PTSD in an additive manner. Experiencing a single physical assault puts a person at progressively greater risk for developing PTSD symptoms each subsequent time they are assaulted. Given the compound nature of violence exposure in RHY, there is a high potential to develop PTSD symptomatology. Additionally, exposure to violent events for both genders is a positive predictor of PTSD symptoms in housed adolescent populations (Zona & Milan, 2011). RHY are consistently exposed to violence in manner that confers a much higher risk of developing PTSD than those exposed to other trauma patterns.

1.7.1. Sexual victimization

RHY are an extremely high-risk group for experiencing sexual victimization. This is true for both genders, but is especially true for females. The risk of this victimization increases the longer an adolescent spends homeless (Hoyt et al., 1999). This effect has been replicated across studies (Tyler, Whitbeck, Hoyt, & Cauce, 2004). As noted, consistent with most trauma literature, female RHY are at much higher risk for sexual victimization (Gwadz et al., 2007). RHY are thought to be vulnerable to sexual victimization for several reasons. First, youth spend a lot of time on the street, making them highly visible. Second, the high-risk behaviors engaged in by homeless youth put them in close proximity to potential offenders, Finally, RHY sexual victimization survivors are less likely to report to police because they tend to engage in, or have engaged in illegal activity. These factors make RHY particularly vulnerable targets for potential offenders (Tyler et al., 2004). Additionally, runaway or homeless females are at very high risk of become involved in prostitution or sex trafficking, markedly increasing their risk of sexual victimization. Experiences of sexual victimization have been consistently linked to PTSD symptoms in adolescent populations (Bolstad & Zinbarg, 1997; Kilpatrick et al., 2003). Tragically, being a survivor of childhood abuse is a strong predictor of sexual victimization on the street (Tyler et al., 2004).

1.7.2. Physical victimization

The risk of being physically assaulted as a RHY is extremely high. For instance, in a sample of 432 youths, the majority had been severely physically assaulted (Kipke et al., 1997). Additionally, while many view RHY as perpetrating physical assault against each other, low percentages report actually perpetrating violence. Another sample indicated that RHY were victims of high levels of interpersonal violence (Whitback, Hoyt, Yoder, Cauce, & Paradise, 2001). Additionally, these youth report a pervasive fear of being a victim of physical or sexual violence. For example, 56% reported that they were somewhat or very afraid of being shot while on the streets (Kipke et al., 1997). Ultimately, RHY are at extremely high risk of all types of abuse and tend to live in constant fear of continued perpetration of violence. Unfortunately, for many RHY, abuse did not start on the streets, but began in the home.

These data consistently show that RHY are at high risk of experiencing an ongoing cycle of abuse, beginning in early childhood and continuing through their adolescence. Although there is clear documentation of this pattern of abuse, previous studies have shown that when surveyed, adolescents tend to significantly underreport experiences of sexual and physical victimization (Fergusson, Horwood, & Woodward, 2000). RHY are particularly unlikely to report earlier abuse given that they tend to mistrust adults/human services organizations that conduct the research (Fernandes-Alcantara, 2013). This means it is likely that more RHY than typically report are survivors of repetitive complex trauma, often in the absence of typical social support available to similarly aged housed adolescents. Nevertheless, conspicuously little research has been conducted on culturally informed empirical interventions for RHY presenting with complex trauma pathologies.

1.8. Psychopathology in RHY

As mentioned above, RHY are at much higher risk for psychopathology than housed youth. Once youth are classified as RHY, their risk for onset of disorders and behavior problems increases markedly. For example, RHY populations are at much higher risk for depression, substance abuse and conduct problems than housed youth (Whitbeck et al., 2015). RHY are also significantly more likely than housed youth to have a Post-Traumatic Stress Disorder (PTSD) diagnosis. This effect is especially strong in female RHY, with 45% qualifying for a lifetime PTSD diagnosis (Whitbeck, Hoyt, Johnson, & Chen, 2004a; Whitbeck, Johnson, Hoyt, & Cauce, 2004b). Researchers have consistently replicated the high levels of PTSD in all RHY, especially in females (Gwadz et al., 2007). Co-morbidity is a common theme with RHY. For example, RHY were six times more likely than a control sample to meet criteria for two or more psychological disorders (Whitbeck et al., 2004). The literature suggests that previous traumatic experiences interact with subsequent victimization on the street to create complex psychopathologies in these youth (Whitbeck et al., 1999). PTSD and other co-morbid disorders are often caused by the extreme trauma exposure with RHY. Many studies have attempted to accurately describe the trauma histories and realities of this population.

Given the likelihood of trauma, it is not surprising that estimates of case-level PTSD prevalence are as high as 18% (Whitbeck et al., 2004a,b). These PTSD rates are higher than rates in other adolescents exposed to similar trauma, suggesting that RHY are particularly vulnerable to the development of PTSD in response to traumatic events. Additionally, risk factors of RHY are similar to risk factors for the development of PTSD in adolescents (Stewart, Steiman, Cauce, Cochran, & Whitbeck, 2004). There is also evidence that the presentation of PTSD is culturally variable (Albucher & Liberzon, 2002; Gadpaille, 2013). Given this vulnerability and PTSD's often-culturally defined presentation, it is important for human service professionals and psychologists to understand the nuances of PTSD presentation in this population.

1.9. PTSD presentation

In the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013), PTSD symptoms are grouped into five clusters: (A) stressor, (B) intrusion symptoms, (C) avoidance symptoms (d) negative alterations in cognitions and mood and (E) alterations in arousal and activity. Thompson, Maccio, Desselle, and Zittel-Palamara (2007) found that prevalence of PTSD symptomatology was associated with number of runaway episodes, worry about family relationships and family conflict. This suggests that the relationship with family, and possibly relationship with previous trauma perpetrated by the family, is a driving mechanism for PTSD symptoms. Another study found that the presence of sexual trauma on the streets was a significant predictor of PTSD in both males and females. Among females, childhood sexual abuse was the strongest predictor of PTSD symptom presentation (Gwadz et al., 2007). As a whole these PTSD symptoms suggest that both traumatic experiences at home and on the streets increase risk for PTSD symptoms in RHY. Gwadz et al. (2007) also found that there were significantly more cluster B, C and D symptoms in females. This is consistent with previous literature given that females are at much higher risk of sexual abuse, a type of trauma particularly likely to result in PTSD symptoms. This predictive research can inform practice because it may help practitioners to spot youth who are at the greatest risk of a current, or likely diagnosis of PTSD. Cluster A symptoms denote the presence of a traumatic event, a necessary criterion of any PTSD diagnosis. However, trauma occurs at such a high

frequency in RHY that most youth already meet this criterion before entering a space where they might be diagnosed with other symptoms.

1.9.1. Cluster B

Given the cultural differences between RHY and house populations (Fernandes-Alcantara, 2013), there are specific differences in symptom presentation between housed adolescents and RHY. For intrusive symptoms, Stewart et al. (2004) found that in a sample of 301 homeless youth 24.6% experienced intrusive and upsetting thoughts about traumatic events, 17% reported nightmares of trauma and 11% experienced flashbacks independent of any PTSD diagnosis. Gwadz et al. (2007) found that 61% of females and 24% of males experienced intrusive (cluster B) symptoms. These studies suggest that intrusive PTSD symptoms are present at high levels in RHY.

1.9.2. Cluster C

Avoidance tends not to present typically in RHY. Housed youth and adults with PTSD often have concrete means to avoid triggers of their PTSD anxiety (i.e. avoiding situations similar to their trauma). However, RHY have very little control over their lives and, as such, may be have no control over whether they are exposed to situations that trigger their PTSD. Only a non-significant (statistically) percentage of RHY were able to avoid situations/places which remind them of their trauma while a significant percentage (27.2%) were able to avoid thoughts about the event (Whitbeck et al., 2004a,b). In housed populations, physically avoidant symptoms are more prevalent (Giaconia, Reinherz, & Silverman, a B., Pakiz, B., Frost, a K.,, & Cohen, E., 1995). This difference suggests that RHY may be unable to display this symptom in a manner similar to housed youth. An inability to classically display cluster C symptoms of PTSD, may lead to under diagnosis of clinical PTSD, despite a youth being in need of PTSD treatment. This should certainly be noted for diagnosticians attempting to identify youth needing treatment.

1.9.3. Cluster D

While RHY have lower avoidant symptoms, they do display consistently negative alterations in cognitions and mood. For example, 22.9% of youth displayed decreased range of emotions, 18.6% displayed feeling detached or cut off from others and 15% felt that they had a foreshortened future. Interestingly, no youth felt that they had forgotten important aspects of the event (Stewart et al., 2004). These findings suggest that while youth suffer significant dissociative symptoms, they do not report losses of memory for the event. Youth have been documented to use various methods of coping with these negative mood alterations including self-mutilation and heavy substance abuse (Tyler, Whitbeck, Hoyt, & Johnson, 2003). Additionally, suicide is the leading cause of death among RHY which is often an attempt to escape PTSD and other negative mood symptoms (Roy et al., 2004). Cluster D symptoms are unusually high among RHY, and are also at the root of many negative coping strategies. Psychosocial interventions should be employed to ameliorate the negative affect of this symptom.

1.9.4. Cluster E

Arousal symptoms are another overrepresented symptom in RHY. Stewart et al. (2004) found that 45.8% of youth displayed symptoms of hypervigilance. RHY also report sleep disturbances consistently, often staying awake for days at a time to guard themselves and other homeless youth (Ayerst, 1999). Hyperarousal can also be seen in RHY's marked distrust of others (Baer, Peterson, & Wells, 2004). Hyperarousal is a necessity for RHY to survive and perhaps, should not be viewed as a symptom of mental disorder, but as a coping strategy for their traumatizing lifestyle.

1.10. Systematic review of trauma intervention literature for homeless youth

As is clear from the material presented above, research on the presentations of RHY indicates that many RHY youth display heightened symptoms of trauma response (e.g., hypervigilance). However, this does not mean that all RHY youth meet diagnostic criteria for PTSD. Furthermore, human services professionals would be unwise to treat this population in a manner consistent with housed youth (with PTSD for example). This strategy may seem initially attractive due to the substantial intervention literature that exists for the general adolescent population, however, given the particular presentation and cultural context of RHY, such interventions must be specifically tailored to implementation in RHY populations for them to be most effective. The literature consistently demonstrates that homeless youth present in shelters in a substantially different psychological and cultural state than housed youth in other clinical settings. Therefore, it may be ineffective to simply employ treatment manuals designed for housed youth populations with RHY.

The literature has demonstrated that RHY are exceedingly vulnerable to trauma and subsequent trauma-induced psychopathologies. Despite this, the literature contains relatively few references to interventions specifically designed for traumatized RHY. In order to precisely ascertain the current state of the evidence, and to highlight the most pressing needs for future research, we conducted a systematic review of the RHY literature to clearly establish the extent and quality of the evidence base for empirically supported trauma interventions with this population.

2. Methodology

The systematic review was conducted in concordance with the QUORUM (Moher et al., 1999) and AMSTAR (Shea et al., 2007) guidelines. See Fig. 1 for an overview of the methodology used to select studies.

2.1. Literature search

Online searches of the PubMed (United States Library of Medicine), PsycInfo (American Psychological Association) and Social Services Abstracts (Pro Quest) data bases were conducted in July 2015. Searches were performed using relevant search terms (e.g. (Treatment OR Intervention) AND (posttraumatic Stress Disorder OR PTSD OR Trauma OR Emotional Trauma) AND (homeless OR runaway)). Abstracts were examined for references to trauma, and interventions in RHY populations. If the article appeared relevant, then the full text was retrieved. We searched reference lists of downloaded articles to find additional relevant studies.

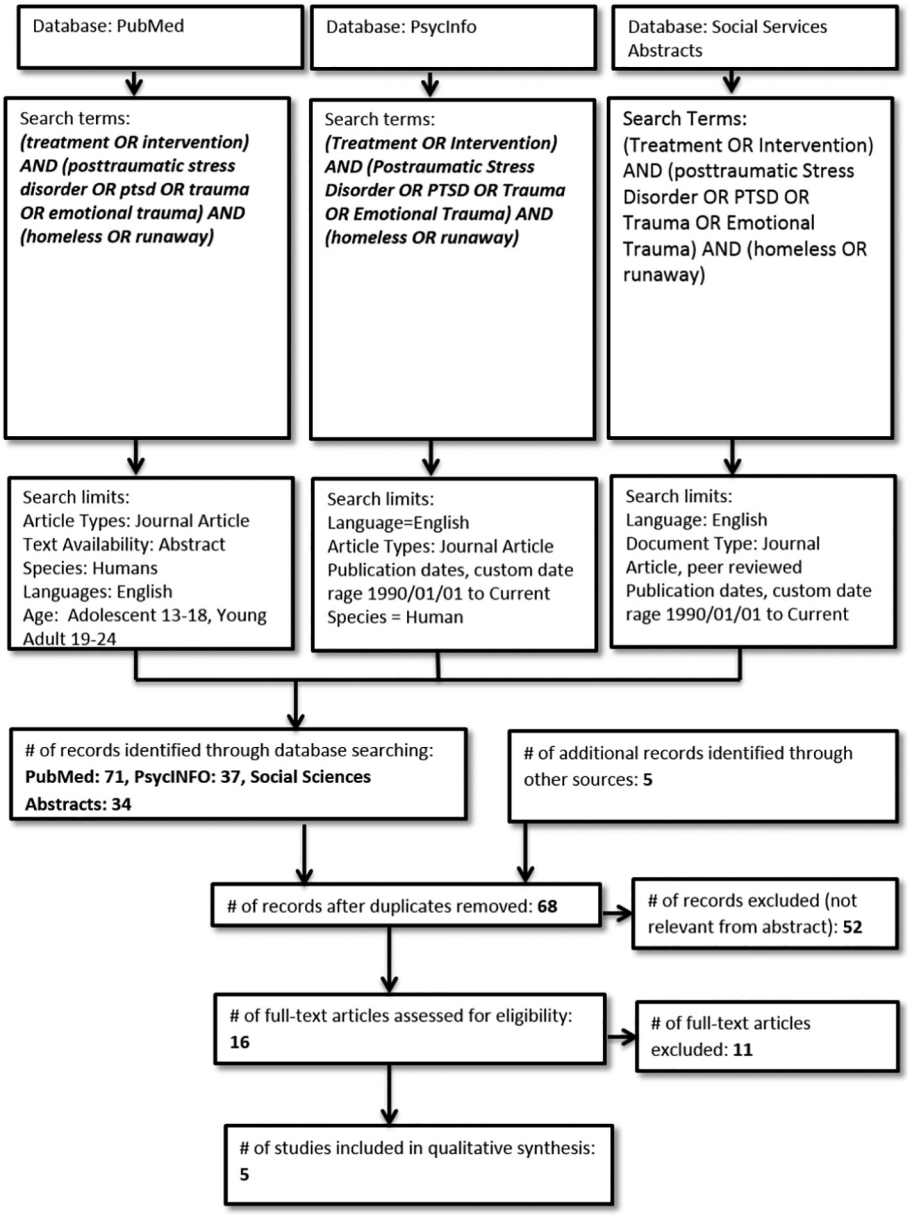
2.2. Inclusion and exclusion criteria

Studies were only included that primarily focused on interventions for trauma for Homeless adolescents. Five of the 67 articles were deemed eligible based on the exclusion criteria. Articles were assessed and excluded based on: Population Type, Intended Subject, and if a treatment model was proposed. Papers were excluded that did not directly focus on either homeless or runaway youth as defined by the RHYA. Papers that did not focus on PTSD/or Trauma in youth were excluded. Papers were also excluded that did not either propose or evaluate a method of trauma-informed intervention for RHY. Primary reasons for exclusion were that the study focused on adult or housed youth populations, and/or did not focus on treatment for PTSD/Trauma.

Of the eligible articles, there were three literature reviews, a book chapter, and a quasi-experimental study (see Table 1). (See Appendix A for full bibliography of the 67 sources considered in the systematic review.)

2.2.1. Sample characteristics

Every study described Runaway and Homeless Youth, sometimes



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referred to as Homeless Adolescents. In the quasi-experimental study, a convenience sample was taken from homeless youth shelters in a large metropolitan area (e.g. Minneapolis-St. Paul).

2.2.2. Levels of evidence

To operationalize the quality of the literature the review yielded we used the Oxford Center for Evidence-Based Medicine (OCEBM) Levels of Evidence as an evaluation framework (Howick et al., 2011). This system grades the quality of evidence contained in papers from level 1 to 5 with increasing numerical levels indicating descending quality of research and generalizability of findings. See Table 2 for a full explanation of each level of evidence.

2.3. Narrative review

The systematic review confirmed our expectation that there is little empirical support for any model of trauma intervention in RHY. Three of the sources selected were narrative literature reviews, which summarized the literature and were classified as Level 5 sources (i.e., the lowest quality level of evidence), meaning that at best, they provide mechanism-based reasoning for their claims (Bronstein, 1996; McKenzie-Mohr, Coates, & McLeod, 2012; McManus & Thompson, 2008; Saewyc & Edinburgh, 2010; Thompson, 2007; Thompson, McManus, & Voss, 2006). The quantitative paper discussed the efficacy of a pre-existing intervention (the Runaway Intervention Program - RIP) on a group of sexually exploited runaway girls, suggesting that the RIP was able to return these girls to a more developmentally appropriate trajectory (Saewyc & Edinburgh, 2010), and was classified and meeting evidence level 3. In short, the literature, in its present state, does not provide an adequate empirical basis for addressing the trauma needs of the RHY population.

2.3.1. Literature review summaries

McKenzie-Mohr et al. (2012), suggest that human service organizations switch to a *Trauma-Informed Care model*. This model is a set of guidelines proposing that since most individuals interacting with a shelter will be trauma survivors, an organization, as a whole can emphasize the physical, psychological and emotional safety of survivors

Fig. 1. Systematic review summary.References for systematic review(Studies included in qualitative synthesis are indicated by a *).Asberg, K., & Renk, K. (2015). Safer in jail? A comparison of victimization history and psychological adjustment between previously homeless and non-homeless incarcerated women. Feminist Criminology. Sage Publications. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc11&NEWS=N&AN=2015-12193-003Barber, C. C., Fonagy, P., Fultz, J., Simulinas, M., & Yates, M. (2005). Homeless near a thousand homes: outcomes of homeless youth in a crisis shelter. The American Journal of Orthopsychiatry, 75(3), 347–355. http://doi.org/10.1037/0002-9432.75.3.347Bassuk, E. L., DeCandia, C. J., Tsertsvadze, A., & Richard, M. K. (2014). The effectiveness of housing interventions and housing and service interventions on ending family homelessness: A systematic review. American Journal of Orthopsychiatry, 84(5), 457–474. Retrieved from http://libproxy.uoregon.edu/login?url=http://search.proquest.com/docview/1667947995?accountid=14698Benda, B. B. (2005). A Study of Substance Abuse, Traumata, and Social Support Systems among Homeless Veterans. Journal of Human Behavior in the Social Environment, 12(1), 59–82. http://doi.org/http://dx.doi.org/10.1300/J137v12n01_04Benda, B. B. (2006). Survival Analysis of Social Support and Trauma among Homeless Male and Female Veterans Who Abuse Substances. American Journal of Orthopsychiatry, 76(1), 70–79. http://doi.org/http://dx.doi.org/10.1037/0002-9432.76.1.70Bender, K., Ferguson, K., Thompson, S., Komlo, C., & Pollio, D. (2010). Factors associated with trauma and posttraumatic stress disorder among homeless youth in three U.S. cities: The importance of transience Journal of Traumatic Stress. John Wiley & Sons. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc7&NEWS=N&AN=2010-04850-022Bernstein, E., Ashong, D., Heeren, T., Winter, M., Bliss, C., Madico, G., & Bernstein, J. (2012). The Impact of a Brief Motivational Intervention on Unprotected Sex and Sex While High Among Drug-Positive Emergency Department Patients Who Receive STI/HIV VC/T and Drug Treatment Referral as Standard of Care. AIDS and Behavior, 16(5), 1203–1216. http://doi.org/http://dx.doi.org/10.1007/s10461-012-0134-0Berzoff, J. (2013). Group Therapy With Homeless Women. Smith College Studies in Social Work, 83(2–3), 233–248. http://doi.org/http://dx.doi.org/10.1080/00377317.2013.802967Boscarino, J. A., Hoffman, S. N., Kirchner, H. L., Erlich, P. M., Adams, R. E., Figley, C. R., & Solhkhah, R. (2013). Mental health outcomes at the Jersey Shore after Hurricane Sandy International Journal of Emergency Mental Health and Human Resilience jaboscarino@geisinger.edu: Chevron Publishing. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc10&NEWS=N&AN=2013-42911-007Bronstein, M. L. R. (1996). Intervening with homeless youths: Direct practice without blaming the victim. Child and Adolescent Social Work Journal, 13(2), 127–138.Brown, R. A., Kennedy, D. P., Tucker, J. S., Wenzel, S. L., Golinelli, D., Wertheimer, S. R., & Ryan, G. W. (2012). Sex and relationships on the street: how homeless men judge partner risk on Skid Row. AIDS and Behavior, 16(3), 774–784. http://doi.org/10.1007/s10461-011-9965-3Burns, M. N., Lehman, K. A., Milby, J. B., Wallace, D., & Schumacher, J. E. (2010). Do PTSD symptoms and course predict continued substance use for homeless individuals in contingency management for cocaine dependence? Behavior Research and Therapy, 48(7), 588–598. http://doi.org/10.1016/j.brat.2010.03.010Caldwell, K. (1995). Decreasing Sensitivity to Stressors: The Lilac Episode. Journal of Family Psychotherapy, 6(2), 79–81. Retrieved from http://libproxy.uoregon.edu/login?url=http://search.proquest.com/docview/61607413?accountid=14698Carolan, M., Burns-Jager, K., Bozek, K., & Escobar Chew, R. (2010). Women Who Have Their Parental Rights Removed by the State: The Interplay of Trauma and Oppression. Journal of Feminist Family Therapy, 22(3), 171–186. http://doi.org/http://dx.doi.org/10.1080/08952833.2010.499694Christensen, R. C., Hodgkins, C. C., Garces, L. K., Estlund, K. L., Miller, M. D., & Touchton, R. (2005). Homeless, mentally ill and addicted: the need for abuse and trauma services. Journal of Health Care for the Poor and Underserved, 16(4), 615–622. http://doi.org/10.1353/hpu.2005.0091Coe, A. B., Moczygemba, L. R., Gatewood, S. B. S., Osborn, R. D., Matzke, G. R., & Goode, J.-V. R. (2015). Medication adherence challenges among patients experiencing homelessness in a behavioral health clinic. Research in Social & Administrative Pharmacy. Elsevier Science. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc11&NEWS=N&AN=2015-18236-018Coren, E., Hossain, R., Pardo, J. P., Veras, M., Chakraborty, K., Harris, H., & Martin, A. J. (2013). Interventions for promoting reintegration and reducing harmful behavior and lifestyles in street-connected children and young people. Evidence-Based Child Health: A Cochrane Review Journal, 8(4), 1140–1272.Crombach, A., & Elbert, T. (2015). Controlling offensive behavior using narrative exposure therapy: A randomized controlled trial of former street children. Clinical Psychological Science. Crombach, Anselm: Department of Psychology, University of Konstanz, P.O. Box 905, Konstanz, Germany, 78,457, anselm.crombach@uni-konstanz.de: Sage Publications. http://doi.org/10.1177/2167702614534239Gwadz, M. V., Gostnell, K., Smolenski, C., Willis, B., Nish, D., Nolan, T. C., … Ritchie, A. S. (2009). The initiation of homeless youth into the street economy Journal of Adolescence. Center for Drug Use and HIV Research (CDUHR) Elsevier Science. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc6&NEWS=N&AN=2009-03093-013Gwadz, M. V., Nish, D., Leonard, N. R., & Strauss, S. M. (2007). Gender differences in traumatic events and rates of post-traumatic stress disorder among homeless youth. Journal of Adolescence. Gwadz, Marya Viorst: marya.gwadz@ndri.org: Elsevier Science. http://doi.org/10.1016/j.adolescence.2006.01.004Harris, M. (1996). Treating Sexual Abuse Trauma with Dually Diagnosed Women. Community Mental Health Journal, 32(4), 371–385. Retrieved from http://libproxy.uoregon.edu/login?url=http://search.proquest.com/docview/61608410?accountid=14698Helfrich, C. A., Peters, C. Y., & Chan, D. V. (2011). Trauma symptoms of individuals with mental illness at risk for homelessness participating in a life skills intervention. Occupational Therapy International, 18(3), 115–123. http://doi.org/10.1002/oti.308Helfrich, C. A., Simpson, E. K., & Chan, D. V. (2014). Change Patterns of Homeless Individuals with Mental Illness: A Multiple Case Study. Community Mental Health Journal, 50(5), 531–537. http://doi.org/http://dx.doi.org/10.1007/s10597-013-9647-xHoltgrave, D. R., Wolitski, R. J., Pals, S. L., Aidala, A., Kidder, D. P., Vos, D., … Bendixen, A. V. (2013). Cost-Utility Analysis of the Housing and Health Intervention for Homeless and Unstably Housed Persons Living with HIV. AIDS and Behavior, 17(5), 1626–1631. http://doi.org/http://dx.doi.org/10.1007/s10461-012-0204-3Howick, J., Chalmers, I., Glasziou, P., Greenhalgh, T., Heneghan, C., Liberati, A., … Thornton, H. (2011). Explanation of the 2011 Oxford Center for Evidence-Based Medicine (OCEBM) Levels of Evidence. Oxford Centre for Evidence-Based Medicine, (12), 1–8.Ibabe, I., Stein, J. A., Nyamathi, A., & Bentler, P. M. (2014). Predictors of substance abuse treatment participation among homeless adults Journal of Substance Abuse Treatment. Elsevier Science. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc10&NEWS=N&AN=2013-40287-001Johnson, S. D., Cottler, L. B., Ben Abdallah, A., & O'Leary, C. C. (2011). History of Sexual Trauma and Recent HIV-Risk Behaviors of Community-Recruited Substance Using Women. AIDS and Behavior, 15(1), 172–178. http://doi.org/http://dx.doi.org/10.1007/s10461-010-9752-6Kapadia, F., Latka, M. H., Wu, Y., Strathdee, S. A., Mackesy-Amiti, M. E., Hudson, S. M., … Garfein, R. S. (2011). Longitudinal Determinants of Consistent Condom Use by Partner Type Among Young Injection Drug Users: The Role of Personal and Partner Characteristics. AIDS and Behavior, 15(7), 1309–1318. http://doi.org/http://dx.doi.org/10.1007/s10461-009-9569-3Kennedy, D. P., Tucker, J. S., Green, H. D., Golinelli, D., & Ewing, B. (2012). Unprotected Sex of Homeless Youth: Results from a Multilevel Dyadic Analysis of Individual, Social Network, and Relationship Factors. AIDS and Behavior, 16(7), 2015–2032. http://doi.org/http://dx.doi.org/10.1007/s10461-012-0195-0Kennedy, D. P., Wenzel, S. L., Brown, R., Tucker, J. S., & Golinelli, D. (2013). Unprotected Sex Among Heterosexually Active Homeless Men: Results from a Multi-level Dyadic Analysis. AIDS and Behavior, 17(5), 1655–1667. http://doi.org/http://dx.doi.org/10.1007/s10461-012-0366-zKilmer, R. P., Cook, J. R., Crusto, C., Strater, K. P., & Haber, M. G. (2012). Understanding the Ecology and Development of Children and Families Experiencing Homelessness: Implications for Practice, Supportive Services, and Policy. American Journal of Orthopsychiatry, 82(3), 389–401. http://doi.org/http://dx.doi.org/10.1111/j.1939-0025.2012.01160.xKim, M. M., & Arnold, E. M. (2004). Stressful Life Events and Trauma Among Substance-Abusing Homeless Men. Journal of Social Work Practice in the Addictions. Haworth Press. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc4&NEWS=N&AN=2005-11005-001Kurtz, S. P., Surratt, H. L., Kiley, M. C., & Inciardi, J. A. (2005). Barriers to Health and Social Services for Street-Based Sex Workers. Journal of Health Care for the Poor and Underserved. Johns Hopkins University Press. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc4&NEWS=N&AN=2007-02797-002Lewinson, T., Thomas, M. L., & White, S. (2014). Traumatic transitions: Homeless women's narratives of abuse, loss, and fear Journal of Women & Social Work. Sage Publications. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc11&NEWS=N&AN=2014-13394-007Linden, I. A., Torchalla, I., & Krausz, M. (2013). Addiction in maternity: Prevalence of mental illness, substance use, and trauma. Journal of Aggression, Maltreatment & Trauma Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc10&NEWS=N&AN=2013-41741-003*McKenzie-Mohr, S., Coates, J., & McLeod, H. (2012). Responding to the needs of youth who are homeless: Calling for politicized trauma-informed intervention. Children and Youth Services Review, 34(1), 136–143. http://doi.org/http://dx.doi.org/10.1016/j.childyouth.2011.09.008*McManus, H. H., & Thompson, S. J. (2008). Trauma Among Unaccompanied Homeless Youth: The Integration of Street Culture into a Model of Intervention. Journal of Aggression, Maltreatment & Trauma, 16(1), 92–109. http://doi.org/10.1080/10926770801920818McWhirter, P. T. (2006). Community Therapeutic Intervention for Women Healing from Trauma. Department of Educational Psychology, University of Oklahoma, Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc5&NEWS=N&AN=2006-21869-005Mello, A. F., Juruena, M. F., Maciel, M. R., Cavalcante-Nobrega, L. P., Cividanes, G. C., Fossaluza, V., de Jesus Mari, J. (2015). Factors related to the cortisol awakening response of children working on the streets and siblings, before and after 2 years of a psychosocial intervention. Psychiatry Research. Elsevier Science.Merscham, C., Van Leeuwen, J. M., & McGuire, M. (2009). Mental health and substance abuse indicators among homeless youth in Denver, Colorado. Child Welfare, 88(2), 93–110.Mershcam, C., Van Leeuwen, J. M., & McGuire, M. (2009). Mental Health and Substance Abuse Indicators Among Homeless Youth in Denver, Colorado. Child Welfare, 88(2), 93–110. Retrieved from http://libproxy.uoregon.edu/login?url=http://search.proquest.com/docview/61394273?accountid=14698Mohammad, E. T., Shapiro, E. R., Wainwright, L. D., & Carter, A. S. (2015). Impacts of family and community violence exposure on child coping and mental health Journal of Abnormal Child Psychology Springer. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc11&NEWS=N&AN=2014-32181-001Nebelkopf, E., & Wright, S. (2011). Holistic system of care: A ten-year perspective. Journal of Psychoactive Drugs. Wright, Serena: Native American Health Center, Family & Child Guidance Clinic Taylor & Francis. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc8&NEWS=N&AN=2012-02266-007North, C. S., Thompson, S. J., Smith, E. M., & Kyburz, L. M. (1996). Violence in the lives of homeless mothers in a substance abuse treatment program: A descriptive study. Journal of Interpersonal Violence. US: Sage Publications. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc3&NEWS=N&AN=1996-04436-007Padgett, D. K., Hawkins, R. L., Abrams, C., & Davis, A. (2006). In Their Own Words: Trauma and Substance

Abuse in the Lives of Formerly Homeless Women With Serious Mental Illness. American Journal of Orthopsychiatry, 76(4), 461–467. http://doi.org/http://dx.doi.org/10.1037/1040.3590.76.4.461Padgett, D. K., & Henwood, B. F. (2012). Qualitative Research for and in Practice: Findings from Studies with Homeless Adults Who Have Serious Mental Illness and Co-Occurring Substance Abuse. Clinical Social Work Journal, 40(2), 187–193. http://doi.org/http://dx.doi.org/10.1007/s10615-011-0354-1Padgett, D. K., Smith, B. T., Henwood, B. F., & Tiderington, E. (2012). Life Course Adversity in the Lives of Formerly Homeless Persons With Serious Mental Illness: Context and Meaning. American Journal of Orthopsychiatry, 82(3), 421–430. http://doi.org/http://dx.doi.org/10.1111/j.1939-0025.2012.01159.xPatterson, M. L., Currie, L., Rezansoff, S., & Somers, J. M. (2015). Exiting homelessness: Perceived changes, barriers, and facilitators among formerly homeless adults with mental disorders. Psychiatric Rehabilitation Journal. Educational Publishing Foundation. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc11&NEWS=N&AN=2014-48758-001Petering, R., Rice, E., Rhoades, H., & Winetrobe, H. (2014). The social networks of homeless youth experiencing intimate partner violence Journal of Interpersonal Violence. Sage Publications. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc11&NEWS=N&AN=2014-33739-002Preitler, B. (2012). When disaster strikes in time of war: Traditional healing and psychosocial training help divided communities mourn together International Journal of Applied Psychoanalytic Studies. John Wiley & Sons. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc9&NEWS=N&AN=2012-25074-005Ravenell, J. E., Whitaker, E. E., & Johnson, W. E. J. (2008). According to him: barriers to healthcare among African-American men. Journal of the National Medical Association, 100(10), 1153–1160.Rhoades, H., Wenzel, S. L., Golinelli, D., Tucker, J. S., Kennedy, D. P., & Ewing, B. (2014). Predisposing, Enabling and Need Correlates of Mental Health Treatment Utilization Among Homeless Men. Community Mental Health Journal, 50(8), 943–952. http://doi.org/http://dx.doi.org/10.1007/s10597-014-9718-7Rhoades, H., Wenzel, S. L., Golinelli, D., Tucker, J. S., Kennedy, D. P., Green, H. D., & Zhou, A. (2011). The social context of homeless men's substance use. Drug and Alcohol Dependence, 118(2–3), 320–325. http://doi.org/http://dx.doi.org/10.1016/j.drugalcdep.2011.04.011Roberts, A. C., Wechsberg, W. M., Zule, W., & Burroughs, A. R. (2003). Contextual factors and other correlates of sexual risk of HIV among African-American crack-abusing women. Addictive Behaviors, 28(3), 523–536.*Saewyc, E. M., & Edinburgh, L. D. (2010). Restoring healthy developmental trajectories for sexually exploited young runaway girls: fostering protective factors and reducing risk behaviors. The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine, 46(2), 180–188. http://doi.org/10.1016/j.jadohealth.2009.06.010Schaffer, B. J. (2012). Homeless Military Veterans and the Intersection of Partner Violence. Journal of Human Behavior in the Social Environment, 22(8), 1003–1013. http://doi.org/http://dx.doi.org/10.1080/10911359.2012.707961Shea, B. J., Grimshaw, J. M., Wells, G. a, Boers, M., Andersson, N., Hamel, C., … Bouter, L. M. (2007). Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews. BMC Medical Research Methodology, 7, 10. http://doi.org/10.1186/1471-2288-7-10Shors, T. J., Olson, R. L., Bates, M. E., Selby, E. A., & Alderman, B. L. (2014). Mental and Physical (MAP) Training: A neurogenesis-inspired intervention that enhances health in humans Neurobiology of Learning and Memory. Shors, Tracey J.: Rutgers University, NJ, US: Elsevier Science. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc11&NEWS=N&AN=2014-42150-001Stein, J. A., Nyamathi, A. M., & Zane, J. I. (2009). Situational, psychosocial, and physical health-related correlates of HIV/AIDS risk behaviors in homeless men. American Journal of Men's Health, 3(1), 25–35. http://doi.org/10.1177/1557988307307862Strehlau, V., Torchalla, I., Kathy, L., Schuetz, C., & Krausz, M. (2012). Mental health, concurrent disorders, and health care utilization in homeless women. Journal of Psychiatric Practice, 18(5), 349–360. http://doi.org/10.1097/01.pra.0000419819.60505.dcTalukdar, A., Roy, K., Saha, I., Mitra, J., & Detels, R. (2008). Risk Behaviors of Homeless Men in India: A Potential Bridge Population for HIV Infection. AIDS and Behavior, 12(4), 613–622. http://doi.org/http://dx.doi.org/10.1007/s10461-007-9338-0*Thompson (2007). Youth homelessness and trauma. In Trauma Psychology: Issues in Violence, Disaster, Health, and Illness (Vol. 2, p. 203). Greenwood Publishing Group.Thompson, S. J., Bender, K., & Kim, J. (2011). Family factors as predictors of depression among runaway youth: Do males and females differ Child & Adolescent Social Work Journal. School of Social Work, University of Texas at Austin, Springer. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc8&NEWS=N&AN=2011-01525-003*Thompson, S. J., McManus, H., & Voss, T. (2006). Posttraumatic Stress Disorder and Substance Abuse Among Youth Who Are Homeless: Treatment Issues and Implications Special Issue: Evidence-Based Brief Treatment and Crisis Intervention with Co-Occurring Disorders. Oxford University Press. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc5&NEWS=N&AN=2006-10323-002Torchalla, I., Strehlau, V., Li, K., Aube Linden, I., Noel, F., & Krausz, M. (2014). Posttraumatic stress disorder and substance use disorder comorbidity in homeless adults: Prevalence, correlates, and sex differences. Psychology of Addictive Behaviors. Torchalla, Iris: Centre for Health Evaluation and Outcome Sciences, 588–1081 American Psychological Association. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc10&NEWS=N&AN=2013-27999-001Wenzel, S. L., Tucker, J. S., Elliott, M. N., & Hambarsoomians, K. (2007). Sexual Risk among Impoverished Women: Understanding the Role of Housing Status. AIDS and Behavior, 11, 9–20. http://doi.org/http://dx.doi.org/10.1007/s10461-006-9193-4Williams, J. K., & Hall, J. A. (2009). Stress and Traumatic Stress: How Do Past Events Influence Current Traumatic Stress among Mothers Experiencing Homelessness? Social Work Research, 33(4), 199–207. Retrieved from http://libproxy.uoregon.edu/login?url=http://search.proquest.com/docview/61366708?accountid=14698Yeater, E. A., Austin, J. L., Green, M. J., & Smith, J. E. (2010). Coping mediates the relationship between posttraumatic stress disorder (PTSD) symptoms and alcohol use in homeless, ethnically diverse women: A preliminary study. Special Issue: Cultural Considerations of Trauma: Physical, Mental, and Social Correlates of Intimate Partner Violence Exposure. Educational Publishing Foundation. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc7&NEWS=N&AN=2010-26424-003Zlotnick, C., Tam, T., & Bradley, K. (2007). Impact of adulthood trauma on homeless mothers. Community Mental Health Journal, 43(1), 13–32. http://doi.org/10.1007/s10597-006-9070-7Zlotnick, C., Tam, T., & Zerger, S. (2012). Common needs but divergent interventions for U.S. homeless and foster care children: results from a systematic review. Health & Social Care in the Community, 20(5), 449–476. http://doi.org/10.1111/j.1365-2524.2011.01053.x

of trauma. For instance, an education program for shelter workers could be implemented, emphasizing the lasting effects of trauma and its pervasive impact on a person's life. Importantly, this article does not suggest any specific psychotherapeutic interventions but rather, suggests a paradigm shift for organizations working with RHY.

McManus and Thompson (2008) recognize that RHY are an extremely traumatized population, and that many of their unique needs stem from this identity. The paper presents guidelines for general outreach therapy with RHY, and offers some theoretical strategies for addressing their trauma symptoms. They postulate that goals of therapy should primarily (before any symptom specific work) be to (a) develop trust appropriately, (b) increase subjective sense of control over internal experience and life, (c) decrease perception of stigma around being homeless, and (d) increase self-esteem and self-care. They suggest that shelters combine a model of outreach with mentally ill homeless adults, strength-based solution-focused techniques and specific treatment goals adapted from treatment of survivors of chronic trauma. Finally, McManus and Thompson argue that the trauma therapy model that fits best with the service needs of RHY is Newman's (2000) treatment goals. RHY are consistently exposed to the environment which traumatized them, so therapies for survivors of past trauma may be ineffective. Newman's (2000) goals focus on offering basic necessities to these individuals as a means of gaining trust, while conveying to the client respect, empathy and a genuine desire to help.

Thompson (2007), in a similar vein, suggests that treatment options for RHY be drawn from adapting existing empirical interventions from other populations. She identifies the “Strengths-Based Approach” as one possibility for treating the trauma needs of this population. This approach has been demonstrated effective in RHY populations for non-trauma related psychopathologies and outcome measures (Altena et al., 2010), but it does nothing to address the specific cultural needs of the population.

Similarly, Thompson et al. (2006) suggest that practitioners rely on existing models of intervention tested in different adolescent populations to service the trauma needs of RHY. They identify either a *Strengths-Based Approach* or the use of Cognitive Behavioral Therapy (CBT). They rely on the premise that interventions tested in other populations will be effective with RHY. Thompson and McManus revised this viewpoint in their 2008 paper, and began suggesting that a specific RHY trauma intervention be created.

Each of these authors introduces plausible therapeutic approaches to the treatment of PTSD in RHY. However, none of these mechanism-based explanations (evidence level 5) have been tested. As such, it would be inappropriate to conclude that these are an effective style of trauma-focused intervention for RHY. Given that RHY are a unique population, both culturally, and in their trauma presentation, without further testing it cannot be ruled out that these plausible interventions might be ineffective, or even harmful, to RHY.

Table 1
Systematic review output summary.

Author (year)	Title	Population	Paper type	Trauma focused	Treatment focused	Evidence level	Brief conclusion
McKenzie-Mohr et al. (2012)	Responding to the needs of youth who are homeless: Calling for politicized trauma-informed intervention	Homeless Youth	Literature Review	Yes	Yes	Level 5	Suggests a paradigm shift in RHY shelters where all practitioners emphasize trauma as part of their care.
Saewyc and Edinburgh (2010)	Restoring Healthy Developmental Trajectories for Sexually Exploited Young Runaway Girls: Fostering Protective Factors and Reducing Risk Behaviors	Sexually Exploited Runaway Girls (n = 68)	Quasi-Experimental Study	Yes	Yes	Level 3	Develops a program for RHY girls with sexual abuse history that shows promise, though needs more testing.
McManus and Thompson (2008)	Trauma Among Unaccompanied Homeless Youth: The Integration of Street Culture into a Model of Intervention.	Homeless Youth	Literature Review	Yes	Yes	Level 5	Existing frameworks of trauma can be adapted with knowledge about RHY behavior to serve the population effectively.
Thompson (2007)	Youth homelessness and trauma	Runaway and Homeless Adolescents	Book Chapter	Yes	Yes	Level 5	Reviews literature and concludes that research provides little guidance for treatment of trauma in RHY. Provides mechanism-based recommendations for practice and policy.
Thompson et al. (2006)	Posttraumatic Stress Disorder and Substance Abuse Among Youth Who Are Homeless: Treatment Issues and Implications.	Runaway and Homeless Adolescents	Literature Review	Yes	Yes	Level 5	Suggests that existing models will be effective at treating RHY with little adjustment

2.3.2. Empirical article summary

Saewyc and Edinburgh (2010) provide some evidence that the effects of trauma in RHY can be treated with the Runaway Intervention Program (RIP). This program, specifically designed for runaway girls who have experienced sexual assault or exploitation, provides strengths focused interaction with case advocates in addition to group therapy focused on women's empowerment. Girls receiving this treatment were compared to an age-matched sample of children enrolled in a public school system. Researchers operationalized intervention success by comparing outcome measures (e.g., Suicidal Ideation, Self-Esteem) between the RHY group and the public school group. Saewyc and Edinburgh (2010) found that while at the beginning the runaway girls had significantly poorer measures of well being, as the intervention progressed the runaway girls improved signifcantly more than the comparison youths. Before accepting RIP as an effective intervention for RHY, it is important to note that the design of this study (quasi-experimental, no-control) limits the conclusions which can be drawn. Furthermore, the population studied represents a relatively small and unique segment of the RHY population. Thus the improvement they experienced may not generalize to the larger RHY population. Lastly, the study did not specifically target trauma outcomes, but rather, took a trauma population and assessed general functioning, thereby limiting the researchers ability to understand the progression of trauma symptomatology. This study was classified as a Level 3 study, but since no causal inferences can be made and no trauma outcomes were assessed, it can only provide a suggestion at an intervention that would require significant modification to be effective with RHY.

2.3.3. Systematic review discussion

Each manuscript presents a plausible theoretical model to address PTSD symptoms in RHY. Generally, the papers tend to draw from frameworks intended to treat different populations and make small adjustments to make them more compatible with RHY. However, this is concerning because RHY's unique presentation will likely make them ill-suited to interventions designed and tested with a different population even if that intervention has been adjusted. In addition to this shortcoming, no subsequent research has been conducted validating these models. Therefore, they cannot be confidently implemented as an evidence based approach to trauma in RHY populations. It is premature to conclude that these are effective trauma-focused intervention for RHY. None of the reviewed articles had an evidence level above 3 and the majority only gave theoretical models (evidence level 0). Human service professionals will not be able to provide evidence based interventions for the trauma needs of RHY until substantially more research is conducted. Until such time as it is possible to empirically test intervention approaches, RHY will have to be treated with speculative mechanism based models, or adaptations of models that are empirically supported for a small segment of their population. Ultimately, this means that this significant, vulnerable, population will not receive the full benefits of evidence-based services.

The scope of this systematic review is limited somewhat, because very few articles directly addressed the needs of runaway youths as discrete from homeless youth. This stems from a number of sources (1) The transience of most runs make these youths even more challenging than homeless youth to interview/study (2) The vulnerabilities of short term runners may not be as severe as homeless youth because they have had less exposure to street trauma that may exacerbate existing psychopathology. While short term runners deserve psychological support, their needs may more addressable within existing frameworks in the literature.

Of course, there are significant barriers to conducting research with these populations that may in large part explain this lacuna in the literature. RHY youth cannot be recruited through the usual institutions (e.g., clinical services) that are utilized for accessing many clinical samples, and research staff with specific cultural and practice expertise are usually required in order to be able to detect and engage RHY

Table 2
Oxford center for evidence-based medicine 2011 evidence levels for intervention research (Howick et al., 2011).

Question	Evidence level 1	Evidence level 2	Evidence level 3	Evidence level 4	Evidence level 5
Does this Intervention Help?	Systematic review of randomized trials or n-of- 1 trials	Randomized trial or observational study with dramatic effect	Non-randomized controlled cohort/follow-up study	Case-Series, case-control studies or historically controlled studies	Mechanism-based reasoning

samples. In this regard, it is interesting to note that other commonly traumatized samples that are not accessible through mainstream clinical services, such as clients of domestic violence services and shelters, also lack a strong evidence base for interventions that are specifically tailored to their needs (Jones, Hughes, & Unterstaller, 2001). The fact that both these populations lack an adequate evidence base for practice suggests that this may be a common problem among samples that are difficult for researchers to access using typical methods.

A barrier that is more specific to younger samples is related to the common requirement of human ethics committees to obtain parental/guardian consent for minors to participate in research, which is clearly problematic for minors who are estranged from their parents. It is important to note that in the case of consent for medical procedures with pediatric samples, especially adolescent samples, there has been some discussion of the "mature minor exception" to the general requirement of parental consent (Coleman & Rosoff, 2013). If an argument can be made that the minor has the cognitive capacity to provide fully informed consent (as will be the case in many adolescent samples) and that the benefits of conducting the research clearly outweigh the risks, it may be ethically defensible to consent RHY without obtaining parental/guardian consent. This argument should probably be presented to research ethics committees that are considered projects that involve RHY more often, as parental consent may not be necessary for informed consent procedures to be legally and ethically adequate, and may also be inhibiting the establishment of an evidence base for effective services and intervention - thereby harming the very population these requirements seek to protect.

To address the trauma needs of RHY we suggest that clinical psychologists begin the development of systematic trauma-focused therapy that addresses the specific cultural and psychopathological needs of RHY. Our review of the existing literature suggests a number of principles that should guide this effort. Specifically, current studies suggest that therapy should be strengths based (McManus & Thompson, 2008; Thompson et al., 2007, 2006), incorporate a specific outreach strategy (McKenzie-Mohr et al., 2012; McManus & Thompson, 2008), address trauma directly (Saewyc & Edinburgh, 2010; Thompson et al., 2006), use a previously established trauma framework that is specifically adapted to RHY (i.e., Newman's treatment goals) (McManus & Thompson, 2008) and focus on peer to peer interactions and interventions (Booth et al., 1999; Saewyc & Edinburgh, 2010). With such a theoretical approach developed, researchers should focus on the efficacy of interventions in smaller, more specific samples of RHY. For example, a small sample of RHY could be invited into a residential setting, where the intervention could be tested in a Randomized Control Trial (RCT) or even an uncontrolled design. If this intervention showed significant changes in PTSD symptoms, it could be implemented in larger scales RCTs, and then subsequently in effectiveness designs with large samples. The ideal methodology to study most interventions is a large sample, prospective, RCT, but due to the transient nature of RHY, this would be extremely challenging and costly to conduct. This step would only be inappropriate if a substantial body of literature had built up around the efficacy and effectiveness of a particular trauma intervention for RHY.

3. Conclusions

Runaway and homeless youth are a nationally significant population of youth who receive insufficient attention in the national public health debate, conventional media and the scientific literature (especially clinical psychological science). In the 39 years since the Runaway and Homeless Youth Act, the status of these young people has not improved, and estimates of the size of this population have risen. RHY experience high rates of psychopathology, violence, substance abuse and infectious diseases. An omnipresent theme in RHY is consistent and repetitive exposure to trauma. These youths often flee their homes to escape abuse in their home environment, only to emerge on the streets and be exposed to consistently high levels of sexual and physical victimization, in addition to constant exposure to violence. Evidence demonstrates that pre-existing childhood abuse can interact with and predict victimization on the street, which makes RHY especially vulnerable to trauma-related mental health issues. Most RHY display PTSD related symptoms at much higher rates than housed youth. However, their PTSD may present differently, in a street culture specific manner. Despite being a population who display high levels of PTSD and who often present for services while still in the environment in which they were traumatized, clinical psychologists have conducted very little research into culturally sensitive, empirically tested interventions for traumatized youth. The only frameworks suggested in the literature have little to no high quality empirical support. Researchers have a duty to create a uniform, empirically tested and effective trauma intervention suited and tailored for implementation in RHY populations. Until then, complex and interacting experiences of trauma will define the lives of RHY, and effective help may be hard to come by as there is still scant empirical basis for interventions that can change harmful RHY trajectories.

References

Albucher, R. C., & Liberzon, I. (2002). Psychopharamcological treatment in PTSD: A critical review. *Journal of Psychiatric Research, 36*(6), 355–357.

Altena, A. M., Brilleslijper-Kater, S. N., & Wolf, J. L. M. (2010). Effective interventions for homeless youth. A systematic review. *American Journal of Preventive Medicine*, *38*(6), 637–645. http://dx.doi.org/10.1016/j.amepre.2010.02.017.

American Psychiatric Association (2013). *The diagnostic and statistical manual of mental disorders*(5th ed.). DC: Washington.

Ayerst, S. (1999). Depression and stress in street youth. *Adolescence*, *34*(135).

Baer, J. S., Peterson, P. L., & Wells, E.a. (2004). Rationale and design of a brief substance use intervention for homeless adolescents. *Addiction Research & Theory*, *12*(4), 317–334. http://dx.doi.org/10.1080/1606635042000236475.

Baron, S. W., Forde, D. R., & Kennedy, L. W. (2001). Rough justice: Street youth and violence. *Journal of Interpersonal Violence*, *16*(7), 662–678. http://doi.org/0803973233.

Barry, P. J., Ensign, J., & Lippek, S. H. (2002). Embracing street culture: Fitting health care into the lives of street youth. *Journal of Transcultural Nursing*, *13*(2), 145–152. http://dx.doi.org/10.1177/104365960201300208.

Bender, K., Ferguson, K., Thompson, S., Komlo, C., & Pollio, D. (2010). Factors associated with trauma and posttraumatic stress disorder among homeless youth in three U.S. cities: The importance of transience. (B. Auerswald Bender, Benight, Clatts, Cohen, Cuffe, Davey-Rothwell, De Rosa, Fors, Foy, Ginzler, Green, Joe, Johnson, Kilpatrick, McCarthy, McManus, Ouimette, Pine, Safyer, Saigh, Sheehan, Simon, Stewart, Thompson, Thompson, Thompson, Thompson, Toro, Tyler, Ed.) Journal of traumatic stress. Bender, Kimberly: School of Social Work, University of Denver, 2148 S High Street, Denver, CO, US, 80208, kimberly.bcndcr@du.edu: John Wiley & Sons. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc7&NEWS=N&AN=2010-04850-022.

Bolstad, B. R., & Zinbarg, R. E. (1997). Sexual victimization, generalized perception of control, and posttraumatic stress disorder symptom severity. *Journal of Anxiety*

Disorders, *11*(5), 523–540. http://dx.doi.org/10.1016/S0887-6185(97)00028-5.
Booth, R. E., Zhang, Y., & Kwiatkowski, C. F. (1999). The challenge of changing drug and sex risk behaviors of runaway and homeless adolescents. *Child Abuse and Neglect*, *23*(12), 1295–1306. http://dx.doi.org/10.1016/S0145-2134(99)00090-3.
Bronstein, M. L. R. (1996). Intervening with homeless youths: Direct practice without blaming the victim. *Child and Adolescent Social Work Journal*, *13*(2), 127–138.
Coleman, D. L., & Rosoff, P. M. (2013). The legal authority of mature minors to consent to general medical treatment. *Pediatrics*, *131*(4), 786–793.
Cougle, J. R., Resnick, H., & Kilpatrick, D. G. (2009). Does prior exposure to interpersonal violence increase risk of PTSD following subsequent exposure? *Behaviour Research and Therapy*, *47*(12), 1012–1017. http://dx.doi.org/10.1016/j.brat.2009.07.014.
De Rosa, C. J., Montgomery, S. B., Kipke, M. D., Iverson, E., Ma, J. L., & Unger, J. B. (1999). Service utilization among homeless and runaway youth in Los Angeles, California: Rates and reasons. *Journal of Adolescent Health*, *24*(3), 190–200.
Fergusson, D. M., Horwood, L. J., & Woodward, L. (2000). The stability of child abuse reports: A longitudinal study of the reporting behavior of young adults. *Psychological Medicine*, *30*(3), 529–544.
Fernandes-Alcantara, A. L. (2013). *Runaway and Homeless Youth: Demographics and Programs*. 1–38. Retrieved fromhttp://www.nchcw.org/uploads/7/5/3/3/7533556/crs_2013_rhya_history_and_lit_review.pdf.
Gadpaille, W. J. (2013). Cross-cultural and gender considerations of trauma. *Annals of the American Society for Adolescent Psychiatry*, *27*(225).
Gaetz, S. (2004). Safe streets for whom? Homeless youth, social exclusion, and criminal victimization. *Canadian Journal of Criminology and Criminal Justice*, *46*(4), 423–456.
Gangamma, R., Slesnick, N., Toviessi, P., & Serovich, J. (2008). Comparison of HIV risks among gay, lesbian, bisexual and heterosexual homeless youth. *Journal of Youth Adolescence*, *37*(4), 456–464.
Giaconia, R. M., Reinherz, H. Z., & Silverman, a B., Pakiz, B., Frost, a K., & Cohen, E. (1995). Traumas and posttraumatic stress disorder in a community population of older adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *34*(10), 1369–1380. http://dx.doi.org/10.1097/00004583-199510000-00023.
Gwadz, M. V., Nish, D., Leonard, N. R., & Strauss, S. M. (2007). Gender differences in traumatic events and rates of post-traumatic stress disorder among homeless youth. *Journal of Adolescence*, *30*(1), 117–129. http://dx.doi.org/10.1016/j.adolescence.2006.01.004.
Haber, M. G., & Toro, P.a. (2004). Homelessness among families, children, and adolescents: An ecological – Developmental perspective. *Clinical Child and Family Psychology Review*, *7*(3).
Horowitz, K., Weine, S., & Jekel, J. (1995). PTSD symptoms in urban adolescent girls: Compounded community trauma. *Journal of American Academy of Child Adolecent Psychiatry*, *34*(10), 1354–1361. Retrieved fromhttp://ac.els-cdn.com/S0890856709640053/1-s2.0-S0890856709640053-main.pdf?_tid=81145e96-035e-11e5-b270-00000aacb35f&acdnat=1432614193_6236a418e4cbe00dfad249ddc7834313.
Howick, J., Chalmers, I., Glasziou, P., Greenhalgh, T., Heneghan, C., Liberati, A., ... Thornton, H. (2011). Explanation of the 2011 Oxford center for evidence-based medicine (OCEBM) levels of evidence. *Oxford Centre for Evidence-Based Medicine*, *12*, 1–8.
Hoyt, D. R., Ryan, K. D., & Cauce, A. M. (1999). Personal victimization in a high-risk environment: Homeless and runaway adolescents. *Journal of Research in Crime and Delinquency*, *36*(4), 371–392.
Jones, L., Hughes, M., & Unterstaller, U. (2001). Post-traumatic stress disorder (PTSD) in victims of domestic violence a review of the research. *Trauma, Violence, & Abuse*, *2*(2), 99–119.
Kaplan, S. J., Pelcovitz, D., & Labruna, V. (1999). Child and adolescent abuse and neglect research: A review of the past 10 years. Part I: Physical and emotional abuse and neglect. *Journal of the American Academy of Child and Adolescent Psychiatry*, *38*(10), 1214–1222. http://dx.doi.org/10.1097/00004583-199910000-00009.
Kilpatrick, D. G., Ruggiero, K. J., Acierno, R., Saunders, B. E., Resnick, H. S., & Best, C. L. (2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the national survey of adolescents. *Journal of Consulting and Clinical Psychology*, *71*(4), 692–700. http://dx.doi.org/10.1037/0022-006X.71.4.692.
Kipke, M. D., Simon, T. R., Montgomery, S. B., Unger, J. B., & Iversen, E. F. (1997). Homeless youth and their exposure to and involvement in violence while living on the streets. *Journal of Adolescent Health*, *20*(5), 360–367. http://dx.doi.org/10.1016/S1054-139X(97)00037-2.
Maclean, M. G., Embry, L. E., & Cauce, A. M. (1999). Homeless adolescents' paths to separation from family: Comparison of family characteristics, psychological adjustment, and victimization. *Journal of Community Psychology*, *27*(2), 179–187.
Malone, K. (2002). Street life: Youth, culture and competing uses of public space. *Environment and Urbanization*, *14*(2), 157–168. http://dx.doi.org/10.1177/095624780201400213.
Martijn, C., & Sharpe, L. (2006). Pathways to youth homelessness. *Social Science & Medicine*, *62*, 1–12. http://dx.doi.org/10.1016/j.socscimed.2005.05.007.
Masten, A. S., Miliotis, D., Graham-Bermann, S. A., Ramirez, M., & Neemann, J. (1993). Children in homeless families: Risks to mental health and development children in homeless families: Risks to mental health and development. *Journal of Consulting and Clinical Psychology*, *61*(2), 335–343. http://dx.doi.org/10.1037/0022-006X.61.2.335.
McKenzie-Mohr, S., Coates, J., & McLeod, H. (2012). Responding to the needs of youth who are homeless: Calling for politicized trauma-informed intervention. *Children and Youth Services Review*, *34*(1), 136–143. http://dx.doi.org/10.1016/j.childyouth.2011.09.008.
McManus, H. H., & Thompson, S. J. (2008). Trauma among unaccompanied homeless youth: The integration of street culture into a model of intervention. *Journal of Aggression, Maltreatment & Trauma*, *16*(1), 92–109. http://dx.doi.org/10.1080/10926770801920818.
Moher, D., Cook, D. J., Eastwood, S., Olkin, I., Rennie, D., Stroup, D. F., & Group, Q (1999). *Improving the quality of reports of meta-analyses of randomised controlled trials: The QUOROM statement. 354*, 1896–1900.
Molnar, B. E., Shade, S. B., Kral, A. H., Booth, R. E., & Watters, J. K. (1998). Suicidal behavior and sexual/physical abuse among street youth. *Child Abuse and Neglect*, *22*(3), 213–222. http://dx.doi.org/10.1016/S0145-2134(97)00137-3.
Powers, J. L., Eckenrode, J., & Jaklitsch, B. (1990). Maltreatment among runaway and homeless youth. *Child Abuse & Neglect*, *14*(1), 87–98. http://dx.doi.org/10.1016/0145-2134(90)90084-7.
Roy, E., Haley, N., Leclerc, P., Sochanski, B., Boudreau, J.-F., & Boivin, J.-F. (2004). Mortality in a cohort of street youth in Montreal. *JAMA: The Journal of the American Medical Association*, *292*(5), 569–574. http://dx.doi.org/10.1001/jama.292.5.569.
Running, D. M., Ligon, J. B., & Miskioglu, I. (1999). From the SAGE social science collections. All rights reserved. *Journal of Composite Materials*, *33*(10), 928–940. http://doi.org/0803973233.
Ryan, K. D., Kilmer, R. P., Cauce, A. M., Watanabe, H., & Hoyt, D. R. (2000). Psychological consequences of child maltreatment in homeless adolescents: Untangling the unique effects of maltreatment and family environment. *Child Abuse and Neglect*, *24*(3), 333–352. http://dx.doi.org/10.1016/S0145-2134(99)00156-8.
Saewyc, E. M., & Edinburgh, L. D. (2010). Restoring healthy developmental trajectories for sexually exploited young runaway girls: Fostering protective factors and reducing risk behaviors. *The Journal of Adolescent Health*, *46*(2), 180–188. http://dx.doi.org/10.1016/j.jadohealth.2009.06.010.
Shea, B. J., Grimshaw, J. M., Wells, G. A., Boers, M., Andersson, N., Hamel, C., ... Bouter, L. M. (2007). Development of AMSTAR: A measurement tool to assess the methodological quality of systematic reviews. *BMC Medical Research Methodology*, *7*, 10. http://dx.doi.org/10.1186/1471-2288-7-10.
Stewart, A. J., Steiman, M., Cauce, A. M., Cochran, B. N., & Whitbeck, L. B. (2004). Victimization and posttraumatic stress disorder among homeless adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *43*(4), 325–331.
Stricof, R. L., Kennedy, J. T., Nattell, T. C., Weisfuse, I. B., & Novick, L. F. (1991). HIV seroprevalence in a facility for runaway and homeless adolescents. *American Journal of Public Health*, *81*(Suppl), 50–53. Retrieved fromhttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1404745&tool=pmcentrez&rendertype=abstract.
The Runaway and Homeless Youth Act (2008). United States Congress.
Thompson, S. J. (2007). Youth homelessness and trauma. *Trauma psychology: issues in violence, disaster, health, and illness*. *2*, (pp. 203–). Greenwood Publishing Group.
Thompson, S. J., Maccio, E. M., Desselle, S. K., & Zittel-Palamara, K. (2007). Predictors of posttraumatic stress symptoms among runaway youth utilizing two service sectors. *Journal of Traumatic Stress*, *20*(4), 553–563. http://dx.doi.org/10.1002/jts.20229.
Thompson, S. J., McManus, H., & Voss, T. (2006). Posttraumatic stress disorder and substance abuse among youth who are homeless: Treatment issues and implications. (A. Aisenberg Baer, Bailey, Barry, Becker, Brown, Cauce, Cauce, Chilcoat, Cohen, Crome, De Rosa, de Winter, Ennett, Fest, Foa, Gaetz, Gingerich, Goodman, Green, Greenblatt, Greene, Greene, Johnson, Johnston, Karabanow, Karabanow, Karabanow, Kessler, Kessler, Ed.) Special issue: Evidence-based brief treatment and crisis intervention with co-occurring disorders. Thompson, Sanna J.: University of Texas at Austin, School of Social Work, 1717 West 6th Street Suite 335, Austin, TX, US, 78703, sannathompson@mail.utexas.edu: Oxford University Press. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc5&NEWS=N&AN=2006-10323-002.
Tucker, J. S., Edelenm, M. O., Ellickson, P. L., & Klein, D. J. (2011). Running away from home: A longitudinal study of adolescent risk FActors and young adult outcomes. *Journal of Youth Adolescence*, *40*, 507–518. http://dx.doi.org/10.1007/s10964-010-9571-0.
Tyler, K. A., & Bersani, B. E. (2008). A longitudinal study of early adolescent precursors to running away. *The Journal of Early Adolescence*, *28*(2), 230–251.
Tyler, K. A., Hoyt, D. R., & Whitbeck, L. B. (2000a). The effects of early sexual abuse on later sexual victimization among female homeless and runaway adolescents. *Journal of Interpersonal Violence*, *15*(3), 235–250.
Tyler, K. A., Hoyt, D. R., & Whitbeck, L. B. (2000b). The effects of early sexual abuse on later sexual victimization among female homeless and runaway adolescents. *Journal of Interpersonal Violence*, *15*(3), 235–250. http://dx.doi.org/10.1177/088626000015003001.
Tyler, K. A., Whitbeck, L. B., Hoyt, D. R., & Johnson, K. D. (2003). Self-mutilation and homeless youth: The role of family abuse, street experiences, and mental disorders. *Journal of Research on Adolescence*, *13*(4), 457–474. http://dx.doi.org/10.1046/j.1532-7795.2003.01304003.x.
Tyler, K. A., Whitbeck, L. B., Hoyt, D. R., & Cauce, A. M. (2004). Risk factors for sexual victimization among male and female homeless and runaway youth. *Journal of Interpersonal Violence*, *19*(5), 503–520. http://dx.doi.org/10.1177/0886260504262961.
van den Bree, M. B. M., Shelton, K., Bonner, A., Moss, S., Thomas, H., & Taylor, P. J. (2009). A longitudinal population-based study of factors in adolescence predicting homelessness in young adulthood. *Journal of Adolescent Health*, *45*(6), 571–578. http://dx.doi.org/10.1016/j.jadohealth.2009.03.027.
Whitback, L. B., Hoyt, D. R., Yoder, K. A., Cauce, A. M., & Paradise, M. (2001). *Deviant Behavior and Victimization Among Homeless and Runaway Adolescents*, *16*(11), 1175–1204.
Whitbeck, L. B., Hoyt, D. R., & Bao, W. N. (2015). Depressive symptoms and co-occurring depressive symptoms, substance abuse, and conduct problems among runaway and homeless adolescents. *Child Development*, *71*(3), 721–732. http://dx.doi.org/10.1111/1467-8624.00181.
Whitbeck, L. B., Hoyt, D. R., Johnson, K. D., & Chen, X. (2004a). Victimization and posttraumatic stress disorder among runaway and homeless adolescents. *Violence and*

Victims, *22*(6), 721–734. http://dx.doi.org/10.1891/088667007782793165.
Whitbeck, L. B., Hoyt, D. R., & Yoder, K.a. (1999). A risk-amplification model of victimization and depressive symptoms among runaway and homeless adolescents. *American Journal of Community Psychology*, *27*(2), 273–296.
Whitbeck, L. B., Johnson, K. D., Hoyt, D. R., & Cauce, A. M. (2004b). Mental disorder and comorbidity among runaway and homeless adolescents. *Journal of Adolescent Health*, *35*(2), 132–140. http://dx.doi.org/10.1016/j.jadohealth.2003.08.011.
Yates, G. L., MacKenzie, R., Pennbridge, J., & Cohen, E. (1988). A risk profile comparison of runaway and non-runaway youth. *American Journal of Public Health*, *78*(7), 820–821. http://dx.doi.org/10.2105/AJPH.78.7.820.
Zide, M. R., & Cherry, A. L. (1992). A typology of runaway youths: An empirically based definition. *Child and Adolsecent Social Work Journal*, *9*(2), 155–168.
Zona, K., & Milan, S. (2011). Gender differences in the longitudinal impact of exposure to violence on mental health in urban youth. *Journal of Youth and Adolescence*, *40*(12), 1674–1690. http://dx.doi.org/10.1007/s10964-011-9649-3.