

Using a Person-Centered Approach to Examine the Impact of Homelessness on School Absences

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Abstract Brought on by increasing levels of economic vulnerability, homelessness is a pressing issue for our schools. Homeless students often miss an inordinate amount of school days and are thought to fall at the farthest end of a "continuum of poverty." Theoretically they have worse outcomes than their peers, though the past 20 years of literature have found inconsistencies in these comparisons. Thus the literature suggests analysis to compare types of students based on outcomes rather than demographic categorizations, a person-centered approach. Using this approach, a comparison of the number of absences for homeless students and their housed peers is made through quantile analysis. Using school administrative data collected over one school year for an entire school district we found that homeless students as an aggregate do not miss significantly more days of school than their poorest peers. However, we found homelessness and poverty dramatically increase the number of absences for children who are in the higher percentiles of absences meaning homelessness has a greater impact on those who miss more days of school in general compared to regular attendees. Findings from this study indicate that homelessness may exacerbate problems rather than cause them. Implications for practice are discussed and directions for future study are proposed.

Keywords Homeless · Homelessness · Attendance · Absences · Quantile regression · McKinney-Vento

Children and youth experiencing homelessness are at high risk for poor educational outcomes ranging from belowgrade level reading and math scores, to high rates of dropout, and to poor attendance (Berliner, 2009; Buckner, 2008; Buckner, Bassuk, & Weinreb, 2001; Di Santo, 2012). Accounting for 40 % of the total homeless population, the number of children and youth experiencing homelessness is expected to grow as the US comes out of the housing and mortgage crises (Rukmana, 2008). Conceptually, homelessness is often thought to be an experience of transience, meaning homeless children and youth often move between housing situations, which in turn leads to much unplanned school mobility (Julianelle & Foscarinis, 2003). This unplanned and unexpected moving between schools is often thought to be a driving factor behind poor academic outcomes for homeless children and youth. Specifically, transience place homeless children at high risk for poor attendance and is highlighted as an area to address in policy and subsequent practice with this population.

Attendance is a traditional concern for schools, dating back to the onset of compulsory education. It has taken on increased importance in recent years as attendance figures are a component of adequate yearly progress for schools (Massat, Constable, McDonald, & Flynn, 2009). Further, attendance is consistently found to be related to academic outcomes (Gottfried, 2010; Roby, 2004) and regular attendance is especially important during the early years of education when students learn the foundational skills that prepare them for success and graduation in later years (Schoeneberger, 2012). Students with high levels of absenteeism who miss this early instruction are at higher risk for dropout, grade retention, low grade point averages, and poor test scores in later years (Schoeneberger, 2012).

Linkages between high numbers of absences and poor academic performance are relatively consistent (Gottfried,



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2010; Roby, 2004), but more importantly for school-based practitioners, attendance has been identified as a malleable factor schools are able to address through policies and programs (Caldas, 1993). In the case of homelessness, schools are tasked with implementing the educational provisions that address challenges to attendance of the McKinney-Vento Homeless Assistance Act (MVA). The purpose of the policy is to uphold the right to equal educational opportunity for school-aged children and youth experiencing homelessness (42 U.S.C. 11431 et seq.). The MVA theoretically reduces the number of absences by removing obstacles homeless children face when trying to enroll in school, providing opportunities for children to maintain enrollment in the same school when experiencing homelessness, and providing resources such as transportation to encourage continued enrollment and attendance (42 U.S.C. 11431 et seq.). This should, as a result, improve attendance by providing some semblances of stability in an otherwise transient homeless experience.

Comparisons to non-homeless children are a necessary component to an overall understanding of the efficacy of the MVA. In a broader sense, comparisons between homeless children and their housed peers are a relatively common focus in the literature. However, despite the prevalence of comparison studies, little consistency has been found in findings (Buckner, 2008). Many studies use a group of homeless children and youth in one area, region, shelter system, etc., and then find a similar comparison group to examine differences (Buckner, 2008). While this approach is sound in a methodological sense, it may belie the conceptual complexity of the issue.

Homelessness is a unique experience, and every situation has their own risk and protective factors (Rafferty, Shinn, & Weitzman, 2004). Therefore, it may be advisable to use methods that account for this—rather than treating homeless children as a homogenous group studies should take into account the heterogeneity of the homeless experience. One way to do this is to focus on an outcome, in this study attendance, and take a person-centered approach, as advocated by Buckner (2008) to assess the impact of homelessness. This means that in addition to examining attendance rates between homeless children and their housed peers overall, we are going to examine different types of students based on attendance. Then we will examine whether homelessness and poverty have an impact on these different types of students. Therefore the purpose of this paper is to examine, in multiple ways, the attendance rates and patterns of MVA-identified homeless children youth as compared to other students at a Midwestern-school district.

Review of the Literature

In terms of attendance, homeless children generally miss many days of school and are nine times more likely to be truant than other children (Nolan, Cole, Wroughton, Riffe, & Clayton-Code, 2013). This often leads to poor academic outcomes for homeless children and youth, often due to barriers these students face when enrolling or maintaining enrollment (i.e. attending) in school. In particular, estimates indicate only 25 % of homeless students graduate from high school (National Center on Family Homelessness, 2009) and homeless children consistently perform poorly on a multitude of academic outcomes (Miller, 2011). These students are reported to score below proficiency in reading and math (National Center on Family Homelessness, 2009) and are 1.5 times more likely to be behind grade level in reading and spelling and 2.5 times more likely to be behind in math (Duffield & Lovell, 2008, cited in Miller, 2011).

The US federal government enacted the MVA as an effort to address some of the poor academic opportunities homeless children face when attending school. While the MVA is the overarching policy that addresses homelessness in the US, arguably one of the most important facets of the MVA is that it addresses the academic needs of homeless children and youth. It achieves this through providing a standard definition of homelessness for schools and other educational agencies to identify children and offers provisions to improve educational opportunity. Any student that lacks a "fixed, regular, and adequate nighttime residence" can be considered homeless (42 U.S.C. §11434A(2)(A)), including those in foster care placements (42 U.S.C. §11434A(2) (B)(i)), migrant farm children that meet the definition (42 U.S.C. §11434A(2)(b)(iv)), and those staying with family or friends in a non-permanent manner. In terms of provisions, many are designed to improve opportunities for homeless children and youth to attend school and immediate and continuous enrollment is a priority (42 U.S.C. 11431 et seq.). Chief among the provisions are waivers for proof of residence, immunizations, and previous school records (42 U.S.C. §11432(g)(3)(C)) in addition to providing transportation even if a child has moved to a location outside of the residential boundaries of the district due to homelessness (42 U.S.C. §11432(g)(3)(G)). The provisions are designed for equal educational opportunity, allowing for an idiosyncratic examination of the differences between homeless children and their housed peers. Therefore, children identified as homeless by MVA regulations should not miss a significant amount of school more than peers who are not eligible for the legislation's provisions.



To date, there are few actual evaluations of the impact of the MVA (Hendricks & Barkley, 2012; Biggar, 2001). Of the few, one study found no difference in end-of-school test scores between schools with and without MVA funding and other studies provided estimations that the MVA does improve attendance by up to 17 % (Markward & Biros, 2001, cited in Hendricks & Barkley, 2012). Further, many acknowledge the importance of the policy, but not necessarily any impact, going so far to calling it an "unfunded mandate" (Biggar, 2001). Despite the uncertainty behind the MVA's efficacy, it does accomplish two very important things: it provides an overall, overarching base definition of who is considered homeless, and thus eligible for services, and it requires schools to act in order to provide equal educational opportunity. In fact, the policies purpose statement directly references the goal of providing equal educational opportunity and the provisions discussed earlier are designed to reflect this notion (42 U.S.C. §11434A, et seguentia).

The provisions to support equal educational opportunity in the MVA show that comparisons to other children are an important aspect to examining how homelessness impacts academic outcomes. In the case of attendance, students identified as homeless for MVA services theoretically should have similar attendance rates and patterns as other children in the district. Very few studies have compared MVA-identified homeless students and their peers (Hendricks & Barkley, 2012), though in a broader sense, comparisons between homeless children and their impoverished, but housed peers is relatively common in the literature.

Buckner's 2008 systematic review comprehensively examined the literature on comparisons between homeless children and their housed peers, finding 28 articles, spanning 25 years of literature. Buckner (2008) posits that the theoretical underpinning of these articles is a notion of a hypothesized "continuum of poverty." Theoretically, homeless children and youth should fall at the farthest end of the continuum because they experience the accumulated risk of experiencing homelessness, experiencing poverty, and general childhood risk factors all children face (Buckner, 2008). Meaning, as hypothesized in many of the articles Buckner (2008) found, homeless children should have poorer outcomes than their housed peers. However, findings from 25 years' worth of comparisons between homeless children and youth and their housed peers yielded inconsistent findings, thus indicating a "continuum of poverty" may not sufficiently explain the impact of homelessness and poverty (Buckner, 2008).

The inconsistencies found in the literature comparing homeless children to their housed peers may stem from conceptualizing children and youth experiencing homelessness as a homogenous group (Buckner, 2008). This approach belies the dynamic and complex nature of

homelessness as each case or situation of homelessness may present unique risk or protective factors that influence and impact outcomes (Rafferty et al., 2004), but is common in the literature (Buckner, 2008). For example, a child living in abandoned buildings may not have adequate lighting or space to complete homework compared to one living in a transitional housing facility, who may have access to study space and computers to do schoolwork. Both situations would be considered as homeless, however both have their own risk and protective factors. Individual students bring unique risk or protective factors that can influence outcomes. Rather than focus on direct comparisons of aggregates of children and youth, Buckner, in both 2008 and earlier with Bassuk, and Weinreb (2001), suggests using "person-centered" approaches to examination how homelessness impacts outcomes.

Therefore in this study, rather than solely typologize students by a demographic factor, such as homeless or impoverished, and then making direct comparisons of outcomes between categories, we will instead take a "personcentered" approach by examining outcomes and how homelessness and poverty impact them. We will examine whether homelessness and poverty exacerbate the number of missed school days across percentiles of absences. This moves away from the theoretical "continuum of poverty," and can provide an understanding of whether homelessness and poverty impact student achievement. It is possible that high-achieving students may have mitigating protective factors that decrease the influence of homelessness and poverty on their individual achievement and conversely, lower-achieving students may have additional risk factors beyond homelessness and poverty that prevent success.

Two research questions guide this study: First, using school administrative data from one entire year at a Northern Kentucky school district, are there significant differences in the number of absences across aggregates of homeless, impoverished, but housed, and non-impoverished housed students? Second, using a "person-centered" analysis, is there a significant difference in patterns of attendance across quantiles of homeless, impoverished, but housed, and non-impoverished housed students? The first research question is more a traditional one asked in the literature on homeless children and youth whereas the second uses a person-centered approach allowing for comparisons across the two approaches.

Method

Dataset

This study utilized a school administrative data set developed from the regularly collected data of a large



Midwestern public school district for the 2010–2011 school year. The district consists of twenty-one schools divided between twelve elementary, five middle, and four high schools. The district routinely collects data on their students ranging from demographic information (e.g. race/ethnicity, gender, etc.) to academic measures (e.g. absences) for state and federal reporting requirements. Data is inputted by district-designated staff members to the Infinite Campus database used by the school district to organize and store data and is verified for accuracy via error checks conducted at the state and district level. For this study, both district approval and IRB exemption were obtained to access and analyze de-identified data stored in the district's Infinite Campus database.

Variables

Lunch Status: A Proxy Measure for Socioeconomic Status

Distinct fields within the Infinite Campus database were used as variables for analyses. Socioeconomic status (SES) was a composite variable developed from two separate fields because the school does not collect direct SES data (e.g. income, assets, etc.). Lunch status is used as a marker and proxy of SES because of the federal guidelines schools follow regarding the type of lunch services a student receives. This allows researchers to make assumptions of a given student's SES, absent income information. The federal guidelines are as follows: students whose family income is less than 130 % of the federal poverty level are eligible for free lunch. Students whose family income is between 130 and 185 % of the federal poverty level are eligible for reduced lunch. Finally, if a student's family income is higher than 185 % of the federal poverty level they receive no reduction in lunch price.

Homelessness

The school used a dichotomous variable where students were either identified as homeless or not homeless. Identification was made either by district personnel using MVA guidelines or through self-reports by the student or the family. Because homeless students as part of district policy are automatically enrolled in free lunch once identified as homeless, for this study, any student identified as homeless was removed from the either of the lunch categories in the composite variable. Thus, we assume that any student that has not been identified as homeless, but receives free or reduced lunch is housed. Absences are calculated by the number of times a student missed school as reported by district personnel.

Data Analysis

Two analytical methods were used for this study. First, an analysis of variance (ANOVA) was conducted to examine mean differences in absences between the different SES categories. Tukey–Kramer adjusted multiple comparisons were used to identify specific differences (Montgomery, 2001). For the person-centered analysis, a quantile regression was conducted. Quantile regression is a statistical procedure that estimates population percentiles at various levels of an explanatory factor, in this case absences. Quantile regression is useful in examining response distributions which contrasts with typical statistical estimation that may estimate only some central value such as a mean or median (Koenker & Roger 2005). For this study, this allowed findings that examined the distributions of absences for each of the four SES groups.

Results

Demographics

This study's database consisted of school district-collected information on 19.261 students from the 2010–2011 school year. Table 1 displays demographic results of this sample. The overwhelming majority of students were White/Caucasian (86.8 %) followed by Hispanic (4.9 %), Black/ African American (3.5 %), Asian (2.4 %), and those with other races or ethnicities (2.4 %). There were slightly more males (52.2 %) than females (47.8 %). Only 6.1 % had limited English proficiency (LEP) and 15.6 % had an active special education status compared to inactive (7.2 %) and no special education status (77.2 %). The majority of students enrolled in this school district did not receive any reduced lunch (65.9 %), but 5.5 and 26.8 % of housed students received reduced and free lunch respectively. Homeless students accounted for 1.8 % of the students in this district.

Differences in Absences

The first research question in this study asked if any significant differences existed between homeless students and their housed peers in terms of absences from school. A statistically significant difference was observed in absences between homeless students and their housed and economically advantaged peers (p < 0.0001), with homeless students missing on average 2.72–4.47 days more than nonhomeless students at the highest level of economic status (see Table 2). The second research question in this study addressed whether homeless children missed more school than their economically disadvantaged, but housed peers.



Table 2 displays the means and 95 % confidence intervals corresponding to the four classifications. Homeless students and students receiving free lunch miss on average at least 8.4 days of school (there is no evidence of a difference between these two groups); those receiving reduced lunch miss an average between 6.1 and 6.9 days; and those

Table 1 Demographics

	N	%
Race/ethnicity		
Asian	462	2.4
Black/African American	668	3.5
Hispanic	946	4.9
White/caucasian	16,725	86.8
Other race or ethnicity	460	2.4
Gender		
Male	10,046	52.4
Female	9215	47.8
Socioeconomic status		
Homeless	344	1.8
Free lunch	5156	26.8
Reduced lunch	1061	5.5
No Reduced lunch	12,700	65.9
Limited English proficiency		
Yes	1174	6.1
No	18,087	93.9
Special education status		
Active	3012	15.6
Inactive	1379	7.2
None	14,870	77.2

Table 2 Average absences

	N	M(SD)	95 % CI
Homeless students	344	9.19 (0.33)	5.48-5.71
Free lunch	5156	8.53 (0.09)	6.10-6.85
Reduced lunch	1061	6.48 (0.19)	8.36-8.70
No reduced lunch	12,700	5.60 (0.06)	8.53-9.85

Differences between homeless students and their peers

A	В	Mean difference (A-B)	95 % CI	
Homeless	Free	0.66	-0.23	1.55
	Reduced	2.72*	1.72	3.71
	Paid	3.60*	2.72	4.47
Free	Reduced	2.05*	1.51	2.60
	Paid	2.93*	2.67	3.20
Reduced	Paid	0.88*	0.36	1.39

p < 0.0001

receiving no lunch price reduction miss an average of around 5.5 to 5.7 days per school year.

Quantile Regression Results

Figure 1 presents the results of the quantile regression analysis. We found very little difference in attendance patterns for students in the lower quartile—about 25 % of students miss five or fewer days of school and for these students, those of lower economic statuses (free lunch/homeless) miss no more than an average of one more day as compared to students in the highest (paid lunch) status group. Based on 95 % confidence intervals, we find that more important differences appear in the upper percentiles of absence count. The differences between groups grow larger, with those students in the lower economic statuses registering absence counts that average 2 to 3 days higher at the 50th percentile, 3 to 6 days higher at the 75th percentile and 7 to 9 days higher at the 95th percentile.

Discussion

These findings indicate that in this particular school district, homeless children as an aggregate do not significantly miss more days of school than housed students receiving free lunch. However, when examining the data through a person-centered approach, the findings indicate that homelessness and poverty do not have a significant impact on the students who would normally regularly attend. It is the students in the fiftieth percentile and above that we see how experiencing homelessness can impact school attendance. Given the limitations of this study, caution should be taken when interpreting the findings from this study, however several implications can be made for both research and practice with homeless children and youth.

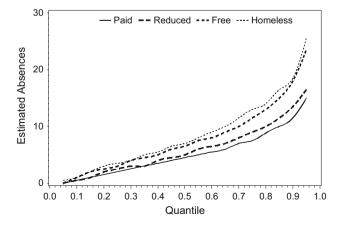


Fig. 1 Quantile regression findings for absences



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Limitations

There are a few limitations with regard to this study's generalizability. First, this study analyzed data from one school district in a northern Kentucky county. Findings may not be generalizable to the entire state, much less the country in regards to the impact of homelessness and poverty on attendance. Next, identifying students for homeless services has been characterized as one of the biggest barriers to school social work practice with this population (Groton, Teasley, & Canfield, 2013). Some students may have not been identified as homeless, thereby confounding our findings. Next, there were no comparisons across ages, grades, or schools. It is possible that these factors may impact attendance.

A student identified as homeless may receive services that decrease the number of absences; similarly, a student receiving free lunch may have become homeless over the course of the school year and will have an increasing number of absences over the school year, but because our study used aggregate attendance data, there was no way to examine whether or not attendance was increasing or decreasing. Finally, future research studies should take this into consideration and examine different situations of homelessness, such as residing in a public location, shelter, transitional housing facility, etc., independently.

Implications for Research

In the case of absences, we found little difference between homeless students and others in the lowest percentiles (those who missed less), but in percentiles after the fiftieth, a noticeable difference was observed. This indicates that homelessness itself may not necessarily cause attendance problems, but may heighten attendance issues. Therefore future studies must consider homelessness as an experience that may exacerbate various outcomes, rather than cause them. For example, it is entirely plausible that the homeless children and youth in the fiftieth and higher percentiles face similar unique risk factors that inflate the number of school absences whereas homeless students below the fiftieth percentile have protective factors that mitigate missing an inordinate amount of school. This, in a way, reinforces Buckner's (2008) call for more person-centered analyses to untangle the complicated nature homeless plays on childhood outcomes. While much of the literature comparing homeless children to their housed peers assumes that experiencing homelessness brings additional risk factors that would lead to poorer outcomes, the findings from this study indicate a more nuanced approach to homelessness may be better suited to understand the impact of the issue. Given that homelessness can be characterized as systems of complex, varying, and unique risk and protective systems (Rafferty et al., 2004), a better understanding of the impact of homelessness may lie in grasping the interplay of these various factors.

Along these lines, our understanding of the impact and influence of homelessness may be increased through examinations of types of children, developed from outcomes, rather than differences between hypothesized homogenous groups. It may be more prudent to typologize students by their level of achievement on standardized tests using percentiles, as an example, and examine differences in those groups rather than assume all homeless students are the same. Findings to such future studies may yield more detailed and nuanced findings on how homelessness impacts the academic experience. In addition, future statistical models examining percentiles or types of students must further this study by including other possible mitigating factors, such as age, grade level, or form of transportation, to better understand the complexity of both the impact of homelessness and the greater academic experience.

A challenge to the approach used in this study is that there was no way to determine whether or not absences were increasing or decreasing for each student identified as homeless. It is possible that a student may have missed an extreme amount of days of school, but once identified as homeless and receiving services, the number of absences may have drastically decreased. This type of examination is crucial and critical to understanding the impact and efficacy of the MVA, especially given the dearth of evaluation studies on the topic. The data set used in this study did not include the date of identification because the school did not record this information into their data management system. The school district was not required to as per the MVA, thus eliminating an easy way to evaluate their MVA-based programming. Future policy planning must take into account ways to determine policy efficacy, without over-taxing school staff. Along these lines, researchers must collaborate with school staff to ensure that data is collected that will maximize evaluation efforts.

Identification is considered to be a major challenge to serving school-aged homeless children and youth (Groton et al., 2013) and this challenge may have confounded these findings. It is very plausible and likely probable, that there were students who were not identified as homeless but met the criteria and would be eligible for services. Future studies should examine ways to improve identification of children and youth eligible for MVA services and test whether the relationships found in this study are consistent. Furthermore, actual evaluations on the impact of the MVA hinge upon proper and expedient identification.



Implications for Practice

Practitioners should be aware of different student types when developing and implementing interventions. In the case of attendance, understanding a given student's history of attendance would benefit practitioners developing treatment plans. If a student regularly attends school and then becomes homeless, these findings indicate that the student will most likely still attend school regularly. That is not to say a student identified as homeless may not need interventions to maintain good attendance, but practitioners should identify what protective factors are still in place and what new risk factors may have arisen. This allows practitioners to develop interventions that highlight and focus on pressing needs tailored to the student, mirroring the person-centered approach to research and analysis suggested in the literature.

Next, in order to develop awareness of the unique risks and protective factors that a homeless student may face, practitioners must understand that homelessness is a dynamic experience. The findings for this study add to the inconsistency in the literature on this subject. Homeless students overall miss more than other students, but not all other students, indicating a need for practitioners to understand that homelessness impacts children and youth differently. Theoretically, blanket interventions for homeless students may not be the most effective. Future study with emphasis on program evaluation is needed to confirm this and advise practitioners on how to address this problem.

Conclusion

Homelessness is a growing concern for schools across America. More understanding is needed to better develop interventions that minimize the impact of homelessness on children and youth. This study's findings indicate that different types of students may be impacted by homelessness and poverty differently. Higher achieving students may not be impacted as much as we traditionally hypothesize. While this does not indicate that we should cease services for these types of children and youth, it does provide an opportunity to better tailor interventions to maximize outcomes. Future research and practice must identify ways to address the issue of homelessness that take into account the unique and individual nature of both the student and situation of homelessness.

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