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**The Relationship between Emotional and Behavioral Needs Identified
When Children Enter Substitute Care and their Problems while in Care**

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The Relationship between Emotional and Behavioral Needs Identified When Children Enter Substitute Care and their Problems while in Care

Studies across the country have found that 40% to 60% of children and youth in substitute care have significant behavioral or emotional problems.¹ The 2017 Illinois Child Well-Being Study also found a high rate of behavioral and emotional problems among Illinois children in substitute care—see the study final report,² a research brief on the issue,³ and the well-being chapter in FY2019 *B.H. Monitoring Report*.⁴ In this report, we explore the identification of behavioral and emotional needs in the Integrated Assessment (IA), which is a nationally recognized DCFS program⁵ that provides comprehensive family assessments for children entering substitute care. This report is also available as Chapter 5 of the Children and Family

¹ Bronsard, G., Alessandrini, M., Fond, G., Loundou, A., Auquier, P., Tordjman, S., & Boyer, L. (2016). The prevalence of mental disorders among children and adolescents in the child welfare system: A systematic review and meta-analysis. *Medicine*, 95(7). Burns, B. J., Phillips, S. D., Wagner, H. R., Barth, R. P., Kolko, D. J., Campbell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43(8), 960-970.

² Cross, T.P., Tran, S., Hernandez, A., & Rhodes, E. (2019). *The 2017 Illinois Child Well-Being Study: Final Report*. Urbana, IL: Children and Family Research Center, University of Illinois at Urbana-Champaign.

https://cfrc.illinois.edu/pubs/rp_20190619_2017IllinoisChildWell-BeingStudy.pdf

³ Tran, S.P., Cross, T.P. & Kwon, S. (2020). *The emotional and behavioral health of school-age children and youth in DCFS care: Findings from the 2017 Illinois Child Well-Being Study*. Urbana, IL: Children and Family Research Center, University of Illinois at Urbana-Champaign.

https://cfrc.illinois.edu/pubs/bf_20200914_TheEmotionalandBehavioralHealthofSchool-AgeChildrenandYouthinDCFSCare:Findingsfromthe2017IllinoisChildWell-BeingStudy.pdf

⁴ Fuller, T., Nieto, M., Wang, S., Adams, K.A., Wakita, S., Tran, S., Chiu, Y. Braun, M., Cross, T.P., Lee, L., Burnett, A., & Meyer, H. (2019). *Conditions of children in or at risk of foster care in Illinois: FY2019 Monitoring Report of the B.H. Consent Decree*. Urbana, IL: Children and Family Research Center, University of Illinois at Urbana-Champaign.

⁵ Children's Bureau (2010). *Illinois' Integrated Assessment Process*. Children's Bureau Express.

<https://cbexpress.acf.hhs.gov/index.cfm?event=website.viewArticles&issueid=114§ionid=3&articleid=2826>

Research Center's FY2021 Monitoring Report of the *B.H. Consent Decree*.⁶ It is adapted from a recent article we published in a peer-reviewed journal.⁷

As part of the IA, a screener completes the Child and Adolescent Needs and Strengths (CANS) scale, a structured tool to assess children and families' needs and strengths. In this chapter, we present the results of a study that examined whether there is an association between a child's score on the IA CANS and later behavioral and emotional needs in care and the services they receive. We also examine whether the identification of behavioral and emotional needs at entry into substitute care is still relevant when children and youth have been in care for long periods of time. The results speak to the validity of the IA and help illuminate the ongoing behavioral and emotional problems of many Illinois children in substitute care.

IA screens for a range of different needs, including need for behavioral health services.⁸ For each case, an IA clinician known as a screener works with the child's caseworker and other members of the child protection team. The screener conducts developmental screenings and teams with the caseworker to gather and integrate this clinical information with information provided by other professionals involved in the case. The team writes an IA report that details the child and family's needs and strengths, discusses the underlying conditions and risk factors that led to DCFS involvement, identifies child and family strengths and supports, and recommends interventions. The team completes the IA CANS, which informs case decision-making, service planning, and outcomes management.⁹ Caseworkers are expected to complete the CANS every six months the child is in care. This is the first study that relates the IA CANS behavioral and emotional needs data to other measures of behavioral and emotional needs collected when children and youth were in substitute care.

Methods

CANS Data

One data source was CANS data collected from a children's baseline Integrated Assessments that were conducted between November 2005 and November 2017. The Mental Health Services and Policy Program at the Northwestern University Feinberg School of Medicine maintains a database of CANS data for DCFS. The DCFS CANS 2.0 used in IA includes 139 items that assess a wide array of child and family needs and strengths. For most individual items

⁶ Fuller, T., Nieto, M., Adams, K., Chiu, Y., Cross, T.P., Landa, C., Lee, L., Tran, S., Wakita, S. & Wang, S. (2021). *Conditions of children in or at risk of foster care in Illinois: FY2021 Monitoring Report of the B.H. Consent Decree*. Urbana, IL: Children and Family Research Center, University of Illinois at Urbana-Champaign.

⁷ Cross, T.P. Tran, S.P., Betteridge, E., Hjertquist, R., Spinelli, T., Prior, J. & Jordan, N. (2021). The relationship of needs assessed at entry into out-of-home care to children and youth's later emotional and behavioral problems in care. *Children and Youth Services Review*. Advanced online publication. 105896

⁸ Smithgall, C., Jarpe-Ratner, E., Gnedko-Berry, N., & Mason, S. (2015). Developing and testing a framework for evaluating the quality of comprehensive family assessment in child welfare. *Child Abuse & Neglect*, 44, 194-206.

⁹ Lyons, J. S., Small, L., Weiner, D. A., & Kisiel, C. (2008). *Child and Adolescent Needs and Strengths: Illinois Department of Children and Family Services (Version 2.0)*. Chicago, IL: Buddin Praed Foundation.

measuring children's needs, the screener chooses one of the following ratings: 0 = No evidence (no need for action); 1 = Watchful waiting, prevention (efforts are needed to monitor this need or engage in activities to ensure that it does not become worse); 2 = Action required (the need is interfering in a notable way with the child's or family's life, and something should be done); and 3 = Immediate or intensive action required (the need is dangerous or disabling and a priority for intervention). A score of 2 or 3 indicates a need that should be addressed in a service plan. For this chapter, we analyzed the IA CANS Behavioral/Emotional Needs domain score. This represented the highest IA CANS score on the following CANS items: Psychosis, Attention Deficit/Impulse Control, Depression, Anxiety, Oppositional Behavior, Conduct, Substance Abuse, Attachment Difficulties, Eating Disturbance, Affect Dysregulation, Behavioral Regression, Somatization, and Anger Control.¹⁰

Well-Being Study Data

A second source of data was the 2017 Illinois Child Well-Being Study, which examined a range of well-being domains, including child development, physical health, emotional and behavioral health, education, safety, experiences of substitute care, and resilience. The Survey Research Laboratory of the University of Illinois at Chicago collected data through interviews from December 2017 to July 2018. The study used a stratified random sample design and included 700 children and youth who were in care on October 23, 2017. Thus, this was a point-in-time study and not a cohort study. This means that children and youth in the sample had entered substitute care at different times and varied in their length of time in care. Interviews were conducted with caseworkers, caregivers, and children and youth age 7 or older. Stratified random sampling was used to ensure that enough cases of children and youth in different age groups and with different lengths of care were adequately represented. The sample was weighted with simple post-stratification weights that adjusted the sample distribution of age by year based on the population distribution of age by years in care. Caseworker interviews were completed for 527 cases (response rate = 80.9%), caregiver interviews were completed for 381 cases (response rate = 62.4%), and child interviews were completed for 145 cases (response rate = 48.7%). We combined the data from the two sources, the IA CANS data file and the 2017 Child Well-Being Study, into a single analysis file.

For the work presented in this chapter, we used several measures from the 2017 Illinois Child Well-Being Study. One was the Total Problem Score from the Child Behavior Checklist (CBCL), a measure in which caregivers rate a checklist of 113 items measuring emotional or behavioral problems children and youth might have. Caregivers rate each item on a 3-point scale (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true), in reference to the child's behavior in the previous six months. The CBCL has cut-off scores for the total score that identify children and youth who need mental health interventions (clinical range) or may need them (borderline clinical range).

¹⁰ For results for other CANS variables, see Cross et al. (2021), *ibid.*, which can be requested by email from Dr. Cross at tpcross@illinois.edu.

A second measure was a caregiver report of child emotional and behavioral problems. In the caregiver interview of the Well-Being Study, caregivers were read a list of different mental health or emotional problems children and youth might have, including attention deficit disorder, depression, bipolar or extreme mood swings, conduct or behavioral problem, oppositional or defiant disorder, extreme stress from abuse or neglect, attachment problems with caregivers, eating disorders, sexually aggressive behaviors, alcohol or substance abuse, and other emotional or behavioral health problems. From this set of problems, we constructed a yes/no variable that represented whether the caregiver identified the child as currently having *any* of these problems.

Caregivers were also asked if their child was currently receiving emotional or behavioral health services. A separate yes/no question was asked about each of the following services: counseling, group therapy, in-school therapeutic services, self-esteem/anger management classes, outpatient psychiatry, outpatient psychiatric care, inpatient psychiatric care, tutoring, mentoring, and crisis intervention. We created a yes/no variable representing whether their child was currently receiving any of these services. When caregivers answered yes to the question of whether their child had a specific emotional or behavioral problem (see above), the interviewer also asked a follow-up question about whether the child had been prescribed medication for that problem. From this set of questions, we created a yes/no variable about whether the caregiver said that the child had been prescribed medication for any emotional or behavioral problem.

We calculated the amount of time children and youth had been in substitute care. The time in substitute care ranged from less than 1 year to 16 years, and the weighted median length of time in care was 1.71 years (i.e., half the sample had been in care for less than 1.71 years, and half for more than 1.71 years).¹¹

Results

Behavioral and Emotional Needs of Children and Youth at Entry into Substitute Care

We had IA data for the CANS Behavioral and Emotional Needs Domain Score on 214 children and youth. Only a small percentage (2.2%) had a CANS score of 3 indicating a need for immediate/intensive action, but 26.9% had a CANS score of 2 indicating a need for action, though somewhat less urgent. Almost half of the sample (44.7%) had a CANS score of 1, indicating a need for “watchful waiting” and effort to prevent more serious problems. Just 26.2% had no evidence of behavioral or emotional needs and no need for action.

Behavioral and Emotional Needs of Children While in Substitute Care

According to their caregivers, many children and youth had emotional and behavioral needs while in substitute care. On the CBCL for children and youth age 6 to 18 years, 41.5% scored in

¹¹ The unweighted median for length of time of care was 2.64 years; see Cross et al. (2021), *ibid*.

the clinical or borderline clinical range, which indicates a likely need for treatment. More than half of caregivers (62.3%) reported their child had at least one emotional/behavioral problem and about the same percentage (60.0%) were receiving a behavioral health service. Over a fifth (20.7%) of children and youth were currently taking psychiatric medication for emotional and behavioral problems.

Relationships Between Needs at Entry and Needs While in Care

We examined whether the behavioral and emotional needs identified in the IA CANS at children and youth's entry into substitute care was associated with their behavioral and emotional needs while they were in care. The CANS Behavioral-Emotional Needs score at entry into care was significantly related to children later being in the borderline clinical or clinical range on the CBCL ($\chi^2(1)=6.58, p=.040$). As Figure 5.1 shows, 48.7% of children and youth given an IA CANS score of 1 (watchful waiting) and 43.9% of those with an IA CANS score of 2 or 3 (action needed) later scored in the borderline clinical or clinical range on the CBCL. None of the 8 children or youth who were given a score of 0 on the IA CANS (no action needed) scored in the borderline clinical or clinical range on the CBCL. The IA CANS was associated with whether caregivers reported that their child had one or more behavioral or emotional problems while they were in care [$\chi^2(1)=22.40, p<.001$, see Figure 5.2]: 55.6% of children with IA CANS of 1 and 75.8% of children with IA CANS of 2 or 3 had a behavioral or emotional problem while in care. In contrast, only 25% of youth with IA CANS of 0 were identified by their caregivers as having a behavioral or emotional problem while in care.

The IA CANS also was associated with whether a child or youth later received behavioral health services ($\chi^2(1)=33.65, p<.001$) and whether they later received psychiatric medication ($\chi^2(1)=10.21, p=.006$). Only 25% of children with an IA CANS behavioral or emotional needs score of 0 received a behavioral health service while they were in care, compared to 63.4% of children and youth with an IA CANS score of 1 and 85.5% of children and youth with an IA CANS score of 2 to 3 (see Figure 5.3). Only 3.1% of children and youth with an IA CANS score of 0 later received psychiatric medication, compared to 18.3% of children and youth with an IA CANS score of 1 and 30.6% of children and youth with an IA CANS score of 2 to 3 (see Figure 5.4).

Figure 5.1 CBCL Total Score in Borderline Clinical or Clinical Range by IA CANS Behavioral-Emotional Need Score

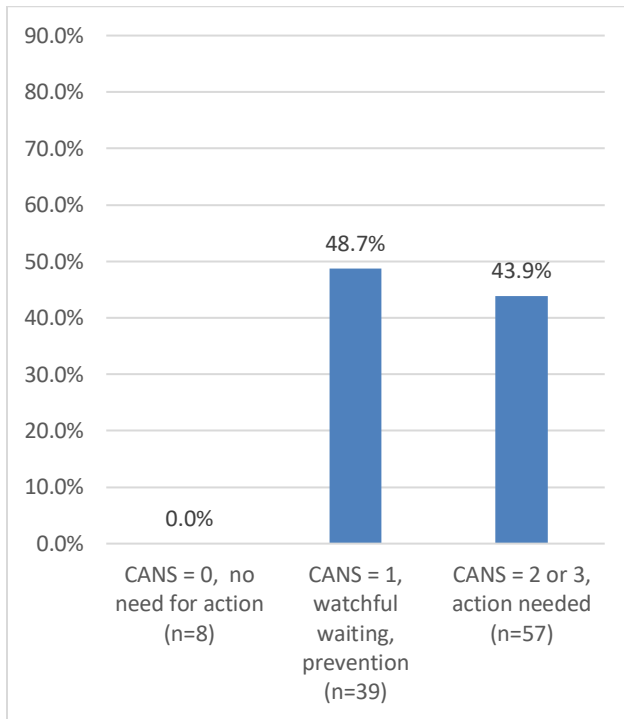


Figure 5.2 Caregiver Perception of Child Emotional/Behavioral Need by IA CANS Behavioral-Emotional Need Score

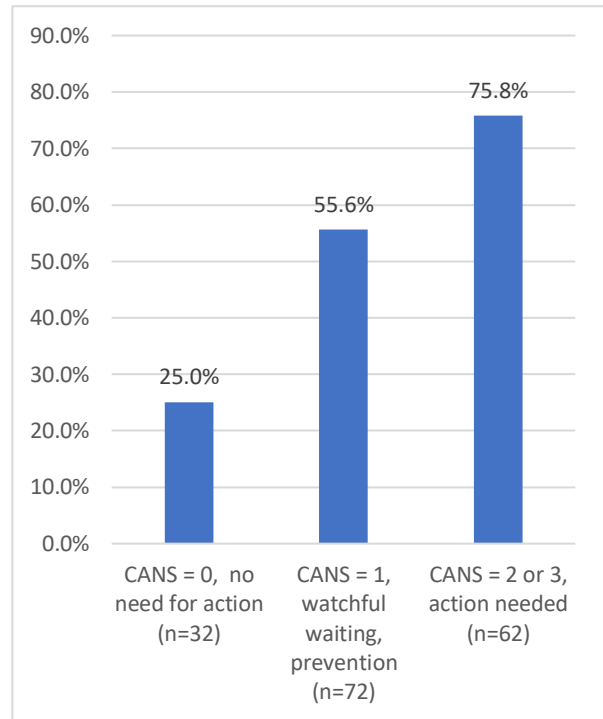


Figure 5.3 Children Receiving a Behavioral Health Service by IA CANS Behavioral-Emotional Need Score

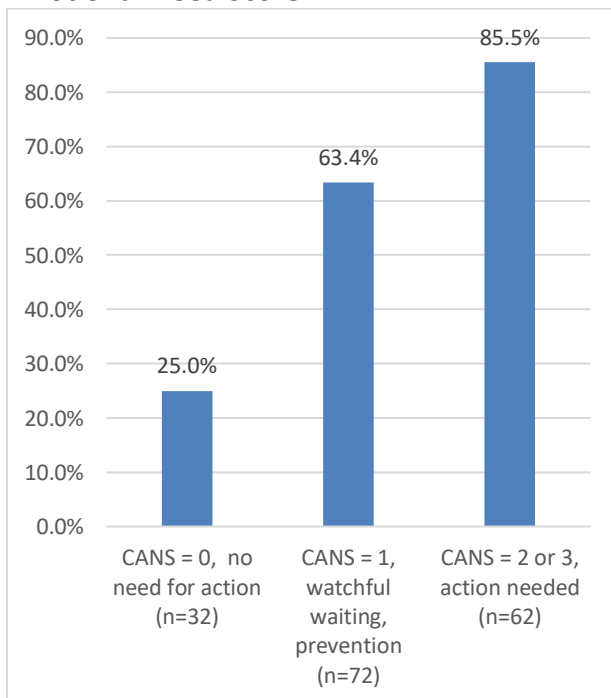
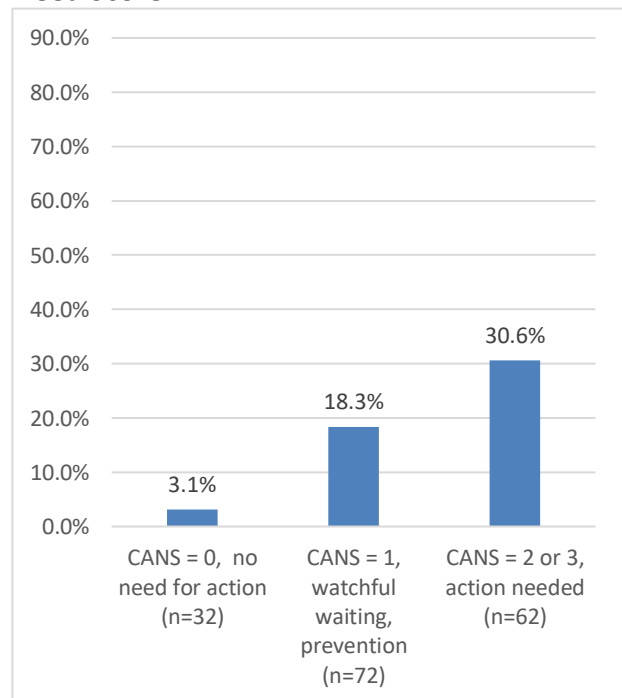


Figure 5.4 Children Receiving Psychiatric Medication by IA CANS Behavioral-Emotional Need Score



The Relationship Between Need at Entry and During Substitute Care by Length of Time in Care

We assessed whether the relationship between having behavioral and emotional needs at entry into substitute care (as measured by the IA CANS) and behavioral and emotional needs during children and youth's stay in care (as measured by the Well-Being Study) differed depending on the amount of time they had been in substitute care. We hypothesized that the IA CANS would have a stronger relationship with the needs of children and youth who had been in care for a short period than for children and youth who had been in care for a long period. If children had been in a care a long time, their need might have decreased because of the services and support they received earlier in care.

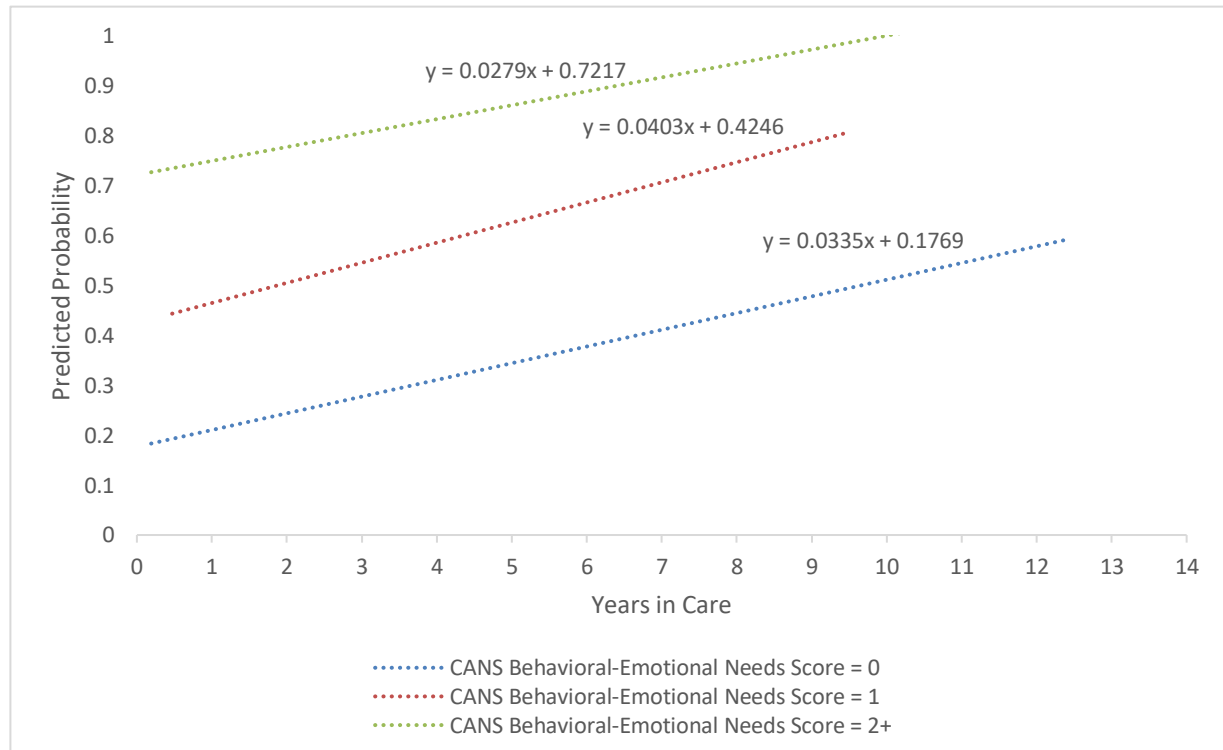
However, the results of a logistic regression analysis showed that the relationship between needs at entry and needs while in care was still substantial when children and youth had been in care for extended periods of time. There was a statistically significant relationship between the IA CANS Behavioral-Emotional Needs Score and the likelihood that a caregiver would identify a child behavioral or emotional problem (odds ratio = 2.99, Wald χ^2 (1)=20.94, $p < .001$). However, there was not a significant interaction effect of the IA CANS Behavioral-Emotional Needs Score by time in care (odds ratio = 1.01, Wald χ^2 (1)=.010, $p = .922$), which means that the relationship between the IA CANS and later behavioral or emotional needs was not significantly affected by the length of time in care.

Figure 5.5 illustrates how the IA CANS Behavioral and Emotional Needs variable was related to emotional and behavioral needs even for children and youth who had been in care for a number of years. The lines in Figure 5.5 show how likely it is that caregivers identified a child behavioral or emotional problem across the entire range of time in care for children and youth with a particular IA CANS Behavioral-Emotional Needs score. The blue line shows the predicted probability of the caregiver perceiving a behavioral or emotional problem for children and youth who had an IA CANS score of 0 (representing no evidence, no need for action). The red line shows the predicted probability of a caregiver perceiving a behavioral or emotional problem for children and youth who had an IA CANS score of 1 (representing watchful waiting/prevention/mild degree). The green line shows the predicted probability of a caregiver perceiving a behavioral or emotional problem for children and youth who had an IA CANS score of 2 or 3, representing an emotional or behavioral need identified at entry into substitute care that needed to be addressed.

The length of time in care for children and youth with an IA Risk Behavior score of 0 (no need for action) ranged from less than a year to more than 12 years. Across that range, the likelihood that a caregiver identified a child behavioral or emotional problem was between 20% and 40%. For children and youth with an IA Behavioral or Emotional Needs score of 1 (watchful waiting, prevention), the likelihood was between 40% and 70% across a range of more than 9 years. For children and youth with an IA Behavioral or Emotional score of 2 or 3 (action), the likelihood exceeded 70% across a range of more than 10 years. The differences in likelihood of having a behavioral and emotional problem did not decrease over time.

Considering a child or youth who has been in care for 6 years illustrates the strength of this relationship between the IA CANS and needs for children in care for a long period. If this child received an IA CANS Behavioral-Emotional Needs score of 2 or 3 at entry into care, the predicted probability that their caregiver would identify a child behavioral and emotional problem 6 years later was 88.9%. If the IA CANS score was 1, the predicted probability of a later problem was 66.6%. If the IA CANS score was 0, the predicted probability of a later problem was 37.8%.

Figure 5.5 Predicted Probability of a Child Behavioral or Emotional Problem Over Time for Different IA CANS Scores



Note. The figure presents the predicted probability of a caregiver perceiving a child behavioral or emotional problem, calculated from logistic regression analysis.

We examined the relationship between the IA CANS separately for cases below and above the weighted median on length of time in care, which was 1.71 years. We found that the relationship between the IA CANS behavioral and emotional needs score and behavioral and emotional needs while in care was strong for both groups. Figures 5.6 through 5.9 present results for those children and youth who had been in care for 1.71 years or more. Even for this group, children and youth with higher IA CANS emotional and behavioral needs scores were substantially more likely to have behavioral and emotional problems than children with lower IA CANS scores.

Figure 5.6 Percentage CBCL Total Score in Borderline Clinical/Clinical Range

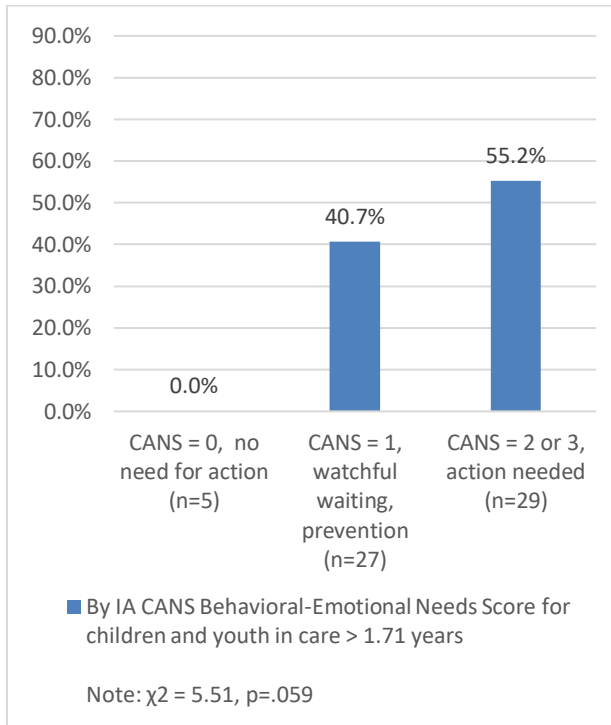


Figure 5.7 Percentage of Caregivers Who Perceive a Child Behavioral or Emotional Problem

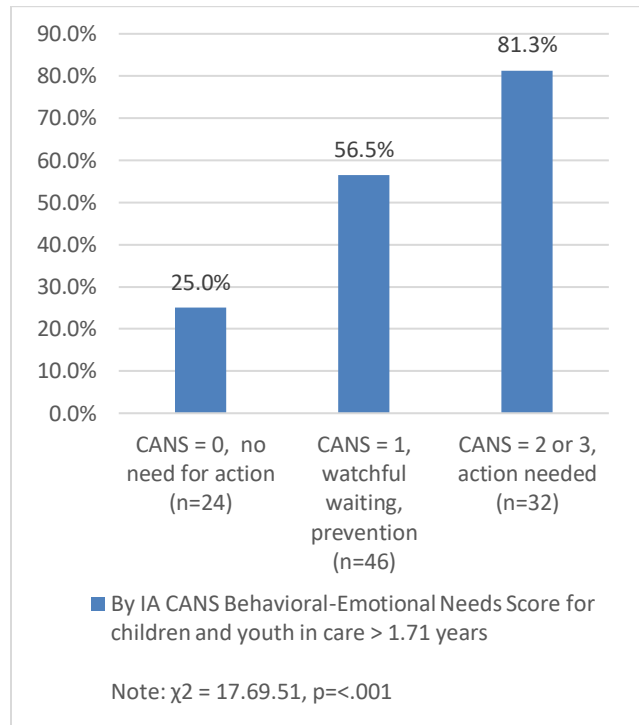


Figure 5.8 Percentage of Children and Youth Receiving a Behavioral Health Service

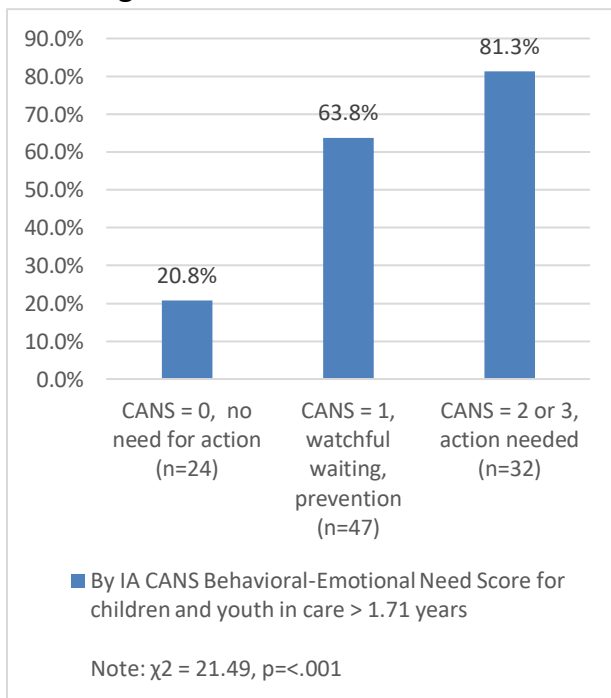
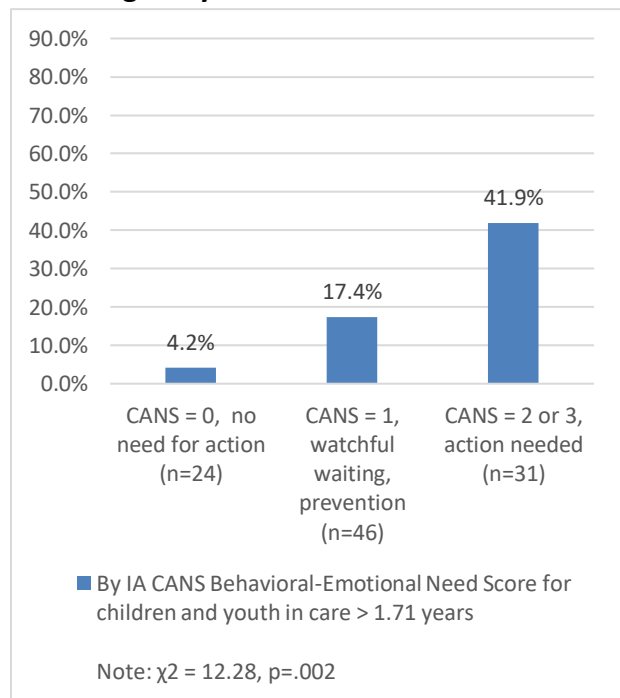


Figure 5.9 Percentage of Children and Youth Receiving a Psychiatric Medication



Discussion

These results provide evidence that scores on the IA CANS Behavioral and Emotional Needs domain were significantly associated with children and youth's emotional and behavioral needs during their stay in substitute care, even years after the IA CANS was completed. The IA CANS was also substantially related to whether children and youth would later receive behavioral health services. An important aim of the IA CANS is to identify children and youth in need of services as they enter care.

The Integrated Assessment is relevant for understanding children and youth's behavioral and needs even when they have been in substitute care for years. As a number of studies have found, the behavioral and emotional challenges of children and youth in substitute care are persistent.¹² It is likely that these difficulties stem from the maltreatment these children and youth have experienced and other adverse childhood experiences they have endured. Clearly more needs to be done to promote the emotional and behavioral health of children and youth in substitute care, given the evidence that their problems may often be chronic. The current study may help motivate agencies to try promising interventions that have demonstrated positive outcomes for children in substitute care but have not been widely implemented.¹³ These interventions resemble evidence-supported interventions used with other at-risk youth and have specifically been tested with youth in substitute care.

This analysis has limitations. The IA CANS scores may not adequately capture some aspects of the assessment provided in the text of the IA report. Also, the 2017 Illinois Child Well-Being study is not longitudinal. Thus we cannot measure changes in children and youth's emotional

¹² Leon et al. (2016) *ibid.* Kim, J., Cicchetti, D., Rogosch, F. A., & Manly, J. T. (2009). Child maltreatment and trajectories of personality and behavioral functioning: Implications for the development of personality disorder. *Development and Psychopathology*, 21(3), 889–912. Lansford, J. E., Malone, P. S., Stevens, K. I., Dodge, K. A., Bates, J.E., & Pettit, G. S. (2006). Developmental trajectories of externalizing and internalizing behaviors: Factors underlying resilience in physically abused children. *Development and Psychopathology*, 18(1), 35–55. Proctor, L. J., Skriner, L. C., Roesch, S., & Litrownik, A. J. (2010). Trajectories of behavioral adjustment following early placement in foster care: Predicting stability and change over 8 Years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 49(5), 464–473. Yoon, S. (2018). Fostering resilient development: Protective factors underlying externalizing trajectories of maltreated children. *Journal of Child and Family Studies*, 27(2), 443–452.

¹³ Leve, L.D., Fisher, P.A., & Chamberlain, P. (2009). Multidimensional Treatment Foster Care as a preventive intervention to promote resiliency among youth in the child welfare system. *Journal of Personality*, 77(6), 1869–1902. Leve, L. D., Harold, G. T., Chamberlain, P., Landsverk, J. A., Fisher, P. A., & Vostanis, P. (2012). Practitioner review: Children in foster care – vulnerabilities and evidence-based interventions that promote resilience processes. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 53(12), 1197–1211. Oriana Linares, L., Montalto, D., Li, M., & Oza, V. S. (2016). A promising parenting intervention in foster care. *Journal of Consulting and Clinical Psychology*, 74(1), 32–41. Taussig, H. N., Weiler, L. M., Garrido, E. F., Rhodes, T., Boat, A., & Fadell, M. (2019). A positive youth development approach to improving mental health outcomes for maltreated children in foster care: Replication and extension of an RCT of the Fostering Healthy Futures Program. *American Journal of Community Psychology*. 64(3-4), 405–417. Wood, J. N., Dougherty, S. L., Long, J., Messer, E. P., & Rubin, D. (2019). A pilot investigation of a novel intervention to improve behavioral well-being for children in foster care. *Journal of Emotional & Behavioral Disorders*, 27(1), 3–13.

and behavioral well-being over time. Children and youth who have been in substitute care long-term differ in important ways from children and youth who leave substitute care after briefer stays, and we cannot determine how much our results relate to the persistence of needs versus differences between the populations of children and youth with longer and shorter stays in care.

Despite these limitations, these results provide evidence for the validity of the IA and help support its value. Given the difficulties in accessing resources for children and youth in substitute care, the Integrated Assessment may be the most thorough and professional assessment a child entering substitute care will ever receive. The baseline CANS may be the only time at which a professional screener is involved in the assessment and can provide expert guidance to the caseworker. Caseworkers assigned to the case could benefit from reading the IA report and considering its implications for current service plans. The IA should also inform periodic assessments throughout the life of the case. For example, findings from the IA can suggest what types of professionals should be involved in evaluating the children's needs over time.