Implementation of the Safe Environment for Every Kid (SEEK) Model in the Early Detection of Psychosocial Risk Factors for Child Maltreatment in Pediatric Primary Care

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Abstract

Introduction: Child maltreatment is a significant health disparity that is often overlooked or underdiagnosed, leading to poor outcomes from childhood through adulthood.

Methods: The Safe Environment for Every Kid (SEEK) model was implemented at a small pediatric practice in Atlanta, Georgia. Provider data were collected before and after the project's implementation to measure provider comfort, knowledge, experience of child maltreatment. The Parent Questionnaire (PQ-R) was given patient samples. Targeted educational handouts and community referrals were offered to families with positive screens.

Results: Fifty-five percent of eligible (n=111) visits were given screens and 65 were positive. Results revealed that safety (40.5%), stress (26.1%), depression (13.5%), and food insecurity (12.6%) were identified as the most prevalent risk factors within the sample. Providers voiced that they are comfortable screening for risk factors but would like more training and support, also that the SEEK model was beneficial in primary care.

Discussion: Routine screening of psychosocial risk factors is vital in child maltreatment prevention and management. This project demonstrates that the SEEK model can successfully identify adversities in vulnerable families.

Key Words: Child maltreatment, SEEK model, psychosocial screening, pediatric care primary care, pediatric nurse practitioner

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Introduction

Child maltreatment (CM) includes neglect, physical, psychological, and sexual harm towards children. All types of CM are a critical issues that expand around the globe and cause poor health outcomes. It can affect every race and all levels of socioeconomic backgrounds (Bryant & VanGraafeiland, 2020; National Institute for Health and Care Excellence [NICE], 2017). Although pediatric primary care providers care for children from birth to young adulthood, many are not screening, recognizing, or responding to child maltreatment appropriately. Therefore, CM continues to be under-detected and poorly assessed (Chung, Gubernick, LaNoue, & Abatemarco, 2019; Dubowitz, Feigelman, Lane, & Kim, 2009). When CM is undetected, children may have delayed development, suffer from depression, are at risk of becoming abusers themselves or practice risky behaviors, have poor school performance, and may have negative relationships (Hoft & Haddad, 2017; National Association of Pediatric Nurse Practitioners [NAPNAP], 2016).

Background and Significance

According to WHO, over 250 million children aged 2-5 years old, globally, are routinely subjected to physical and psychological maltreatment (World Health Organization [WHO], 2020). In the United States, over 650,000 children are victims of CM annually. Child maltreatment-related deaths are estimated to be 1,500 per year (American Society of the Positive Care of Children [ASPCC], 2021; Hoft & Haddad, 2017; NAPNAP, 2016; Zielinski, Paradis, Herendeen, & Barbel, 2017). Centers for Disease Control (CDC) and WHO believe these figures are underestimated due to providers underreporting, misdiagnosing, or not correctly screening for child maltreatment. Neglect is the most common type of CM as it accounts for over 70% of abuse cases, physical abuse accounts for 18% of cases, sexual abuse and psychological abuse are the least common types of CM, accounting for 9% (Child Welfare Information Gateway, 2021; NAPNAP, 2016; WHO, 2020). Having multiple young children,

special needs children, lack of support, and a lower socioeconomic status are common risk factors for CM (Shakil, Chu, Woods, & Bridges, 2018; Steele et al., 2016; WHO, 2020). The highest rates of CM are among children under 3- years old, and the leading rate of death from abuse are children less than one year of age (Ashraf et al., 2020; WHO, 2020). Furthermore, there are direct consequences of CM victimization, which makes early detection of risk factors is essential, otherwise affected children may have long-term poor outcomes as previously mentioned (NAPNAP, 2016). In the past, interventions for the prevention of CM focused on the child; however, recent studies and practice recommendations suggest that screening for and managing adversities in the home setting can aid the prevention of CM (Centers for Disease Control [CDC], 2019; Forkey & Conn, 2018). Also, providers focusing on the family and home adversities can decrease maltreatment rates (American Academy of Pediatrics [AAP], 2016; CDC, 2019; Dubowitz, 2014, Forkey & Conn, 2018).

In addition to the psychological and physical turmoil experienced by the child and family, there are also financial costs to abuse (Eisman, Theuerling, Maguire, Hente, & Shapiro, 2018; Thielen et al., 2016). It is estimated that child maltreatment can cost the United States over 100 billion dollars per year, and in Georgia (GA), the estimated cost per victimized child is over $200,000 in their lifetime. Consequently, with the significant negative impact on the well-being of children, families, and the significant economic burden, there is a need for prevention strategies (CDC, 2019; Dubowitz et al., 2020; Georgia Division of Family and Children Services [DFCS], 2016; Thielen et al., 2016).

Evidence shows a strong correlation between psychosocial stressors such as domestic violence (DV), food insecurity (FI), financial difficulties, depression, lack of a support system, alcohol, or substance abuse (SA), as risks for maltreatment (AAP, 2016; CDC, 2019; Child Welfare Information Gateway, 2021; Dubowitz, 2014; WHO, 2020). The early identification of at-risk families, providing parental support, and targeted education to control stressors associated with parenthood can significantly decrease or prevent occurrences of CM (CDC, 2019; Dubowitz, 2014). Healthcare providers should familiarize themselves with current CM practice guidelines and routinely screen for risk factors to avoid maltreatment (CDC, 2019; Ezpeleta et al., 2016; Hoft & Haddad, 2017; WHO, 2020). An evidence-based

practice protocol, such as the SEEK model, assesses psychosocial risk factors and provides appropriate support and referrals to families, and results in decreasing and preventing child abuse, is recommended (Dubowitz, Feigelman, Lane, & Kim, 2009; Dubowitz et al., 2020).

Project Purpose

The purpose of this QI project is to utilize the SEEK model to screen for psychosocial stressors, identify high-risk families, offer targeted education, support, referrals, and decrease the risk of child maltreatment. The overall aim of this study is to increase identification, management, and prevention of abuse of children by routinely screening for psychosocial risk factors in 100% of the selected sample of patients aged six months old to 5 years old that present for well-child visits. Another identified aim is that all providers will demonstrate knowledge and comfort in managing CM by the project's conclusion. The specific objectives of this project are for: (a) pediatric providers to complete training and education modules on the SEEK model by September 20, 2021, with 100% compliance, (b) pediatric providers utilize the PQ-R tool and the SEEK model guidelines to screen for psychosocial risk factors in 100% of the selected sample of 6-month-old to 5-year-old well-child visits from September to November 2021, (c) positive screens to be addressed during the current visit and for parents to receive targeted education or appropriate psychosocial referrals based on the SEEK Model's guidelines with at least 90% compliance.

Review of Literature

Child maltreatment is a major worldwide health problem and causes adverse effects on the child and family (Dubowitz et al., 2020; Lane et al., 2007; Turner et al., 2017). When children are exposed to adversities, such as parental depression, substance abuse, IPV and toxic environments, there is a significant risk of being abused by a caregiver (Bryant & VanGraafeiland, 2020; Dubowitz et al., 2020; Eisman, Theuerling, Maguire, Hente, & Shapiro, 2018). In addition, several studies demonstrated minimal evidence that providers screened for risk factors or CM in all circumstances (Bryant & VanGraafeiland, 2020; Horner et al., 2017; Shakil, Chu, Woods, & Bridges, 2018). For instance, in one

study, 41% of providers admitted to only discussing the psychosocial issues or screening for CM if the chief complaint was related to a type of abuse and not for routine well-child visits. (Hornor et al., 2017).

Ideally, CM should be prevented before a child is exposed to abuse, and the most appropriate way is through consistent and routine screening for risk factors (Dubowitz et al., 2020; Hornor et al., 2017; Zielinkski, Paradis, Herendeen, & Barbel, 2017). Various studies have introduced several instruments that screen for psychosocial risk factors with favorable results. One project using the Well-Child Care Visit, Evaluation, Community Resources, Advocacy, Referral, Education (WE-CARE) tool enabaled the researchers to recognize that 377 patients at risk that otherwise may not have been identified before the tool's implementation (Zielinkski, Paradis, Herendeen, & Barbel, 2017). An alternative tool, the Child Abuse and Neglect Risk (CAN), also established strong evidence that screening rates or adversities went from 0% to over 82% post-implementation and was sustained for 1.5 years (Chung, Gubernick, LaNoue, & Abatemarco, 2019). Another psychosocial screening tool was utilized in a high-risk pediatric population, and the study was successful in standardizing screening among providers, increasing identification of high-risk families, and community referrals were given to families that previously would not be identified, thus reducing potential incidences of CM (Zielinkski, Paradis, Herendeen, & Barbel, 2017)

The SEEK model has also shown promising results in the literature in that the model has enhanced primary care with routine screening training for providers and streamlines providing interventions for at-risk families. In one study, before implementing the SEEK Model, only 19% of providers across three primary care practices reported addressing psychosocial risk factors with families. After implementing SEEK, there was a significant increase in routine screening by providers, an increase of referrals to social work or mental health services, and fewer child abuse reports (Dubowitz et al., 2020; (Eisman, Theuerling, Maguire, Hente, & Shapiro, 2018; Lane, Dubowitz, Frick, Semiatin, & Madger, 2021).

In the literature, investigators mentioned that providers do not feel competent in discussing adversities and sensitive topics with parents because of the risk of being uncomfortable, lack of training, and not having enough time. One study, (Eismann et al., 2018) noted that most of the study sample admitted to not routinely screening because of comfort level, lack of knowledge, time, and resources. After implementation, provider screening ranged from 75% to 93%, and 89% of targeted families were reached and received appropriate referrals (Eisman, Theuerling, Maguire, Hente, & Shapiro, 2018). Furthermore, several studies recommended obtaining baseline surveys to gauge the providers' current knowledge and attitude on CM and screening for risk factors. Once trained and after implementation, providers should be surveyed again to measure for increased understanding. In several studies, researchers implemented a pre/post-training design with a new instrument showed increased comfort of providers on post surveys, demonstrating the likelihood to be compliant and successful in screening families (Bryant & VanGraafeiland, 2020; Carson, 2018; Chung, Gubernick, LaNoue, & Abatemarco, 2019; Dubowitz, 2020; Ezpeleta et al., 2016).

The literature also mentions parent education and promoting healthy parent-child relationships by screening for and managing psychosocial risk factors can be successful in CM prevention and long-term effects from abuse (Dubowitz, Feigelman, Lane, & Kim, 2009). For instance, the SEEK model has been used in several studies focused on pediatric primary care settings. Overall, the results have been favorable in that provider comfort increased in screening for CM. High-risk families were identified, and there was a reduction of Child Protective Service reports (Dubowitz, Feigelman, Lane, & Kim, 2009).

Methods

Setting

A private pediatric primary care office in an urban area outside of Atlanta, GA, was the setting for implementing the SEEK model. This primary care clinic has been in the community for almost 20 years and serves an average of 3,500 patients per year. On average, about 90% of patients receive

Medicaid assistance, and the demographics include Mexican, Vietnamese, and African American patients, which is the largest ethnic group.

Sample

The SEEK model recommends administering PQ-R at the 2, 9, 15-month-old visit and the 2-, 3-, 4-, and 5-year-old visit (Dubowitz, 2014; "SEEK Wellbeing," 2020). Only well visits for ages ranging from 6 months to 5 years were included for this project's purpose. This decision was made for ease of implementation purposes, and the population still aligns with the literature in that the rates of child maltreatment are more prevalent from infancy to preschool-aged children (Child Welfare Information Gateway, 2021). A convenience sample of patients that presented for well-child visits and were within the desired age range met eligibility. The participants will include males or females, be of any socioeconomic background, race, and be English or Spanish speaking. Also, if the caregiver with the patient is not a legal guardian or parent, the patient visit will be excluded from the study.

SEEK Model Protocol

Permission from the SEEK Model developer, Dr. Dubowitz, and his team at the University of Maryland was obtained to utilize the SEEK Model materials, protocol, and instruments in July of 2021. The project investigator (PI) secured copies of all parent handouts and met with the head pediatrician to compile a list of community resources. Seven providers, including two pediatricians, a pediatric resident, and four pediatric nurse practitioners, were asked to participate. All participating providers were emailed the seven SEEK video modules to familiarize themselves with the concepts before the project's implementation. Providers were given a modified Primary Care Provider Questionnaire (PCPQ; Appendix A) to complete, which surveys their professional background, knowledge, and comfort with assessing risk factors. All education was reinforced with a PowerPoint presentation that gave an overview of the project, tools, referrals, and SEEK materials. A SEEK protocol station was set up where the providers sit

and near exam rooms with the targeted educational handouts labeled individually in English and Spanish, GA poison control magnets, and another file containing community referrals.

After the PCPQ surveys and education were complete, the project was implemented in September 2021 and concluded in November 2021. An unaltered English or Spanish version 15-item PQ-R (Appendix B) tool was given to families with children that met the criteria while waiting for the provider. Parents chose a yes or no response to questions concerning safety, interpersonal violence (IPV), parental depression (PD), SA, FI, major parental stress (MPS), and harsh punishment (HP). The PQ-R was considered significantly positive if parents answered "yes" to any FI, HP, MPS, PD, IPV, or SA items (Dubowitz, 2014). Providers reviewed the PQ-R and addressed any yes responses with the parent. Based on the PQ-R results, the provider will then provide the SEEK targeted educational handouts or community referrals.

Moreover, if parents only answer yes to a safety question, this is also considered positive for the purpose of this project and would require a targeted educational handout as opposed to a referral for more significant items (Dubowitz et al., 2020; Eisman, Theuerling, Maguire, Hente, & Shapiro, 2018).

Data Collection

The data from the PCPQ and PQ-R were collected throughout the implementation and placed in an Excel spreadsheet. The collected data will provide insight into the provider's knowledge, comfort, and attitude before implementing the SEEK Model. Furthermore, data from the completed PQ-R tools will allow providers to assess if the family has any current stressors that put the child at risk for CM. Providers will review the tool with the parent and note if the PQ-R is positive or negative. If positive, the provider will note which items were positive on the instrument, discuss it with the family and provide contact information to a referral or a parent handout depending on the type of positive result. Patient demographics such as age, sex, race, and type of insurance from the electronic health record (EHR) were

abstracted to be analyzed with the PQ-R results. The PI will note how many patients met the sample criteria and compare it to the actual number of PQ-R screens completed. At the project's conclusion, providers will receive the PCPQ-Experience Survey (Appendix C) to measure the provider's capability and experience in utilizing SEEK in practice.

Analysis

Data analysis was performed with the Statistical Package for the Social Science (SPSS) v. 28. Descriptive statistics were utilized and included means, percentages, cross-tabulations, standard deviations, and frequency distributions to illustrate the analyzed data. The results revealed an increased understanding, competence, and comfort in addressing psychosocial issues, which is necessary for routine screening and management. The project outcomes also identified how many families are experiencing psychosocial stressors within the practice and the need for education and community referrals. Additionally, the data found that at-risk families were identified when the PQ-R instruments were routinely completed during office visits. Provider perception of managing psychosocial stressors in families improved based on training and utilization of the SEEK Model, and 100% of positive screen families were given community referrals or targeted education.

The overall project goal was evaluated by analyzing the collected PQ-R tools, assessing if providers followed through with reviewing the positive PQ-R with families and if referrals were given. Post-implantation PCP-Q tools will be examined and statistically analyzed to validate provider attitude, knowledge, and comfort with utilizing the SEEK model. Reviewing the completed instruments for providers following up with positive items and providing targeted education and referrals.

This QI project was classified as exempt and non-human subjects' research by the University of South Alabama's institutional review board.

Results

Results related to providers

Seven pediatric providers participated in this QI project, including two pediatricians (28.6%), four nurse practitioners (57.1%), and one pediatric resident (14.3%; Table1). For the PCPQ, there was a

100% response rate. One hundred percent (n=7) were female with ages ranging from 31 to 50 years old and experience from 2 to 24 years of practice. Informal discussion (57%) was the most common method chosen by providers, using another tool, national guidelines, or not using any method was also among responses (Figure 1). How often providers screen for CM was inconsistent. For instance, 42% (n=3) screened at all patient visits, 28.6% (n=2) screened only at well visits, and another 28.6% (n=) only screened if the visit was only related to CM (Figure 2). Providers responded that the number of CM instances they managed ranged from zero to over 60 cases within the last two years. Overall, providers believed that single parenthood, poverty, stress, prior history of abuse, the child's behavior, and substance abuse were the leading risk factors for CM.

Providers were asked to respond to how many hours of education on risk factors that may lead to CM they received in the last two years. About 57% (n=4) of providers received no training on DV, and 42.9% (n=3) of providers received an average of 2 hours of DV training. Seventy-one percent (n=5) did not receive training on SA, PD, or MPS; however, 28% (n=2) did receive an average of 2 hours of training in SA, 14.3% (n=1) received an average of 5 hours of PD, and MPS training and 28% (n=2) received an average of 6.5 hours of training in MPS. The areas of HD, CM, and social determinants of health (SDOH) showed similar results in that 71.4% (n=5) of providers received no training in HD, and 28% (n=2) did receive an average of 2 hours of training. Also, 57% (n=4) received no training in CM and SDOH, although 85.7% (n=6) received training hours that ranged from 1-20 hours in the last two years. Fifty-seven percent had no training on FI during the previous two years; however, 28% (n=2) received an average of 2 hours of education, and 14.3% (n=1) received 8 hours of training.

In another section, providers responded to how many times in the last two years they helped address the issues of DV, SA, PD, MPS, FI, HD, CM, and SDOH. The responses varied between providers in that 42.9% (n=3) did not help address DV, but 57.2% (n=4) did address DV, with one provider addressing over 40 cases. Concerning SA, 57.2% (n=4) did not address SA; however, 42.9% (n=3) did manage SA with an average of 7 cases among providers. Approximately 85% (n=6) addressed an average of 6 occurrences of PD within the last two years. Fifty-seven percent did not handle HD, and

about 43% (n=3) managed cases of HD that ranged from 4- 40 incidents. Two out of seven providers did not address CM. The remaining providers did address cases of CM with varying ranges of 1-30 cases. Forty-three percent of providers did not address any families with FI concerns, 29% (n=2) managed 8-10 cases, and another 29% (n=2) handled 1-7 instances of FI. Four providers (57%) responded to not managing SDOH issues; others responded to addressing 1-20 cases.

The final sections of the survey asked providers to review 3 case vignettes related to CM risk factors. The first vignette mentions a mother with a toddler that cries excessively, which causes her and her partner to fight. About 42% (n=3) of providers felt comfortable asking the mother about IPV (mean 2.14, sd 0.69) and feel they do not need the training to do so (mean 3.28, sd 0.48); however, 71% (n=5) admitted they did not know what how to respond if the IPV screen is positive (mean 3.28, sd 0.48). All providers agreed that the practice does not have an adequate protocol to address IPV (mean 1.7, sd 0.49).

Vignette two depicts a scenario of a mother who states, “everything is fine,” yet the child has lost significant weight since the previous visit, and the mother appears withdrawn. Providers agreed that they knew how to assess parental depression (mean 2.71, sd 0.45), felt comfortable talking with the mother about possible depression (mean 2.85, sd 0.35), and believed depression was related to CM (mean 2.85, sd 0.35). Also, 85.7% (n=6) responded that they do not routinely screen for parental depression (mean 1.71, sd 0.75). Based on this scenario, providers were split on their responses if they would assess this mother for depression (mean 2.1, sd 0.99). Providers disagreed that the practice has a protocol in place to address PD (mean 2.0, sd 0.75). Providers believed that the FI was a current issue within the practice (mean 1.2, sd 0.45); however, they do not routinely screen for FI (mean 1.8, sd 0.63). Providers were unaware of FI resources in the community (mean 1.8, sd 0.69) and believed the practice should have an educational handout about food programs (mean 2.85, sd 0.37).

The third vignette discusses an inattentive and exhausted mother with an irritable baby, and the parent admits she has increased her alcohol intake. Responses were split on asking about family stressors at well visits (mean, sd 0.70). Most providers admitted they require education on assessing MPS (mean 3.00, sd 0.53). Also, providers responded that they do not ask parents about substance abuse (mean 3.00,

sd 0.75); they are not comfortable in assessing SA and were not aware of resources to offer parents if they admit to having SA issues (mean 2.4, sd 0.72). Most providers agreed the practice should have an educational resource on SA and that they would like more training (mean 3.4, sd 0.72).

At the project's conclusion, providers completed a PCPQ-Experience Survey (Table 2) which assessed their experience with SEEK. All providers agreed that the SEEK model aligns well with primary care (mean 3.85, sd 0.35) and will continue to incorporate SEEK in their practice (mean 3.57, sd 0.49). Also, providers agreed that they found SEEK simple to use (mean 3.7, sd 0.45) and that the PR-Q usually can be administered at the beginning of the visit mean 3.7, sd 0.45). Also, providers all concurred that parents responded positively to follow-up questions when the screen was positive mean 3.24, sd 0.35). However, providers were split on their responses when asked if the visits took longer when high-risk families were identified (mean 2.4, sd 0.49). Providers all decided that they felt comfortable addressing the positive screens (mean 3.28, sd 0.45) and that PQ-R was an efficient method for screening for adversities (mean 4.00, sd 0.00). The responses also revealed that parents were receptive to targeted education and community referrals.

Results related to the PQ-R

Two hundred and one patients met the criteria during the project implementation. Approximately 55% (n=111) of visits received and completed the PQ-R form (Appendix B). The demographics of the patients that screened positive were African American (n=56), Hispanic (n=5), were Caucasian (n=3), and Asian (n=1; Figure 3). There were 65 positive and 45 negative screens, meaning the parent answered no to every question (Figure 4). Positive screens were more frequent in the following age groups, 5 years old (27%), 2 years old (12%), 6 months old (12%), 4 years old (9%), and 3 years old (7%). Approximately 91% of the positive screens were Medicaid patients, and 9% had private insurance. There was no significant variance between males (n=35) and females (n=30) in having more positive versus negative screens. Some of the positive screens had multiple items answered yes by parents. The higher responsive positive categories involved safety (40.5%, n=45), MPS (26.1%, n=29), depression (13.5%, n=15), and FI (11.7%, n=14). The lower response positive categories included HP (10.8% n=12), IPV (4.5%, n=5), and

SA (3.6%, n=3); as indicated in Table 3. Positive responses to the safety questions were the most prevalent among the following ages, 5-year-old (n=14), 6-month-old (n=7), and 2-year-old (n=5). In contrast, positive responses to harsh punishment were common among 3-year-old (n=3) and 5-year-old (n=5) patients. Food insecurity and depression were consistently positive among 1- to 5-year-olds. Stress had more positive responses in 6-month-old (n=4), 2-year-old (n=3), 3-year-old (n=5), and 5-year-old (n=8) patients. All the families with positive screens were offered targeted educational handouts, community referrals, or both items. Ninety-eight percent (n=64) of the identified families accepted the targeted education and referrals, as shown in Figure 5.

Discussion

Prior to implementation, the practice site had no universal screening method for risk factors. Implementing a valid screening method, such as the SEEK model, was beneficial in screening for adversities, early identification of high-risk families, and offering support for parents, thus decreasing the risks of CM (CDC, 2019; Chung et al., 2019; Dubowitz, 2014). The PQ-R tool has shown feasibility and is more trustworthy in screening for adversities than observation alone (Forkey & Conn, 2018). The findings established that a substantial number of parents are affected by safety risks, stress, and depression, which could all lead to child maltreatment. High rates of parental depression (67%) and stress (70%) were also found in a similar project using the WE-CARE tool (Zielinkski, Paradis, Herendeen, & Barbel, 2017). When some parents were asked about the positive items on the PQ-R, a theme emerged: several parents admitted to facing single parenthood, going through a divorce or separation, living with extended family, significant other being murdered, and recent incarceration of the other parent. These findings gave the providers more insight into the needs and the disparities our families are confronting, which may not have been revealed before implementing the SEEK model. Overall, providers felt comfortable questioning parents about adversities that may lead to CM. However, many still agreed that more training would be beneficial in managing risk factors within high-risk patient populations. Also, providers articulated that the practice needs more support and a standard protocol in place. Post-

implementation results uncovered that the SEEK model is a helpful and efficient method for identifying and managing high-risk families. As previously stated, the PI observed the lack of uniformity among providers in screening for CM; however, providers did express that they were knowledgeable and capable in managing some risk factors and found SEEK to be beneficial and straightforward to utilize.

Limitations

There were several limitations throughout the implementation. Firstly, the schedule of patients could not be predicted; therefore, certain days had more patients that met criteria than others. Secondly, the timing of the implementation affected the sample population. For instance, the project was implemented during the fall, and the practice was seeing more sick visits, which also limited the number of positive screens. Implementing the project during the summer may have had more success as more children need physicals for school, which is the case for the children in the older range of the sample. Another limitation was that some providers rotated offices and were not at the practice site, limiting the patients scheduled at the clinic. As the SEEK model was a new practice change and some opportunities were missed, which was evident by the 55% capture rate of eligible patients. Providers and staff sometimes forgot to use the survey and needed verbal reminders and demonstrations to give the PQ-R to parents and what constitutes a positive screen.

Lastly, related studies with similar interventions had a social worker to help with community referrals and aiding families (Bryant & VanGraafeiland, 2020; Zielinkski, Paradis, Herendeen, & Barbel, 2017). The site of the QI project did not have access to a social worker and had to rely on parents following through with the referral. For instance, one study mentioned having social work assistance with barriers that may prevent parents from completing referrals, such as transportation. Having the additional support of social workers or mental health services may increase the usage of the psychosocial tool and referrals by providers (Zielinkski, Paradis, Herendeen, & Barbel, 2017).

Implications for Practice

The results of this QI project will make a positive impact on patient outcomes by preventing child maltreatment through providers being trained in the SEEK Model protocal, assessing for risk factors, and

meeting the psychosocial needs of families (Eisman, Theuerling, Maguire, Hente, & Shapiro, 2018; NAPNAP, 2016; Zielinkski, Paradis, Herendeen, & Barbel, 2017). Implementing the SEEK model will alter patients' care due to providers routinely screening for risk factors, giving necessary referrals and education, and closely following up with families. The evidence shows that implementing the SEEK Model increased provider confidence and knowledge in screening, increased patient satisfaction, and showed fewer occurrences of Child Protective Service (CPS) referrals (AAP, 2016; CDC, 2019; Dubowitz et al., 2020; Eisman, Theuerling, Maguire, Hente, & Shapiro, 2018).

Future research efforts could include expanding the SEEK model to all ages from newborn through adolescence and possibly sick visits. Also, a survey could be administered to parents several weeks after receiving the referral to evaluate if they followed through with the referral and assess their attitudes toward the SEEK model, which could reveal if the SEEK interventions were beneficial.

Conclusions

Child maltreatment is a national and worldwide phenomenon that may include neglect, physical, psychological, or sexual abuse of individuals under 18 years old (ASPCC, 2021, CDC, 2019). The literature shows that children are at risk for CM when psychosocial adversities are within the household. Without routine screening, many of these psychosocial stressors will go unidentified by providers, and the risk of CM will increase (AAP, 2016; Bryant & VanGraafeiland, 2020; Carson, 2018). When families have adversities, such as toxic stress in the household, there are higher incidences of CM (AAP, 2016; CDC, 2019; Steele et al., 2016).

The outcomes of this QI project demonstrated the need for providers to routinely screen for psychosocial risks to prevent child maltreatment. Administering the PQ-R tool enabled the PI and providers to reveal that some families within the practice face significant adversities such as high stress, depression, safety concerns, and food insecurity. Predominantly, families were honest and forthcoming about their situations and receptive to education and community referrals. Applying the SEEK model to practice is vital to advanced practice nurses because children affected by CM have high incidences of becoming future abusers, IPV victims, as well as having low self-esteem, mental health issues, high-risk

sexual behaviors, and unstable relationships. To interrupt this cycle, advanced practice nurses must be competent in screening, recognizing, reporting CM, or intervening when a child is at risk of abuse (CDC, 2019; Chung et al., 2019; Dubowitz et al., 2020; Horner et al., 2017).

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Table 1

Frequency and percentage breakdown of provider participants

Professional Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MD	2	28.6	28.6	28.6
	NP	4	57.1	57.1	85.7
	Resident	1	14.3	14.3	100.0
	Total	7	100.0	100.0	

Table 2

Means and Standard Deviations for Provider Experience with SEEK

	N	Mean	Std. Deviation	Variance
The Seek Model fits well with primarycare	7	3.857	.350	.122
Ill recommend SEEK to colleagues	7	3.857	.350	.122
We are usually able to administer PQ-R before selected check ups	7	3.286	.452	.204
I find it easy to use the PQ-R	7	3.714	.452	.204
I'm able to review the PQR at the start of the visit	7	3.714	.452	.204
Parents respond positvely to my follow up questions	7	3.143	.350	.122
When a parent identifies a problem on the PQ-R visits take a lot longer	7	2.429	.495	.245
I feel comfortable addressing family problems using the PQ-R	7	3.286	.452	.204
The PQ-R is an efficient way to screen for important problems	7	4.000	.000	.000
When I suggest a referral parents are often resisitant	7	2.286	.881	.776
Ill continue to use the PQ-R in my practice	7	3.571	.495	.245
Valid N (listwise)	7			

Std. Deviation and Variance use N rather than N-1 in denominators.

Note: Provider post implementation survey measuring their experience and attitude with using the SEEK model.

Table 3

Identification of High-Risk Families and Intervention Acceptance

Social Determinant	Positive Screen		Targeted Education/Community Referral Acceptance	
	n	**%**	**n**	**%**
Safety	45	40.5%	44	98%
Food Insecurity	14	12.6%	14	100%
Harsh Punishment	12	10.8%	12	100%
Major Parental Stress	29	26.1%	29	100%
Parental Depression	15	13.5%	15	100%
Interpersonal Violence	5	4.5%	5	100%
Substance Abuse	4	3.6%	4	100%

Figure 1

Methods used by Providers to Screen for Child Maltreatment

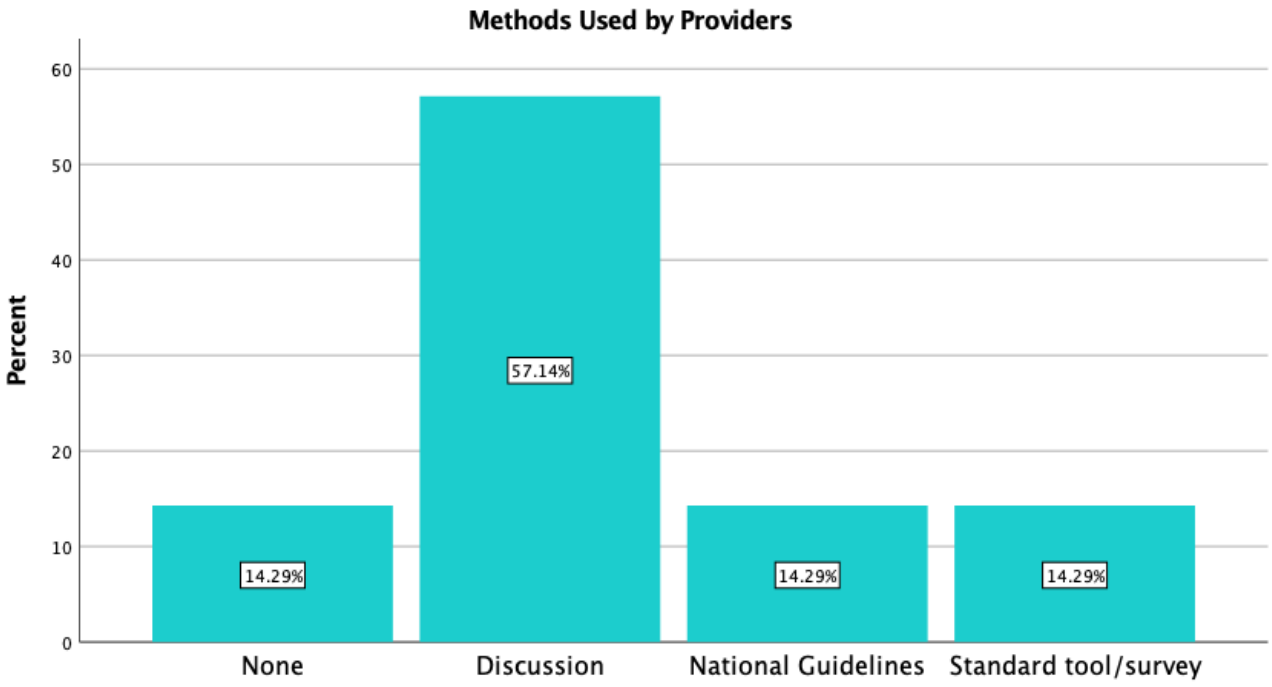


Figure 2

Graph of How Often Provider Participants Screen for Child Maltreatment

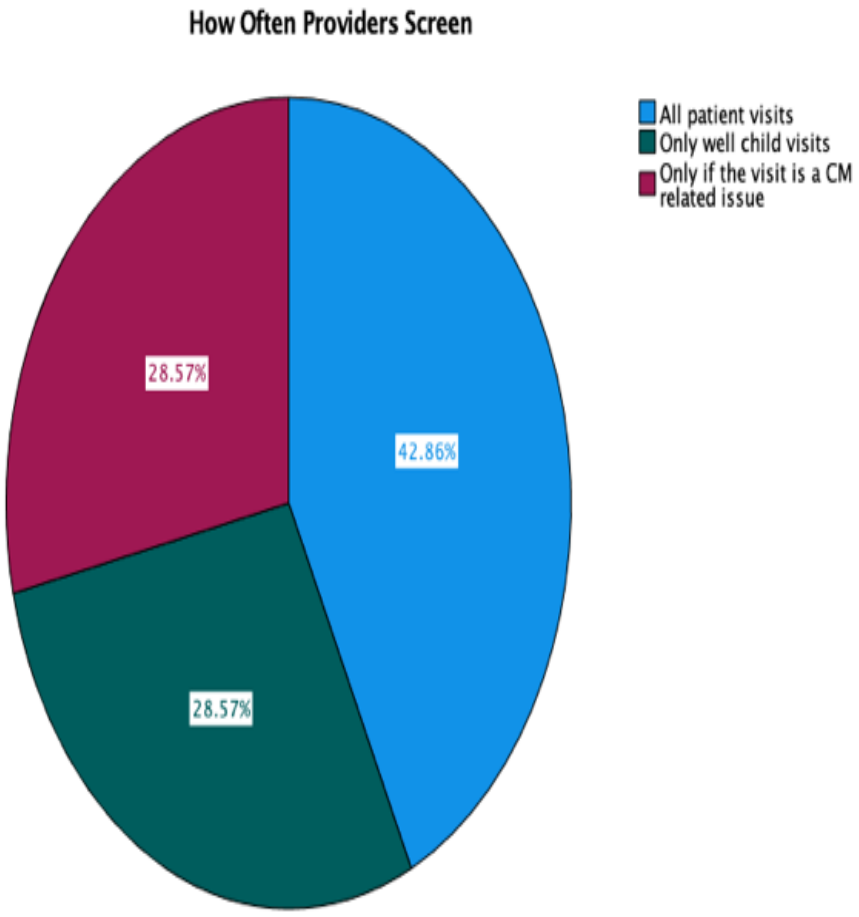


Figure 3

Positive and Negative Parent Questionnaire Responses by Race/Ethnicity

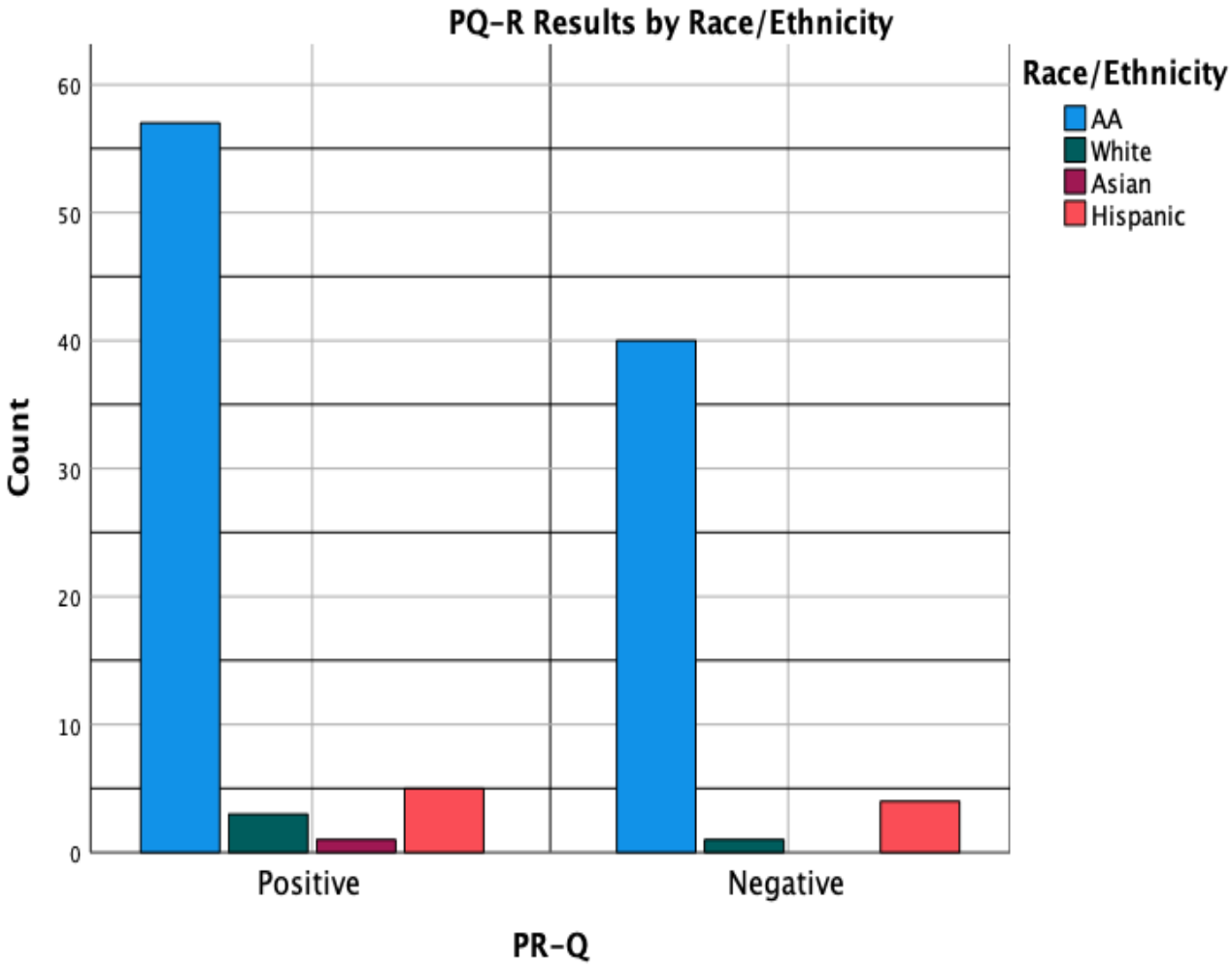


Figure 4

SEEK Parent Questionnaire (PQ-R)

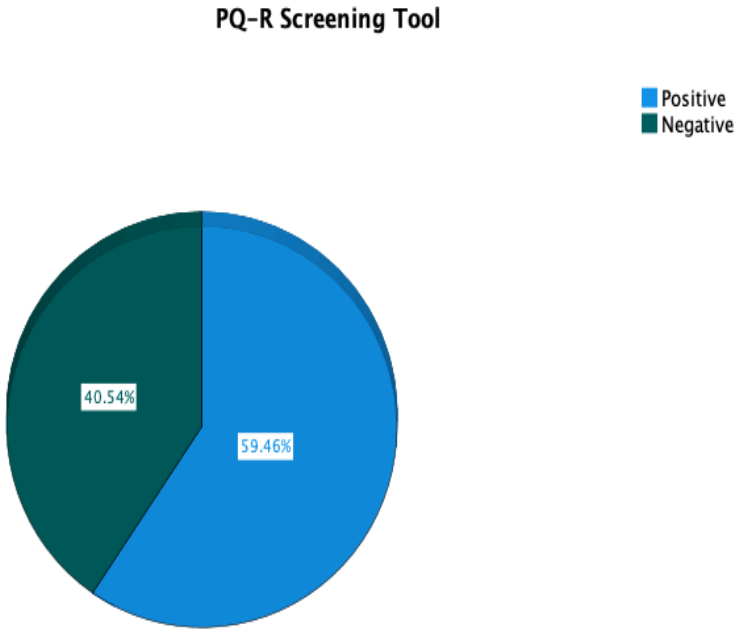
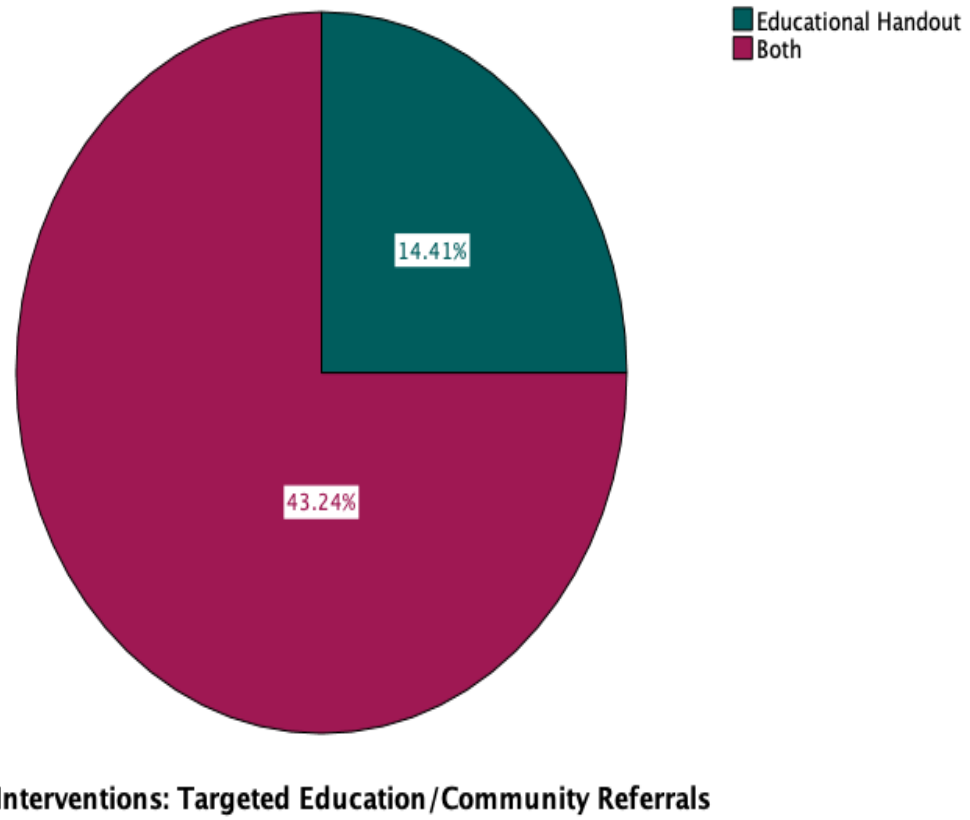


Figure 5

Breakdown of Interventions for positive PQ-R Screens



Note: Positive safety items such as smoke exposure or not having a smoke alarm received education. More serious (parental depression, food insecurity, stress, harsh discipline, etc) positive items were given both targeted education and community referrals. Some multiple positive responses may have received targeted education for safety and a referral for a serious item.

Appendix A

SEEK™ Safe Environment for Every Kid

Parent Questionnaire - R

Dear Parent or Caregiver: Being a parent is not always easy. We want to help families have a safe environment for kids. So, we're asking everyone these questions about problems that affect many families. If there's a problem, we'll try to help.
Please answer the questions about your child being seen today for a checkup. If there's more than one child, please answer "yes" if it applies to any one of them. This is voluntary. You don't have to answer any question you prefer not to. This information will be kept private, unless we're worried about your child's safety.

Today's Date: ___/___/_____ Child's Name: _____

Child's Date of Birth: ___/___/_____ Relationship to Child: _____

PLEASE CHECK

□ Yes	□ No	Would you like us to give you the phone number for Poison Control?
□ Yes	□ No	Do you need to get a smoke alarm for your home?
□ Yes	□ No	Does anyone smoke at home?
□ Yes	□ No	In the past 12 months, did you worry that your food would run out before you could buy more?
□ Yes	□ No	In the past 12 months, did the food you bought just not last and you didn't have money to get more?
□ Yes	□ No	Do you often feel your child is difficult to take care of?
□ Yes	□ No	Do you sometimes find you need to slap or hit your child?
□ Yes	□ No	Do you wish you had more help with your child?
□ Yes	□ No	Do you often feel under extreme stress?
□ Yes	□ No	Over the past 2 weeks, have you often felt down, depressed, or hopeless?
□ Yes	□ No	Over the past 2 weeks, have you felt little interest or pleasure in doing things?

Thinking about the past 3 months

□ Yes	□ No	Have you and a partner fought a lot?
□ Yes	□ No	Has a partner threatened, shoved, hit or kicked you or hurt you physically in any way?
□ Yes	□ No	Have you had 4 or more drinks in one day?
□ Yes	□ No	Have you used an illegal drug or a prescription medication for nonmedical reasons?
□ Yes	□ No	Other things you'd like help with today: _____

Please give this form to the doctor or nurse you're seeing today. We encourage you to discuss anything on this list with her or him. Thank you!

Appendix B

SEEK™ Safe Environment for Every Kid

UNIVERSITY of MARYLAND SCHOOL OF MEDICINE

The SEEK Primary Care Professional Questionnaire

Practice Name:_____ **State:**_____

Number of months implementing SEEK:_____(0 if you've not yet started)

Sex:

Years in practice:

Title (MD, NP, DO, PA):

Age:

In the past 2 years, approximate number of cases of child maltreatment you helped manage: _____

What tool or method, if any, do you use to screen for child maltreatment (CM)? _____

_____

How often do you screen for child maltreatment (CM)?

☐ **All patient visits** ☐ **Only well child visits** ☐ **Only if the visit is a CM related issue**

In your opinion, what are the leading risk factors for child maltreatment (CM)?

_____

_____

Please respond forthrightly and choose the response that best reflects your level of agreement or disagreement with each statement. Your responses will be kept confidential.

Vignette 1. Ms. B is in with her 3-year-old son for a checkup. She feels he's doing well, b t he "cries a lot and sometimes that makes my partner angry. And we fight about that!" No other problems are noted.

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. I usually ask parents like Ms. B about how family members get along.	1	2	3	4
b. There's no clear basis for asking Ms. B about intimate partner (or domestic) violence (IPV).	1	2	3	4
c. I'm uncomfortable asking Ms. B about possible IPV.	1	2	3	4
d. I don't have time to probe possible problems like IPV.	1	2	3	4

e. I don't really know how to talk with Ms. B about IPV.	1	2	3	4
f. I'm concerned that asking Ms. B about IPV will jeopardize our relationship.	1	2	3	4
g. I know what to do if IPV turns out to be a problem.	1	2	3	4
h. Parents often think their children are unaware of conflict between adults in the home.	1	2	3	4
i. I think IPV is rare in middle- and high-income families.	1	2	3	4
j. If offered, most parents readily engage in IPV services.	1	2	3	4
k. I need more training on addressing IPV.	1	2	3	4
l. We should have a parent handout on IPV with local resources.	1	2	3	4
m. My practice really values addressing IPV.	1	2	3	4
n. My practice has a protocol or approach for addressing IPV.	1	2	3	4
o. I lack support for helping address IPV.	1	2	3	4

Vignette 2. You're seeing ZD for her 2-year checkup. Her mother, Ms. D, says all is "fine." No problems are detected although you notice Ms. D seems more quiet than usual. There' been a moderate decline in ZD's weight/age since her visit 6 months ago.

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. I know how to assess depression in a parent.	1	2	3	4
b. I usually talk with new mothers about post-partum depression.	1	2	3	4
c. I'm comfortable talking with Ms. D about possible depression.	1	2	3	4
d. Ms. D will probably be upset if I ask about her mental health.	1	2	3	4
e. Screening for depression is unnecessary; I can usually detect this.	1	2	3	4
f. I routinely screen parents formally for depression.	1	2	3	4
g. A few questions can effectively screen for depression.	1	2	3	4
h. I would assess if Ms. D may be depressed.	1	2	3	4

i. Maternal depression is often related to child neglect.	1	2	3	4
j. Depression is a very difficult problem to treat.	1	2	3	4
k. My practice has a protocol or approach for addressing parental depression.	1	2	3	4
l. My practice really values addressing parental depression.	1	2	3	4
m. We should have a parent handout on depression.	1	2	3	4
n. Food insecurity is not really problem in our practice.	1	2	3	4
o. Monitoring growth obviates the need to screen for food insecurity.	1	2	3	4
p. Most families eligible for food programs are enrolled in them.	1	2	3	4
q. I usually screen formally for food insecurity.	1	2	3	4
r. I'm not comfortable assessing food insecurity.	1	2	3	4
s. It's difficult to encourage families to accept food assistance.	1	2	3	4
t. I know of food resources for families in my practice.	1	2	3	4
u. We should have a parent handout on community food programs.	1	2	3	4

Vignette 3. You walk into an exam room to find Ms. G asleep with her head on the desk and her baby crying. When you wake Ms. G, she is somewhat cranky. She tells you she's tired from working night shifts, and "I've been drinking more".

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. I usually inquire about family stressors during well child visits.	1	2	3	4
b. It's understandable why she's tired, so I wouldn't probe further.	1	2	3	4
c. I need to learn how to assess issues like stress and social support.	1	2	3	4

d. I don't know how to help Ms. G if she needs social support.	1	2	3	4
e. I know how to find resources for parents in my community.	1	2	3	4
f. I don't usually ask parents about drug or alcohol use.	1	2	3	4
g. There isn't time in a routine visit to ask Ms. G about her problems.	1	2	3	4
h. Substance use is not much of a problem in middle- and highincome families.	1	2	3	4
i. I'm concerned that asking Ms. G about stressors in her life might jeopardize our relationship.	1	2	3	4
g. I'd feel comfortable asking Ms. G if she used drugs or alcohol.	1	2	3	4
k. I don't know how to briefly assess alcohol or drug use.	1	2	3	4
l. It's important to ascertain how Ms. G perceives her substance use.	1	2	3	4
m. Treatment of substance use is seldom effective.	1	2	3	4
n. If Ms. G discloses a problem with drugs, I know resources to help her.	1	2	3	4
o. We should have a parent handout on substance use with local resources.	1	2	3	4
p. I'd like to have more training on addressing substance use.	1	2	3	4
q. My practice has a protocol or approach for addressing substance use by a parent.	1	2	3	4

In the past 2 years, how many hours of training/education did you get on these problems?

a. Domestic violence _____
b. Parental substance abuse _____
c. Parental depression _____
d. Major parental stress _____
e. Food insecurity _____
f. Harsh discipline _____
g. Child abuse and neglect _____
h. Social determinants of health _____

In the past 2 years, how many times did you help address these problems?

a. Domestic violence _____

Appendix C

SEEK™ Safe Environment for Every Kid

UNIVERSITY of MARYLAND SCHOOL OF MEDICINE

The SEEK Primary Care Professional Experience with SEEK

Date: _____
Practice Name:_____ State:_____
Number of months implementing SEEK:_____(0 if you have not yet started)

Sex:
Years in practice:
Title: MD, NP, DO, PA
Age:

*Please respond forthrightly and choose the response that best reflects your view of each statement – pertaining to the **past 3 months**. There is no right or wrong answer. Your responses will be kept confidential.*

1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

The SEEK Model

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. The SEEK model fits well with primary care	1	2	3	4
2. The model is difficult to implement	1	2	3	4
3. I needed help from the SEEK provider	1	2	3	4
4. The Project staff were helpful	1	2	3	4
5. I'll recommend SEEK to colleagues	1	2	3	4

	Strongly Disagree	Disagree	Agree	Strongly Agree
6. We are usually able to administer the PQ-R before selected checkups	1	2	3	4
7. I find it easy to use the PQ-R	1	2	3	4
8. I'm able to review the PQ-R at the start of the visit	1	2	3	4
9. Parents respond positively to my follow up questions	1	2	3	4

10. When a parent identifies a problem on the PQ-R, visits take a lot longer	1	2	3	4
11. I feel comfortable addressing family problems using thePQ-R	1	2	3	4
12. The PQ-R is an efficient way to screen for important problems	1	2	3	4
13. Parents appreciate being asked how their family is doing with the PQ-R	1	2	3	4
14. I really don't have enough time to deal with the issues identified by the PQ-R	1	2	3	4
15. I'll continue to use the PQ-R in my practice	1	2	3	4

	Strongly Disagree	Disagree	Agree	Strongly Agree
16. I'm able to consider parents' strengths in my approach	1	2	3	4
17. I'm able to help address problems identified by the PQ-R	1	2	3	4

	Strongly Disagree	Disagree	Agree	Strongly Agree
18. When I suggest a referral, parents are often resistant	1	2	3	4

Any comments or suggestions?