



Initial Mental Health Evaluation of Internationally Adopted Youth: Goals and Timing Considerations

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Abstract

Background: Internationally adopted (IA) children are at a greater risk for emotional, behavioral and adaptation difficulties, relative to typically-developing youth due to the fact that many of them experience severe social-emotional deprivation and other adverse experiences preadoption. Importantly, a disproportionate number of IA children show insecure attachment with caregivers even post-adoption, which has been associated with later problems with affect and behavioral regulation. Notably, research has shown early mental health consultation and intervention for IA children have substantial positive effects in promoting healthy attachment and emotional development. At present, the prevalence of IA children seeking mental health consultations is greater than non-adopted youth. However, it is unclear the duration of time post-adoption before families seek such services, although such intervention is most effective in young children soon post-arrival to their new family, when attachment development is particularly sensitive. Moreover, the factors that prompt families to seek mental health consultations for IA children earlier versus later post-adoption are unknown. The aim of our investigation is to distinguish the presenting concerns and psychodiagnostic results of IA children who seek mental health consultation services earlier versus late post-adoption.

Study: In the current study, we assessed/coded the primary concerns of caregivers of 93 IA children who sought a mental health consultation for diagnostic clarification and treatment recommendations. Families with IA children came for the consultation visit within one year post-adoption (early service, IA-ES, N = 54) or more (late service, IA-LS, N = 39). Additionally, we examined the proportion of IA-ES and IA-LS youth who met DSM-IV/V criteria for mental health diagnoses after a psychological evaluation.

Results: IA-ES families sought mental health services markedly earlier than IA-LS youth, although IA-ES youth were adopted later than IA-LS children. The proportion of IA-ES patients who sought psychological consultation for intervention due to physical health concerns was marginally more than that of IA-LS youth (IA-ES: 70%, IA-LS: 51%), whereas IA-LS children sought such services due to mental health concerns more so than IA-ES patients (IA-LS internalizing symptoms: 48%, internalizing symptoms: 11%). Although IA-ES families sought therapy primarily due to psychosocial concerns secondary to a medical condition, 73% of these children met a mental health disorder according to DSM-IV/V.

Discussion: Findings highlight the need to provide IA children with a mental health evaluation and their adoptive caregivers with psychoeducation on psychological health interventions early post adoption, in efforts to prevent more persistent forms of mental health ailments.

Keywords

International adoption, Attachment, Intervention, Prevention, Psychoeducation, Mental health

Introduction

Internationally adopted (IA) youth are at a greater risk of psychiatric disorders and adaptation difficulties [1], as the majority of these children typically have been exposed to severe adversity including institutional care, deprivation, neglect, and physical abuse from early caregivers [2]. Although adoption may represent a form of intervention that provides some positive effects on multiple domains of development, IA youth have persistent issues with medical and mental health [3-5], and problems with cognitive development and behavioral and emotional regulation [6-8]. IA youth often experience inconsistent or poor care in early childhood and multiple transitions between different types of care (e.g. institutional care, foster care, hospital care), which in turn results with poor development of social skills [9], including deficits in communication and comprehension of social boundaries (e.g. stranger danger) [10-12]. Taken together, research with IA highlights the pervasive impact that early adverse experiences, such as institutional care, have on developmental functioning.

Importantly, the lack of warm and consistent care in early childhood often results in poor attachment relationships with caregivers, as evidenced by IA youth who experienced institutionalization or multiple early transitions [13-16]. According to John Bowlby's attachment theory, under typical development, early parent-child interactions form a long-term impression on the child's social-emotional development [17]. Consistent, warm and sensitive parenting often results in secure and organized attachment and strong adaptation skills, whereby unpredictable care, harsh and punitive parenting styles typically manifests in disorganized attachment. The interactions between caregiver and offspring become internalized in the child as an "internal working model", a cognitive representation of relationships and framework to interpret other's behaviors, emotional and social cues and to respond accordingly [18]. Children with secure attachment learn to socially reference caregivers or communicate to others when distressed to co-regulate their emotions, whereas, those with insecure and disorganized attachment may inconsistently seek social interventions or demonstrate avoidant

or self-soothing behaviors [19]. Accordingly, early caregiving environments (e.g., multiple foster care placements, institutional care) of IA children offer these youth minimal opportunities to form secure relationships before adoption. Notably, these foster care and orphanages are typically characterized a disproportionate ratio of children to caregivers, high transitions between caregivers' shifts, and less individualized or sensitive care [20], resulting with impoverished caregiver-child interactions. As such, IA youth are typically at risk for atypical attachment development. In a study by Van Londen et al. [13], over 30% of IA infants showed disorganized attachment with their caregivers, despite staying with their adoptive families for approximately 8 months. Moreover, IA youth who experienced institutional care are at risk for attachment disorders [21,22]. However, it is not to say that attachment of IA youth could not be changed. Across investigations, promoting secure attachment post-adoption has been shown to buffer the negative effects on social-emotional functioning [23-26]. As such, mental health consultation services to screen for child's diagnostic concerns and assess parent-child relationship would be critical in the early post-adoption process to determine the need for attachment-based parent-child therapy or family/individual therapy, which in turn could mitigate the negative effects of early adverse experiences. In effect, the mental health consultation would be the first stepping-stone for IA youth to receive appropriate treatment/prevention services, as the identification of clinical problems is necessary prior to intervention.

Despite the increased risk of mental health issues among IA youth, at present, the types of psychological services that these children receive remains largely unknown. Adopted youth are more heavily represented in mental health service than non-adopted peers [7], although it remains unclear the type of treatment received or the duration post adoption before enactment of services. Notably, earlier enactment of parent-child intervention has been associated with greater attachment security [27], implicating the importance of starting treatment early in childhood. As such, more research is needed to elucidate gaps in mental health service delivery, e.g., factors that discern families of IA children who seek initial mental health evaluation versus later post adoption.

This current study aimed to characterize IA children who are coming for an initial mental health consultations within a year after adoption (early service, IA-ES) versus later (late service, IA-LS), by examining the primary concerns for the service referral and the prevalence of mental health diagnoses. It should be noted that the goal of this initial assessment was to screen for clinical diagnoses in IA youth, and subsequently provide appropriate referrals for family and individual intervention. The visit is the first mental health consultation after their medical evaluation in the International Adoption Medicine Clinic, and includes both parent-child structured play interaction to determine attachment security (i.e., quality of parent-child relationship) [28] and a psychodiagnostic semi-structured interview to assist in subsequent treatment planning. Additionally, we examined the differences in age of adoption, age at initiation of treatment service (i.e., initial consultation and evaluation), and preadoption risk factors. Given the paucity of research on clinical practice for IA youth, no a priori predictions were made in IA-ES versus IA-LS children.

Methods

Participants

A total of 93 IA children sought an initial mental health consultation at an International Adoption Medicine Clinic (IAMC) at an academic medical center in Minnesota. Of these, 54 children and caregivers comprised IA-ES and 39 IA-LS (Table 1). All primary care physicians at the IAMC recommended IA youth and families to seek mental health services for the child and caregivers within a year of the first medical evaluation. Participants in the current investigation are those who voluntarily sought mental health services after this recommendation. Moreover, it should be noted that the adoptive parents of IA youth determined when they wanted the first

medical appointment, therefore, the post-adoption duration before the initial physical assessment varied. Importantly, the participant groups were determined by the duration after adoption before the medical consultation (i.e., \leq one year as IA-ES, $>$ one year as IA-LS). Caregivers provided written consent at the initiation of mental health services. The investigation procedures were approved by the Institution Review Board of the University of Minnesota.

Demographic background and preadoption risk factors were assessed by a caregiver-report questionnaire sent from the IAMC clinic prior to the consultation appointment, and confirmed during the semi-structured interview with the caregivers. IA-ES group appeared to have a comparable representation of genders (F: 48.72%, M: 51.28%), the relationship between gender and timing of service (IA-ES, IA-LS) was not significant ($\chi^2(1) = 2.24$, ns). Of all IA children in the study, approximately 19% came from China, 13% from Korea, 13% from East African countries (Ethiopia, Uganda), 12% from the Caribbean (Haiti), 11% from South America (Peru, Ecuador, Colombia), 9% from Russia, 5% from Ukraine, 4% Central America (Guatemala), 4% from West Africa (Ghana), 3% from Southeast Asia (Thailand, Cambodia), 1% from East India, 1% from Pacific Islands, and 4% from other European countries (Latvia, Armenia, Romania, Bulgaria). Based on caregiver-report, of the 93 IA children, the racial composition of the sample is as followed: 35% Asian, 29% Black/African, 18% White, 15% Latin American, 1% Pacific Islander, and 1% East Indian. Notably, no relationships were observed between timing of service (i.e., IA-ES, IA-LS) and ethnic identification or birth country.

On the inventory, caregivers were instructed to indicate if the child has a history of prenatal exposure to substances, and/or pre-adoption experiences of sexual abuse, physical abuse, or emotional/physical neglect. Of note, parents whom confirmed the preadoption risk factors received the information from the adoption agency or during their meeting with the temporary caregivers when visiting the child in their birth country. Parents responded by indicating, yes, no, unknown, or suspected but not confirmed. Total number of maltreatment types (sexual abuse, physical abuse, neglect) experienced by the child prior to adoption and confirmed by the caregiver was computed. As shown in table 1, no significant relationships were observed between prenatal substance exposure or other preadoption maltreatment experiences with the timing of mental health services (IA-ES, IA-LS).

Procedures

IA children and caregivers were assessed by a licensed pediatric psychologist with her doctorate degree and part of a team of medical health providers in the IAMC. Caregivers completed a questionnaire to assess the child's early medical and social history and primary concerns for the mental health referral. Parents provided qualitative free responses that were coded (0 = no concern, 1 = present concern) for primary concerns related to Medical Health (micronutrient deficiency, underweight, infections, macrocephaly, microcephaly, prenatal substance exposure, history of neurological trauma, sickle cell disease), Internalizing Symptoms (depression, specific phobias, separation anxiety, social withdrawal, frequent crying, avoidance), Externalizing Symptoms (physical aggression, defiance), Attention Problems (difficulties following instructions, concentration difficulties, distractibility, poor working memory, restlessness, impulsivity), Motor Problems, Sleep Problems (frequent nightmares, difficulties falling asleep or waking), Cognitive Delays (poor memory, delayed expressive/receptive language, problem-solving difficulties, poor verbal/nonverbal abilities), Social Skills (poor recognition of social verbal/nonverbal cues, inappropriate approach behaviors), and Parent-Child Relationship (attachment concerns, overwhelmed parents). Caregivers and IA children engaged in a semi-structured interview by the clinician, guided by the responses endorsed on the above-noted inventory, to determine if presenting symptoms met a DSM-IV/V diagnosis [29]. The resulting diagnoses were coded (1 = met diagnostic criteria, 0 = did not meet diagnostic criteria) for Adjustment Disorder, Anxiety Disorder, Attention Deficit

Table 1: Average age of adoption, age of clinic visit and preadoption risk factors among internationally adopted children.

	IA-ES (N = 54)	IA-LS (N = 39)	p-value
Age (average months) [95% confidence interval of SD]			
Age of Adoption	44.16 [CI: 27.28-40.05]	26.50 [CI: 23.43-36.95]	0.008
Age of Clinic Visit	45.97 [CI: 27.12-39.83]	92.10 [CI: 34.18-53.90]	< 0.001
Duration Post-Adoption Until Clinic Visit	1.82 [CI: 1.80-2.64]	67.49 [CI: 34.93-55.09]	< 0.001
Prenatal Alcohol Exposure			
Yes	16.67%	10.26%	0.51
No	29.63%	20.51%	
Suspected	9.26%	12.82%	
Unknown	44.44%	56.41%	
Preadoption Sexual Abuse			
Yes	3.70%	2.56%	0.37
No	33.33%	35.90%	
Suspected	7.41%	0%	
Unknown	55.56%	61.54%	
Preadoption Physical Abuse			
Yes	14.81%	5.13%	0.34
No	11.11%	20.51%	
Suspected	9.26%	7.69%	
Unknown	64.81%	66.67%	
Preadoption Physical/Emotional Neglect			
Yes	37.04%	35.90%	0.22
No	3.70%	7.69%	
Suspected	18.53%	5.13%	
Unknown	40.74%	51.28%	
Total Maltreatment Types Experienced			
No maltreatment confirmed	61.11%	64.10%	0.61
1 maltreatment type	25.93%	30.77%	
2 maltreatment type	11.11%	2.56%	
3 maltreatment type	1.85%	2.56%	

Note: IA-ES refers to internationally adopted children who sought initial mental health consultation \leq one year after adoption; whereas, IA-LS refers to internationally adopted youth who sought the service $>$ one year post-adoption.

Hyperactivity Disorder, Attachment Disorder (Reactive Attachment, Disinhibited Social Engagement), and Parent-Adopted Child Relationship Problem. Other psychiatric disorders were not observed in the participants, thus, other ailments (e.g., depression) were not coded.

Additionally, the caregiver and child participated in a structured 45 minute free play, which includes multiple transitions between easy tasks, typically unpopular task (e.g., clean-up), problem solving tasks that increase in difficulty, separation (i.e., parents leave the room and the child engage in free play with the clinician), and parent-child reunion to assess attachment security. The structure and order of tasks was modeled after the Parent-Child Play Interaction to examine parent-child dyads. Specifically, the clinician assessed for the level of comfort displayed by parent and child, the ability to cope with transitions, ability to problem-solving jointly, shared emotional experiences and affective communication, and broadly attachment security [28].

Data Analysis

Independent t-tests were applied to compute group differences (IA-ES, IA-LS) in age of adoption, age of initial clinic visit, and duration post adoption before initial visit. Mann-Whitney U test was applied to assess group differences in caregiver concerns of Medical Health, Internalizing Symptoms, Externalizing Symptoms, Attention Problems, Motor Problems, Sleep Problems, Cognitive Delays, Social Skills, and Parent-Child Relationship issues, and resulting diagnoses of Adjustment Disorder, Anxiety Disorder, Attention Deficit Hyperactivity Disorder, Attachment Disorder, and Parent-Adopted Child Relationship Problem. The coded responses (0 = no concern/did not meet diagnostic criteria, 1 = present concern/met diagnostic criteria) were used as the dependent factors in the noted analyses. Significant results are reported below.

Results

Table 1 outlines average age of adoption and clinic visit percent of participants with preadoption risk factors. Table 2 reflects the

percent of IA youth with caregiver-reported concerns across multiple domains, and the percent of IA youth who met DSM-IV/V diagnostic criteria for mental health disorders. IA-ES youth were older than IA-LS children when adopted, yet younger at their initial clinic visit.

IA-LS caregivers reported significantly more concerns with attention problems and internalizing symptoms. In contrast, the group difference on caregiver concerns of psychosocial functioning secondary to medical health problems reached marginal significance, reflective of IA-ES families reporting mildly more medical related concerns compared to IA-LS caregivers ($p = 0.06$). Although the most frequent concern among IA-ES families was the medical health of their child, over half of these youth met a form of adjustment disorder during their initial psychological assessment in our clinic. In contrast, a greater proportion of IA-LS youth met diagnostic criteria for an anxiety disorder. Despite greater parent concerns of attention problems reported for IA-LS youth prior to the psychological assessment, results of the evaluation indicate no notable differences in the prevalence of ADHD across groups.

Discussion

At present, research on mental health services for international adoptees has been limited, despite a growing literature regarding the numerous developmental risks linked to early adversities. Key findings in the current study showed that 1) IA-ES youth and families were adopted later than IA-LS children, 2) caregivers of IA-ES youth reported marginally more medical concerns relative to the IA-LS group, whereby, families of IA-LS children were significantly more troubled with attention and internalizing problems compared to parents of IA-ES youth, 3) over half of IA-ES youth was diagnosed with adjustment disorder related to the adoption although majority of their parents reported medical concerns as the primary complaint, and 4) greater proportion of IA-LS children were diagnosed with anxiety disorder relative to IA-ES youth. In brief, consistent with prior clinical investigations [1,7], our results suggest IA youth who sought initial mental health services show marked mental health

Table 2: Primary concerns and clinical diagnosis at initial mental health consultation for internationally adopted children.

	IA-ES (N = 54)	IA-LS (N = 39)	p-value
Caregiver Primary Concerns (% of participants)			
Medical Health	70.37%	51.28%	0.06
Internalizing Symptoms	11.11%	48.72%	< 0.001
Externalizing Symptoms	27.78%	23.08%	0.61
Attention Problems	16.67%	41.03%	0.009
Motor Problems	18.52%	15.38%	0.69
Sleep Problems	35.19%	30.77%	0.62
Cognitive Delays	72.22%	69.23%	0.76
Social Skills	31.48%	38.46%	0.49
Parent-Adopted Child Relationship	24.07%	17.95%	0.48
Initial Assessment Diagnosis (% of participants)			
Adjustment Disorder	57.41%	0.00%	< 0.001
Anxiety Disorder	16.77%	35.90%	0.035
Attention Deficit Hyperactivity Disorder	11.11%	23.08%	0.124
Attachment Disorder	5.56%	2.56%	0.485
Parent-Adopted Child Relationship Problem	48.15%	38.46%	0.356

and behavioral difficulties as reported by caregivers and assessed in clinics, regardless if the families received services soon or late post-adoption. Importantly, novel to the current literature, our findings indicate families who seek professional mental health services earlier post-adoption had IA children who were older at age of arrival to the U.S. and were relatively most concerned with psychosocial functioning related to medical health concerns, yet a considerable number of these children met a mental health diagnosis related to emotional difficulties with their adjustment to their new home. In contrast, children who sought services later post-adoption were typically adopted earlier (i.e., in infancy or toddlerhood), and reportedly showed most concerns with mental health difficulties. Despite the wide range in duration post adoption before parent-child intervention services, no difference was observed in parent-child relationship problems across IA-ES and IA-LS groups.

At present, although the legal process of inter country adoption has been closely reevaluated and modified to ensure safety of the child and adoptive families, the post-adoption adjustment for IA youth and caregivers is less supported. While the adoption process has many legal facets that ensure potential caregivers have the financial and material means to care for a child, it does not prepare families to consider possible challenges that may occur across development nor does it provide a streamlined system of standard clinical care that integrates both medical and mental health intervention. Notably, providing parents and IA children with emotional support soon post-adoption may be critical in the development of the parent-child relationship, as adoptive caregivers and youth typically experience significant stress initially after arrival [30]. Caregivers' stress may involve inappropriate expectations of developmental gains post-adoption, poor sensitivity to child's emotional cues resulting in inadequate support, and low confidence in caregiving abilities, which in turn affects their capacity to provide sensitive parenting. Stress experienced in IA youth may involve grieving the loss of their culture, birth family, or caregiver such as foster families [31]. Therefore, the timing of the initial psychological assessment with a clinician is critical, as the consultation would help families identify possible mental health disorders endorsed by the child and parent-child relationship difficulties/stressors, and obtain recommendations for treatment. Despite the significant adjustment that both adoptive caregivers and IA children experience during post adoption and the established risk of disorganized and insecure attachment, there is a dearth of research pertaining to mental health services, such as parent-child intervention, for IA children.

In a similar vein, families undergoing intercountry adoption currently lack necessary psychoeducation on the benefits of early mental health services as prevention rather than intervention means, and appropriate developmental expectations for IA youth. Adoptive families and practitioners are often unaware of the supports and timing necessary for IA children to recover from early adverse experiences in their new homes. For example, among preadoptive

families, expectations of serious problems (and conversely positive outcomes) with social-emotional functioning by IA youth are related to the child's age of adoption [32], suggesting that younger IA children may be perceived by caregivers as more resilient and therefore require less clinical intervention. As such, parents of young adoptive children observed in our clinic might have delayed mental health services, as families assume parent-child relationship difficulties and varying degrees of emotional/behavioral dysregulation are a normative part of the adjustment process.

Importantly, across both IA-ES and IA-LS youth, families were observed to show similar high degree of parent-child relationship problems, implicating that these relational difficulties do not naturally resolve over time without adequate intervention. Moreover, our findings continue to support prior literature [1,7] that a sizeable proportion of IA youth, who sought mental health service for both psychological and medical concerns, met a psychiatric disorder. This is particularly alarming for IA youth who seek clinical services later post-adoption, as they could potentially miss the sensitive window to develop attachment security if these relational and individual psychological difficulties are not identified earlier. Further, it is unclear whether IA-LS youth experienced extended period of relationship issues with their adoptive parents, given that caregiver concerns of parent-child relationship problems across IA-LS and IA-ES were comparable. Considering the pervasive effects that preadoption experiences have on development [7], it may be particularly important that adoptive families are encouraged and supported by adoption agencies to enact mental health services earlier (i.e., to seek a mental health consultation/evaluation soon post-adoption). It should be noted that even within families without clear caregiver-child relational issues, psychoeducation and family interventions targeting enhanced attachment security could have preventive value to buffer against later problem behaviors and stress within the home environment [33]. Therefore, there are numerous benefits in seeking early mental health services to establish a clear understanding of attachment soon after adoption, to closely monitor the relationship development (i.e., the caregiver's attunement to the child's individual distress signals and the child's capacity to use their parents to co-regulate their emotions), to address the parents' emotional concerns (e.g., anxiety regarding their bond with the adoptee), and finally to provide appropriate referrals and enactment of treatment services for the child.

Taken together, our results highlight the importance of implementing a more standard process for the initial mental health consultation. To provide such care, providers working with IA youth and policy makers should consider the following points. First, social workers within international adoption agencies and medical and mental health providers that work with families of IA youth should have more interdisciplinary background on medical and psychological difficulties associated with IA youth, as emerging research highlight that physical health such as sleep or micronutrient

deficiencies may impact social-emotional and cognitive development [34], and likewise dysregulated behaviors in IA children are associated with more linear growth delays (e.g., height and weight) and poor physiological regulation of stress [35]. Further, these providers should have some background regarding the importance of preventive and treatment efforts in early development, such that they are able to provide basic psychoeducation to new adoptive families. Given our results suggest that many IA-ES families seek mental health consultation as a function of medical concerns, psychoeducation regarding the interactive effects of physical and psychological health during the initial medical visit may reduce the stigma associated with mental health services and prompt families to seek support. Furthermore, although parent-child relationship was assessed in our clinic, it is not typically consistently considered across mental health providers. Given the above noted literature highlighting the potential for adoptive parents to buffer the negative effects of impoverished caregiver-child interactions, the parent-child relationship quality should be consistently considered and evaluated in the initial psychological evaluation of IA youth and families. Second, adoptive families and IA children would benefit from having a standard process whereby they seek a mental health consultation following their initial medical assessment with a primary care physician within 6 months after arrival, as early identification of psychological ailments or risk factors (e.g., adjustment disorder) could aid in early treatment planning. IA children may require up to 9 to 12 months post adoption to form an attachment pattern with his or her adoptive caregiver [14,36], therefore, an additional follow-up evaluation in a year after the initial visit would also be advised to help families monitor any progress in the child's emotional adjustment and relational development. Towards this end, it would be important for social workers within adoption agencies to follow-up with families soon after post adoption to ensure that they seek both the recommended initial medical and mental health evaluations. By advocating services as a common part of the post-adoption process, families may endorse a less negative perception of the field. Third, it will be important for primary care physicians who work with IA youth and families to consistently recommend mental health consultation service in the first visit, and to reiterate its importance in subsequent visits to families who have not received the service. In addition, physicians, social workers, and support staff within adoption agencies should emphasize to caregivers that they have the opportunity to decide whether or not they would like to enact the recommended treatment services following the consultation, so families do not perceive this initial evaluation as a long-term commitment to mental health services. Rather, families should be notified that the consultation service would provide them with clinical recommendations and diagnostic screening that may help parents better monitor their children's development and post-adoption adjustment. Finally, when medical and mental health providers are under the same healthcare organization, IA children and caregivers should be given the option to schedule for both first medical and mental health visits on within a week, which in turn may ensure remote families could receive both services altogether. Of note, other medical specialties such as pediatric organ transplant programs in academic medical centers have already begun to implement a similar process, by coordinating appointments for initial and follow-up visits with the physician, neuropsychologist, radiologist, etc. within a limited time. In brief, adapting a medical model to psychological health and related services and providing more interdisciplinary education across medical and mental health disciplines are likely critical to ensure IA youth and families receive appropriate services in a timely manner.

It should be noted that there are several limitations in the study that should be addressed in future research conducted in hospital settings. One of the most common barriers to consistent engagement in the initial evaluation and subsequent treatment was the proximity of our clinic and the families who sought our services. Due to the limited number of clinics specialized in international adoption medicine, several families travelled across states to seek our services, thus, it is unclear if IA-LS families initiated mental health services later due to the perception that it was not necessary, or whether

they delayed services due to the shortage of pediatric mental health providers within their community. It is also possible that some IA families are under financial burdens or high work demands, limiting their opportunity to travel to our clinic to receive consultation services. Thus, such external factors may have biased IA families who are local residents to seek services earlier than others. Additionally, numerous families were provided with vague medical records of prenatal and early childhood history, resulting with more challenges in providing a clear diagnosis for the IA child. Third, the current investigation did not have a measure of subsequent adverse experiences, such as separation from an adoptive caregiver (e.g., divorce among adoptive parents) or post-adoption trauma, which in turn may contribute to the timing of psychological services sought. Finally, several IA-LS families did not seek consistent medical care after adoption, leaving it impossible to discern whether observed social-emotional difficulties stem from preadoption versus post-adoption health issues [34]. In effect, future research will need to consider barriers that prohibit access to mental health services for international adoptees, including financial costs, transportation, and education/awareness of appropriate medical facilities specialized in adoption medicine [37].

Additional considerations should be made in future investigations on mental health services for IA youth, particularly when introducing research in a clinical setting. Prospective research in clinical settings should integrate empirical tools within mental health service delivery to obtain more detailed illustration of the specific symptoms experienced by IA-ES versus IA-LS youth. By using extensive standardized measures, clinical investigators could potentially distinguish the two clinical groups with more specificity on their social-emotional/behavioral concerns. For example, IA caregivers in our study were given a semi-structured interview following an intake clinic inventory with a free response format, which increased the difficulty of comparing detailed symptom descriptions between clinical groups. In the future, clinicians may want to consistently provide standardized symptom inventories to families prior to their first visit to obtain more comprehensive responses that could be compared across clinical groups. Additionally, given the limited number of clinicians and high caseload of patients and families seen in our clinic, it was not possible for the providers to evaluate others' interviews to confirm diagnostic results given time demands of the clinical responsibilities. It should be noted that the mental health consultant in our clinic has significant training and experience in child, family and parent-child therapy. However, clinical investigators should consider including trained research staff with mental health training to examine interviews (either in vivo or on tape) to better assess and confirm diagnostic results. In effect, clinicians interested in assessing mental health services for IA youth will need to weigh the advantages/disadvantages of including more rigid empirical methods to increase validity of their measures in juxtaposition with the greater time and staff demands these changes would require.

In summary, pediatric mental health services, including evaluations for parent-child relationship and attachment-based caregiver-child therapy, are essential for IA children who experienced early childhood adversities, as they could foster attachment formation, and subsequently, social and emotional development. Data from the International Adoption Medicine Clinic at our institution highlight that families of IA youth, who were adopted at an older age, seek pediatric mental health services particularly when plagued with medical ailments and related stress, rather than for the potential relational benefits alone. In contrast, IA-LS youth, generally adopted at an earlier age, may have experienced a prolonged period of relationship difficulties even post adoption before they sought treatment for mental health concerns. Regardless of the varying reasons for initiation of treatment services across IA-ES and IA-LS youth, a high proportion of these children met diagnostic criteria for an Axis I disorder based on DSM-IV-TR and DSM-V, and parent-child relationship problems. Results underscore the need for adoption agencies and pediatricians who follow IA youth to enact policies integrating standard medical and mental health care after adoption, and the importance of early psychoeducation to prepare adoptive

families of potential developmental challenges that needs to be closely monitored. With a more comprehensive and interdisciplinary clinical intervention approach post adoption, IA children may be able to buffer against the adverse effects of preadoption experiences on social and emotional development, and reduce risks of later mental health difficulties.

Acknowledgement

This work was supported by a grant from Minnesota Masonic Charities to the Department of Pediatrics at the University of Minnesota, and the National Science Foundation Graduate Research Fellowship Program under grant 00039202 as part of the first author's training. We warmly thank all the families for their cooperation in the study.

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