ENGAGEMENT INTO TREATMENT: COMPARING IMMIGRANTS AND NON-IMMIGRANTS IN YOUTH MENTAL HEATH SERVICES IN MONTREAL

by

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Abstract

Access to mental health care is of much concern. In Canada, only 10 to 25% of youth with mental health problems receive treatment and the disparity between need and use of services is even higher for ethnocultural minority groups. Access to care is a wide concept that pertains to be referred to services as well as to receive treatment, which includes being engaged in care. This represents a major public health issue for primary care institutions offering youth mental health (YMH services) because low engagement rates have adverse impacts on clinical outcomes and the cost effectiveness of services.

Little is known about factors that specifically influence engagement for immigrant populations accessing primary YMH services. In light of this gap, the primary objective of this research is to explore multi-level factors (youth-, familial-, clinical- and organizational-related) and their influence on the engagement process of youth and their families accessing primary YMH care as well as to address the specific reality of immigrant families. The present research is based on a one-year retrospective file review of requests to two Centre de santé et de services sociaux (CSSS) of two multiethnic neighbourhoods in Montreal. The study had several findings. Firstly, first- and second-generation immigrants, in comparison to non-immigrants, are less likely to attend YMH treatment, and they are less likely to be strongly engaged. Secondly, collaborative care, mixed therapy and referrals involving schools were three significant factors that positively impact strong engagement of youth and families into care. The results suggest a multifactorial and multiphase process of engagement, as well as a complex interplay between these factors and engagement for ethnically diverse populations.

Résumé

L'accès aux soins en santé mentale est un enjeu important, sachant qu'au Canada seulement 10 à 25% des jeunes avec des troubles de santé mentale reçoivent un traitement et que cette disparité entre les besoins et l'utilisation des services de santé mentale est encore plus importante pour les groupes ethnoculturels minoritaires. L'accès aux soins est un large concept qui comprend le fait d'être référé et de recevoir des soins, ce qui inclut d'être engagé dans ces services. Sachant qu'un faible engagement dans le traitement influence négativement les résultats cliniques ainsi que le rapport coût-efficacité de ces services, cela représente un enjeu important de santé publique pour les institutions primaires offrant des services de santé mentale jeunesse (SMJ).

Peu d'études se sont penchées sur les facteurs qui influencent spécifiquement l'engagement des populations immigrantes accédant à des services primaires en SMJ. C'est pourquoi l'objectif de cette recherche est d'explorer différents facteurs concernant le jeune, sa famille, l'intervention clinique et l'organisation offrant les services ainsi que leur influence sur le processus d'engagement des jeunes et des familles accédant à des services en SMJ, puis d'analyser ces résultats selon la réalité spécifique des familles immigrantes. La présente recherche a eu recours à une revue rétrospective des demandes faites au cours d'une année à deux Centres de santé et de services sociaux (CSSS) de deux quartiers multiethniques de Montréal. L'étude a démontré que, en comparaison aux non-immigrants, les immigrants de première et de deuxième génération ont moins tendance à débuter un suivi en SMJ et qu'ils ont moins tendance à être fortement engagés dans les soins. Les autres principaux résultats montrent que les soins en collaboration, l'utilisation de la thérapie mixte ainsi que les références

impliquant les écoles sont trois des principaux facteurs significativement liés à un engagement fort des jeunes et des familles dans les soins. Les résultats obtenus suggèrent également que le processus d'engagement est multifactoriel et multi-phase et qu'il existe une interaction complexe entre ces facteurs et l'engagement des populations multiethniques.

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Introduction

Access to care is of much concern in Canada. Mental health problems of children and adolescents have been estimated to be 20% (Kessler et al., 2005; Lesage & Émond, 2013; Stephens & Brauner, 2006), of which only 10 to 25% of the Canadian children and adolescents with such problems receive treatment (Waddell, McEwan, Shepherd, Offord, & Hua, 2005). The concept of access to mental health care is broad and includes not only being referred and being offered services, but also engaging into treatment. As difficulties of engagement into mental health treatment exist across various clinical populations and settings, this represents an important public health issue.

The literature on engagement in Youth Mental Health (YMH) explores various factors that foster or hinder retention in treatment of youth and families accessing mental health services. These studies involved young patients, their family members, the clinicians or the organizations where services were provided. Different strategies targeting these factors and aiming at improving patient's engagement have also been addressed in the literature. Low engagement rates of patients negatively impact the likelihood of positive treatment outcomes as well as reducing the cost-effectiveness of these services (Wierzbicki & Pekarik, 1993).

The gap between needs and use of services is even more alarming for ethnically-diverse communities. Several studies have shown that ethnocultural communities are less likely to use mental health care (Colucci, Minas, Szwarc, Guerra, & Paxton, 2015; Garland et al., 2005; Ho, Yeh, McCabe, & Hough, 2007) and to remain engaged in treatment (Carson, Stewart, Lin, & Alegria, 2011; de Haan, Boon, de Jong, Geluk, & Vermeiren, 2014; Ingoldsby, 2010). However,

there is a scarcity of studies on factors influencing immigrant populations' engagement process in YMH. It is especially important to better understand the immigrants' reality in relation to engagement, as many studies underscore a recurrent concern over their underutilization of services and the repercussions of a premature termination. A majority of YMH services are offered by primary care institutions. The challenges around engagement into YMH treatment are therefore an important concern for these institutions.

All these considerations reinforce how important it is to better understand which factors are involved in the engagement process of immigrant youth and families in primary YMH services. The purpose of theis thesis is to explore multi-level factors (personal, familial, clinical and organizational) influence on the engagement of youth and their parents in YMH primary care and to address the specific reality of immigrant families.

The methodology of this study is based on a one-year retrospective file review of all requests to two Centres de santé et de services sociaux (CSSS) in two highly diverse neighbourhoods in Montreal. This allowed documentation of different factors associated with the youth, the family, the clinical processes and the organization within the specific YMH treatment episodes. It also allowed the analyses of the relationship between these factors and the engagement in treatment. This study operationalized engagement through the number of sessions attended by youth and their parents as the measure of their engagement into care. Statistical relations have been studied between engagement and the youth (age, gender, French/English knowledge, clinical profile and generational status), the family (deprivation status, single

parenthood, French/English knowledge and important life events), the clinical process (referrals, types of therapy) and the organization (collaborative care).

This thesis will first present a background section pertaining to the research question, followed by a description of the context and objectives of the study and the two research hypotheses. After that, it will describe the methodology, including the sampling process, the data collection and the statistical analyses. The following section will present the quantitative results of the study, which will be followed by the discussion where results are interpreted in view of the hypotheses. Finally, limitations of this research, directions for future research and conclusion are also presented in this document.

Background

Immigrants Access to Youth Mental Health Services

The high prevalence of mental health problems associated with impairment among youth, measured around 20% (Kessler et al., 2005; Lesage & Émond, 2013; Stephens & Brauner, 2006), makes these problems a major public health issue. It points to address these challenges regarding accessibility and optimal care in YMH care. In Canada, only 10-25% of young people with mental health disorders receive treatment for it (Waddell et al., 2005).

Access to YMH care is important, as half of lifetime adult mental health problems have an onset during childhood (Kessler et al., 2005). The impact of untreated or ineffectively treated mental health problems represents a serious issue. Mental health issues have been associated with poverty (Scheid & Brown, 2010), underemployment and unemployment (Dewa & McDaid, 2011), lower educational achievement (Canada, 2002), homelessness (Canadian Institute for Health Information & Canadian Population Health Initiative, 2007) and poor physical health (Waddell, Offord, Shepherd, Hua, & McEwan, 2002). Youth with untreated psychopathology also has less chance of a positive recovery (Garland et al., 2005).

For ethnocultural communities, the disparity between mental health need and use of services is significantly high, and has been documented in Quebec and elsewhere: children from minority ethnocultural groups, compared to majority cultural group, are inclined to use less services (Colucci et al., 2015; Garland et al., 2005; Ho et al., 2007) and stay engaged less in therapy (Carson et al., 2011; de Haan et al., 2014; Ingoldsby, 2010).

Many factors influence access to YMH care for ethnocultural communities. Mental health specific needs of immigrant youth have to be taken into consideration, as culture and context influence their needs (L Nadeau & Measham, 2006) and experience of care. Socio-political contexts influence YMH process of care for these communities (Bullock, Nadeau, & Renaud, 2012; Kirmayer, 2008), and the clinicians' approach is crucial in the taking into account or minimizing of these aspects (Rosenberg, Kirmayer, Xenocostas, Dao, & Loignon, 2007; Wachtler, Brorsson, & Troein, 2006). The migration literature has shown that recent migration is not directly associated with an increase in mental health problems (Rousseau, Hassan, Measham, & Lashley, 2008), but it may be associated with other vulnerability factors. For immigrant families who have to cope with having a child with mental health difficulties, the stress related to recent settlement in the host country may be more difficult to adapt to. Poverty is a common and central factor affecting individuals' health (Cardin & Desrosiers, 2013; Lemyre, 1989) and is yet another factor limiting access to treatments for immigrants (Kataoka, Stein, Nadeem, & Wong, 2007). Language barriers represent another obstacle faced by immigrants and contribute to their difficult and limited access to mental health care (Brisset et al., 2014; Giacco, Matanov, & Priebe, 2014; Leanza et al., 2015).

Clinicians and decision-makers are concerned by the gap between the extent of needs and the limited access to YMH care, even in urban areas. This contributes to health disparities and constitutes an important public health issue. Primary care services, which offer proximity services and are known to be a place where many families will first discuss mental health issues, have been commonly considered as an important solution for delivering YMH services in

response to the underutilization of mental health services and the specialized resources shortage (Gabel, 2010). There is an increased interest in models of collaborative care, where primary care proximity services in mental health are supported by specialized mental health services.

Engagement into Care

Access to care can be seen as a wide concept that includes aspects related to help-seeking patterns, use of services as well as availability and retention in treatment. Patients' engagement in therapy is a major concern in the mental health system, considering that non-attendance to appointments and early dropout exist among different clinical populations and in various service settings and treatment stages (Staudt, 2003). Dropout rates in child and adolescent mental health services vary depending on whether it is based on parents scheduling the first appointment and not showing up (15-35%) or family attending initial sessions, but dropping out thereafter (up to 60%) (Becker et al., 2015; Friars, Mellor, Id, & Mellor, 2007; Herman et al., 2011; Pellerin, Costa, Weems, & Dalton, 2010a). Although few studies have explored differences in retention rates between ethnic minority youth and their majority counterparts accessing YMH services, these studies have identified ethnicity as a significant predictor of attrition in YMH care (Miller, Southam-Gerow, & Allin, 2008; Oruche, Downs, Holloway, Draucker, & Aalsma, 2014; Warnick, Gonzalez, Robin Weersing, Scahill, & Woolston, 2012).

Dropping out prematurely from treatment has implications at the clinical, organizational and financial levels and represents a challenging clinical reality. Firstly, a patient who drops out prematurely or who is not fully invested in treatment is less likely to benefit from his treatment, and therefore, the efficacy of his/her treatment is attenuated (Miller et al., 2008; Staudt, 2007;

Wierzbicki & Pekarik, 1993). Also, a premature abandon is costly in terms of time and resources from the practitioner and the system offering YMH services, reducing the cost-effectiveness ratio of services (Kazdin, Holland, & Crowley, 1997; Pellerin et al., 2010a; Pellerin, Costa, Weems, & Dalton, 2010b; Watt & Dadds, 2007; Wierzbicki & Pekarik, 1993). Thus, it is a priority for decision makers and clinicians to be able to foster a genuine and lasting engagement of young patients and their family.

The scientific reviews on therapeutic engagement in YMH underline that studies results vary greatly, address different outcomes and use different terminology (Gopalan et al., 2010; McKay & Bannon, 2004; Miller et al., 2008; Staudt, 2007), thus presenting challenges to obtain an overall coherent appraisal of this issue. Studies on engagement in YMH settings cover aspects related to its conceptualisation and measurement, identification of facilitators and barriers to engagement and interventions fostering family and youth engagement.

Concept of engagement. Engagement can be defined as a decisional process that is ongoing, multi-phase, multifactorial and multi-dimensional:

- Engagement is ongoing, as it can fluctuate throughout the course of treatment, from the initial intake session (referred as initial attendance) to various moments during the subsequent provision of care (referred as adherence) (Gopalan et al., 2010; McKay & Bannon, 2004; Staudt, 2007). Therefore, it is a continuous process that needs to be constantly renewed.
- It is multi-phase, because it involves a process of multiple periods, starting with the recognition of the youth's mental health difficulties to searching for proper support, then

the referral process to appropriate services and the patient's attendance at first session and subsequent treatment adherence (Gopalan et al., 2010; McKay & Bannon, 2004).

- It is multifactorial, as it is influenced by specific factors related to the service system, the practitioner, the parent and the youth. All these factors act simultaneously on engagement (Gopalan et al., 2010; King, Currie, & Petersen, 2014; McKay & Bannon, 2004; Miller et al., 2008; Nock & Ferriter, 2005; Staudt, 2007) and from a critical perspective, may play the role of barriers or facilitators to youth and family engagement in mental health care.
- Finally, engagement is multi-dimensional. As such, engagement can be operationalized through different dimensions with strategies associated with each dimension. The two main dimensions discussed in the literature are the behavioural dimension and the attitudinal dimension. The behavioural dimension relates to the performance of necessary tasks by the patient to obtain treatment results. The attitudinal dimension refers to the emotional investment, positive attitude and commitment to treatment (Becker et al., 2015; King et al., 2014; Lindsey et al., 2014).

These various aspects of the conceptualization of engagement lead correspondingly to different measures of engagement. The most commonly cited measures in the literature either refer to the behavioural dimension, such as attendance at treatment sessions, which is one of the most prevalent measure, completion of homework, discussion about relevant topic during sessions, practice of new skills and efforts outside sessions; or to the attitudinal dimension, such as cooperation and involvement in therapy, readiness and commitment to treatment and clinicians' judgement on completion of therapy (Gopalan et al., 2010; Ingoldsby, 2010; Lindsey et al., 2014; Miller et al., 2008; Staudt, 2007).

Factors associated with engagement (facilitators and barriers). Therapeutic engagement is influenced by an array of factors. Researchers have analyzed different barriers and predictors associated with engagement in order to better understand what differentiates those who prematurely drop out of treatment than those who complete treatment and to identify them early in treatment. In the specific context of YMH care, factors have usually been divided into categories related to the youth, to the parents and family, to the clinical intervention, including the clinician, and finally, to the organization. The literature clearly demonstrates that none of these factors act solely to lead to a premature dropout in YMH, but rather these multiple factors interact simultaneously and intricately on youth and family engagement into mental health services (Johnson, Mellor, & Brann, 2008; Kazdin et al., 1997; McKay & Bannon, 2004).

Youth profile. In relation to engagement in treatment, the main characteristics that are youth-related pertain to the **child's psychopathology** and **dysfunction**. However, the direction of the influence of these factors on engagement is contradictory and remains unclear. For example, a diagnosis of a mental health problem or impairment is associated with a stronger engagement, but the relation between the severity of impairment and engagement is not clear (McKay & Bannon, 2004). Some studies have also examined the high attrition rates of parents of children with conduct disorders, as they tend to drop out more because of parent and family dysfunctions (Friars et al., 2007; McKay & Bannon, 2004; Snell-Johns, Mendez, & Smith, 2004), whereas children with mood and anxiety disorders are more likely to stay engaged in therapy (Gopalan et al., 2010). **Gender** and **age of the child** have also been identified as factors linked to the level of engagement with mixed evidence. For example, boys are more likely to be referred and use services, but this trend disappears with an increase in age (McKay & Bannon, 2004). There is also some evidence that adolescents might be less likely to engage in services, notably due to their fear of being labeled and stigmatized by their peers (Gopalan et al., 2010).

Parents and Family. In addition to individual factors, research on engagement in the YMH context has greatly explored parental and familial characteristics. These factors play an essential role in the engagement process of youth and their family into mental health services (Friars et al., 2007). Staying engaged in services is challenging for families with **low socioeconomic status** (SES) (Gopalan et al., 2010; Nock & Ferriter, 2005; Staudt, 2007), where personal, financial and social stresses, associated with lack of basic resources experienced by these parents interfere with their decision to seek help and engage in treatment. Financial limitations lead to barriers to motivation and adherence to treatment for families and their

children, namely through lack of transportation and child care options. These obstacles to services are also involved in the relation between **low-resource neighbourhoods** and families' engagement (McKay & Bannon, 2004; Nock & Ferriter, 2005; Snell-Johns et al., 2004). Also, there is mixed evidence on the influence of **parents education level**, where some studies found it to be a significant predictor of dropout (McCabe, 2002) and other did not (Kendall & Sugarman, 1997).

Early termination from mental health care has also been associated with **single parenthood**. As suggested by longitudinal research, these families are more likely to live in precarious socioeconomic circumstances, with more difficult access to resources (Carson, Le Cook, & Alegria, 2010; McKay & Bannon, 2004; Snell-Johns et al., 2004). **Parental mental health** is also considered a predictor of engagement in YMH care, where maternal depression has been linked to premature termination of treatment (Snell-Johns et al., 2004). More specifically with children with behavioural difficulties, **harsh parenting practices and discipline** have been linked to reduced engagement rates (Carson et al., 2010; Friars et al., 2007; Kazdin et al., 1997). Although less studied in the literature, **family cohesion and organization** have been associated with high levels of engagement in the initial period of therapy (Perrino, Coatsworth, Briones, Pantin, & Szapocznik, 2001). **Social isolation and lack of support** from family and community, including family member resistance to treatment as well as caring for children and elderly parents, also impeded family engagement into therapy (Herman et al., 2011; Snell-Johns et al., 2004; Staudt, 2007).

For ethnocultural minority groups, the engagement process of families and youth is influenced by other specific variables. One of them is experiencing hostility or discrimination in host country institutions, which may influence future patient interaction with services and

apprehension of future contact (Colucci et al., 2015). A **previous negative experience** influences decision of families' attendance to first and consecutive appointments (Herman et al., 2011; McKay & Bannon, 2004). In addition, some immigrant families show more reluctance to be involved in a YMH episode of care, worrying to be socially **discriminated** or **stigmatized** by the community. Stigma has been identified to be one of the most important barriers to mental health services for minority groups (Ho et al., 2007), as it can bring feelings of shame and fear to the family and youth, dissuading them to request or attend services. Some studies also reported on immigrant families being concerned by the poor understanding or the rejection of their beliefs and values by practitioners (Guzder, Yohannes, & Zelkowitz, 2013). Some parents with history of persecution or organized violence in their country of origin may also **fear** that services may be linked to immigration services, police or other institutions and are concerned regarding the confidentiality of services (L Nadeau & Measham, 2006). **Mistrust and power relations** contribute to the resistance of families in receiving and engaging into services (Colucci et al., 2015; Ellis, Miller, Baldwin, & Abdi, 2014; Herman et al., 2011). Some minority families may not have full trustfulness towards majority services "due to a history of being marginalized and a legacy of disempowerment in social, political and economic arenas" (Ellis et al., 2014, p. 70). These past experiences and perceptions of barriers negatively impact families' engagement into mental health services (Gopalan et al., 2010; Guzder et al., 2013).

Beliefs and values regarding the causes and treatments of mental health problems are also important in relation to engagement. For example, parents who thought that their child's difficulties were linked to relationships with peers were more likely to use services than those who attributed it to other reasons (Gopalan et al., 2010; Herman et al., 2011; McKay & Bannon, 2004). **Expectations** towards relevance and appropriateness of treatment is yet another factor

identified in the literature. For example, parents who have low expectations of their child's improvement or limited confidence in their skills and ability to effectively contribute to a change in their child behavioural difficulty are less likely to have the motivation to pursue treatment (Becker et al., 2015; McKay & Bannon, 2004).

Moreover, **perceptual barriers** have been identified as significantly more important than **logistical barriers** in explaining family engagement rates in treatment (McKay & Bannon, 2004). A study of Kazdin et al. (1997) noted that parental perceived need and relevance of treatment as well as perceptions towards the therapeutic relationship and involvement in therapy predicted engagement more importantly than barriers related to logistical aspects.

Limited proficiency in the main language of the host country has been identified as an obstacle to access and engagement into YMH services for refugee communities, but literature is still scarce in the literature on immigrant youth. Linguistic capacity is especially relevant with respect to mental health problems, where capacity to transmit inner states and emotions to the practitioner is essential (Leanza et al., 2015). Some studies have shown that language barriers are one of the most important factors behind health disparities (Fiscella, Franks, Doescher, & Saver, 2002).

Clinical interaction aspects. Many studies associated aspects related to the clinical encounter to premature dropout. **Therapeutic alliance** was found to be associated with the degree of engagement of patients. For instance, differences in therapeutic alliance between the mother and child or between the parents have predicted dropout of treatment (Gopalan et al., 2010). Herman et al. (2011) also discuss the concern about cultural disconnectedness between the clinician's approach and the family. **Mismatched expectations** towards therapy between

family and clinicians are yet another factor contributing to attrition, and especially so when therapy is not in concordance with the family needs (Ingoldsby, 2010; McKay & Bannon, 2004).

There is some discrepancy in the literature about **ethnic match** in the context of YMH care, where for example, one study concluded that for children and adolescents in community mental health centers, the youth-clinician match did not influence their clinical outcomes (Gamst, Dana, Der-Karabetian, & Kramer, 2004). However, ethnically matched African-American child and adolescents were more likely to need less appointments, but this effect being more important for adolescents than children (Gamst et al., 2004). In YMH, ethnic match does not only concern the youth-clinician relation, but also the parents-clinician relation because of the family involvement in therapy. With this in mind, cultural matching refers to one aspect of the person's identity and thus, consideration has to be given to others facets of identity, such as gender, religion and social status (L Nadeau & Measham, 2006). The literature also reports how ethnic matching is a complex issue, where in some circumstances, ethnic matching may not be the most favourable therapeutic choice (Loubeyre, 1999).

Cultural competence, as "the capacity to respond to the special needs of migrants, using, for example, cultural brokers, culturally oriented psychotherapy and psychosocial intervention" (Tarricone, 2011, p. 628) is discussed in the literature, as a factor that positively impacts family continuation of treatment (Ingoldsby, 2010). Cultural competence also pertains to being informed of the immigrant group, country of origin's history and some understanding of cultural norms, traditions, cultural explanations and expressions of mental health (Ellis et al., 2014). Cultural competence may as well refer to the recognition of the clinician and the health care system as being part of a system with its own dynamics and interactions (Kirmayer, Jarvis, & Guzder, 2014).

There is paucity in the literature on engagement in YMH in relation to the **type of therapy** used and its impact on attrition. Studies generally examined interventions and strategies fostering engagement with an ecological perspective or in culturally competent services, without specifically looking at the type of therapy. Concerning systemic therapies, Henggeler, Pickrel, Brondino, and Crouch (1996) found that families with delinquent or substance-abusing youth, who benefitted from Multi-Systemic Therapy, had a higher rate of treatment completion. This type of therapy is rooted in the ecological approach and includes an evaluation stage of the barriers of the family's engagement and a problem-solving stage addressing those specific barriers (McKay & Bannon, 2004). The authors also highlighted that part of the Multi-Systemic Therapy, low caseloads, time allowance to practitioners and flexible schedules contributed to these results (Staudt, 2007).

Sources of referrals are determinant in the help-seeking process of youth and families, where youth from different ethnocultural groups tend to have various pathways of referral into outpatient YMH care (Yeh et al., 2002). However, very few studies have explored relations between these referral sources and engagement into services in a YMH context.

Organizational factors. Although less examined in the literature, factors related to the organization have been linked to therapeutic engagement, (Ingoldsby, 2010; Oruche et al., 2014). In comparison to non-immigrants, **reported delays and barriers** in access to YMH services were one of the most salient differences reported by immigrant parents of youth in a psychiatric day hospital program (Guzder et al., 2013). **Time spent on waiting list** as well as **limited service availability and flexibility** tend to interfere with family use of and engagement in services (Herman et al., 2011; McKay & Bannon, 2004). A study with adolescents and their

parents in a community mental health clinic also demonstrated that **high staff turnover** resulted in lower retention in treatment (Ingoldsby, 2010; Oruche et al., 2014).

In addition, in order to meet the specific needs of ethnocultural groups and tackle systemic issues to their access to mental health care, some services decided to implement a culturally competent approach to their offer of services. **Cultural competent services** aim to recognize and address the multidimensional aspects of individuals and their families, namely by embracing and integrating other conceptualisations of health and well-being (Westerman, 2010). Culturally competent services have demonstrated positive results in reaching and engaging immigrant and refugee populations in services (Ingoldsby, 2010; Miller et al., 2008).

Overall, the literature reveals that some of these factors are often found in constellations. Personal, social, cultural and contextual elements act in a complex interplay on youth's and family's decision to engage in services.

Engagement strategies and interventions. The literature on engagement in the context of YMH describes potential interventions aiming to an improved and sustained engagement of youth and their families, but almost no study with immigrant populations. A majority of these strategies are directed to parents of children with externalized disorders or substance abuse problems, restricting the generalization of these results to other clinical situations. Successful interventions appear to capitalize on facilitators of engagement and target barriers that impede parents and youth engagement as well as being continuously addressed during the episode of care.

Some studies underlined the necessary distinction between different dimensions in the engagement process, either initial attendance, strong adherence or attitudes and readiness for change. The following interventions showed interesting results for these different aspects of engagement: **Assessment of the patient** about his strengths and needs (either through a phone call before the first meeting, an interview, or a questionnaire) aim to build an alliance with him/her. **Psychoeducation about services** and the service system aims to provide information, such as content of sessions, frequency, roles, and confidentiality. This intervention has also been significantly associated with high levels of engagement through the whole episode of care. Likewise, **accessibility promotion** relates to the identification of solutions and strategies to ensure accessible and convenient services (Becker et al., 2015; Ingoldsby, 2010; Lindsey et al., 2014). A study led by Kazdin and Mazurick (1994) showed that children and families who drop out prematurely from treatment do so at various moments during treatment, and present different characteristics depending on the period of the engagement process, which points out to the use of different strategies for long-lasting and optimal engagement. For example, in the previous study, factors that impacted early and late attrition from treatment differed, where single parenthood, being from a minority group and low-income of the family significantly predicted early dropout (Kazdin & Mazurick, 1994).

Many other interventions have been reviewed and examined, but with less effective results, such as **letter or phone reminders**, specific **interviews** to elicit and identify barriers, **incentives**, working with **paraprofessionals and family associates**. All of those have a general positive effect on no-shows, but these punctual interventions will not necessarily help maintain patients using services after first meetings (Snell-Johns et al., 2004; Staudt, 2003). More

importantly, as Staudt (2003) stated in her critical review on engagement interventions, strategies that reduced attrition rates were those including an ecological perspective and a total service delivery. This was also noticed by McKay and Bannon (2004), where the ecological approach is necessary for successful and efficient engagement interventions, identifying and addressing barriers at different levels and phases of engagement (initial involvement, treatment retention and completion).

Recently, few studies have addressed specific engagement interventions for refugees and immigrant groups in the context of YMH, who require an integrated response to the barriers and stressors they experience (Ellis et al., 2014). One essential ingredient of strategies addressing barriers for these populations is the involvement of community and health services partners in the development of services and the collaboration in the planning and implementation of service delivery. This serves to a better balance of power between service providers and patients, the development of trust and the improvement of cultural appropriateness of services (Ellis et al., 2014). Developing partnerships between providers and cultural experts (interpreters, cultural brokers, community leaders) enhances appropriateness and relevance and leads to lower rates of attrition of services. Another element that most likely increase engagement of immigrant patients is the location of mental health services in non-stigmatizing space like an integration of both physical and psychological services offered in programs already trusted and highly accessible by the community.

In the past decade, many Canadian service providers reorganized their mental health care services by integrating **collaborative care** (Kates et al., 2011; Pauzé, Gagné, & Pautler, 2005).

Collaborative care is based on " strong partnerships between primary care and mental health professionals, with the goal of establishing a comprehensive network providing a full spectrum of care in mental health" (Nadeau, Rousseau, & Measham, 2014, p. 203). Collaboration between different institutions offers the possibility to benefit from communication channels, facilitate processes at the institution-level and the health professional-level, offer personalized referrals and coordinating services in the best interest of the patient. Collaborative care is promoted as an approach that puts great importance on communication and collaborative care initiatives are particularly relevant in the case of services provided to children and youth, as this population often needs multidisciplinary team contributions (Lucie Nadeau et al., 2014). It also involves joining multiples institutions, such as schools, health and youth protection services (Chenven, 2010; Reid, 2006). In fact, schools are specifically considered important partners in a collaborative care network in YMH, because of their proximity to the family living environment (Rousseau, Measham, & Nadeau, 2013). For example, in a study of help-seeking pathways of refugees, elements like working and partnering with community, cultural and religious organizations as well as offering concurrently physical and psychological services facilitated their pathway to care (Colucci et al., 2015), and ultimately their retention in treatment.

In a multiethnic context, the quality of the services is interrelated to the capacity of the mental health care teams to consider the migration dynamics and the sociocultural issues. In Boston, a project of collaborative care has increased the utilization of mental health services by low-income Chinese migrants (Yeung et al., 2004), which suggests that simultaneous inclusion of cultural and contextual factors in the adaptation of collaborative care can increase their efficiency. Stressors associated to resettlement are primary preoccupations and therefore, are

prioritized by newly arrived families, which is another reason for greater collaboration between health institutions and organizations addressing basic needs (Thomson, Chaze, George, & Guruge, 2015).

In short, access to care and engagement are inextricably linked, and the high attrition rates across various clinical populations and settings make it a serious concern. In general, engagement refers to initial attendance as well as continuous adherence in treatment and therefore, has to be addressed at different phases of an episode of care. Current literature on engagement in YMH stresses the multiplicity and complexity of factors involved, which are youth-, family-, clinical- and organization-related.

It still needs to be further studied in order to better understand how these factors interplay and to integrate these characteristics into the development of strategies fostering the engagement of immigrant children and families access to primary YMH services. Therefore, engagement for ethnic minority groups has to be specifically addressed, considering the gap between their needs and their use of services being higher than for their majority counterparts and the additional barriers they face when accessing services.

Context and Objectives of the Study

This study is nested within a larger research program on collaborative care in YMH, which took place in seven CSSS of Montreal. It included studies looking at the relationship between different factors (individual, familial and organizational factors, as well as the type of intervention offered) and the quality of care in YMH in a context of collaborative care in culturally and economically diverse urban populations. This program has obtained ethical approval from the Review Ethics Board of the host institution (CSSS de la Montagne) and partner institutions through a multisite ethical review. Since the launch of the *Quebec Mental Health Action Plan* 2005-2010 and the creation of primary mental health teams and the YMH access points (referred to in Quebec as "guichet d'accès unique"), all requests for public mental health services have to go through the YMH access points. These access points are located in the CSSS and their role is to receive, evaluate and direct all requests to either internal services (CSSS-based) or external services (hospital-based) (Appendix A). During the research program, another reform in the health system took place (bill n^{o} 10 in September 2014), which included the merger of CSSS into larger entities of Centre intégré en santé et services sociaux (CISSS or CIUSSS, depending if a university is linked to the institution).

The CSSS de la Montagne has a specific mission, because of its affiliation to SHERPA, a research center specialized in primary health and social services in multiethnic contexts. The institution offers initiatives such as seminars, symposiums and trainings specifically related to immigrant and refugee communities. Also, child-psychiatrists work on site to evaluate and meet patients, which contributes to the accessibility of services.

This study aims to explore factors that are specifically related to engagement in primary YMH care in two ethnically diverse neighbourhoods of Montreal, which includes an array of clinical profiles, referrals and contexts.

Two hypotheses have been developed in accordance with the focus of this study, which is to understand how belonging to first-, second-generation immigrant or non-immigrant populations influenced engagement into primary YMH treatment. The hypotheses are

(1) *Immigrant youth and their families are less likely to attend and be strongly engaged in YMH treatment than non-immigrants; this effect is more important for first-generation than second-generation immigrants;*

(2) *The presence of collaborative care positively impacts engagement rates for immigrants and non-immigrants, but this effect is more significant for both immigrant groups*.

Keeping in mind the multifactorial and multi-dimensional aspects of engagement as described in the background section, the study will also look at a diversity of factors and their interplay.

Method

Sampling

This study is based on the data obtained within two CSSS of a Montreal urban area: the CSSS de la Montagne (now within the CIUSSS du Centre-Ouest-de-l'île-de-Montréal) and the CSSS Bordeaux-Cartierville-St-Laurent (CIUSSS du Nord-de-l'île-de-Montréal). As presented in Table 1, these two institutions provide services to similar population in terms of poverty (in reference to proportions of low-income families), migration and proportion of families with children (Agence de la santé et des services sociaux de Montréal, 2015a, 2015b).

Table 1

Comparison of populations of the CSSS DLM and CSSS BCSTL from the 2011 National Household Survey (in Percentage)

Characteristics	CSSS DLM	CSSS BCSTL
Poverty (families in low-income, after tax)	24.2	19.7
Recent migration (families arrived in Canada during the last five years)	13.7	12.7
Families with children	63.5	69.0

Note. CSSS = Centre de santé et de services sociaux. DLM = De la Montagne. BCSTL = Bordeaux-Cartierville-Saint-Laurent.

Subjects of the file review ($N = 541$) are individuals aged between 6 and 18 years old and who have been referred between March 2013 and March 2014 for mental health issues to the YMH access points. During this period, both YMH team of each of the two CSSS were stable, with little turnover of professionals.

Procedure

The method used for this study is a retrospective file review for all of the patients for whom a request was received by one of those two YMH access points, including requests for assessments and psychosocial follow-up. The documents reviewed included referent' requests, practitioners' notes and results of the psychiatric or psychological evaluation of the CSSS teams. Administrative data and sociodemographic information have been collected from the youth file to document individual (**age, gender, diagnosis, generational status**), familial (**single parenthood, parent's educational level**) and social characteristics (**migration, socioeconomic status**). **Knowledge of French and/or English** and the **region of birth** have been documented for the youth and the parents as well as the need for an **interpreter** during the episode of care.

Generational status refers to the immigration status and is based on Statistics Canada classification: first-generation refers to youth born outside of Canada and second-generation refers to youth who were born in Canada and had at least one parent born outside of Canada (Statistics Canada, 2016).

The youth clinical profile has been established based on either the child-psychiatrist diagnosis, when available, or based on a triangulation of data from psychological evaluation, clinical impressions of the YMH teams or from the symptoms identified on the referral. They have been divided into 14 categories: anxiety and/or depressive problems (referred to as anxio-depressive), behavioural problems, mixed (emotional and behavioural) problems, attachment or relational problems, psychotic or bipolar disorder, post-traumatic stress disorder (PTSD), learning or developmental disorder, attention deficit hyperactivity disorder (ADHD), autism spectrum disorder, adjustment disorder or external stressors, intellectual disability, eating disorder, substance abuse and others.

To document information about the SES of families, we used the Quebec deprivation index based on data of 2011. The Quebec material and social deprivation index is geographical and based on six socioeconomic indicators, which "were selected for their known relations with health […]: the proportion of persons without a high school diploma; the employment-population ratio; the average personal income; the proportion of persons living alone; the proportion of individuals separated, divorced or widowed; and the proportion of single-parent families" (Pampalon et al., 2012, p. S17). This index has been validated and is widely used to inform authorities in the public health sector about health inequalities (Pampalon, Hamel, Gamache, Simpson, & Philibert, 2014).

Presence of contextual information in the request-for-service form has been collected as **important life events**: abuse, family and environmental stressors, bullying, trauma, family conflicts, immigration, love relationships difficulties and others.

The **type of follow-up** offered by the CSSS has been examined: individual therapy included individual psychotherapy for the youth and/or medication; systemic approach meant intervention with the parents/family in the form of family therapy or psychosocial intervention (child's registration to activities, governmental procedures, arrangements for affordable housing, etc.) and mixed therapy meant a combination of both individual and systemic approaches during the same episode of care. The degree of **collaborative care** through the presence of communication and co-intervention has also been documented.

Finally, the care trajectories have been analyzed. It included the **referral process** (where the requests for services are coming from) and internal or external **orientation** of the request (to what kind of services the request will be transferred to) once they have gone through the YMH access point.

The data collecting form of this project has been developed based on a previous literature review of the most important factors related to engagement and based on information available from the request-of-service form (Appendix B).

Statistical analyses

Firstly, access to care has been analyzed through the care trajectory of the mental health request, i.e. in terms of referrals and orientation to services.

Secondly, therapeutic engagement has been operationalized based on the number of direct appointments between the practitioner and the youth or his/her family, such as: coming to no appointment as null engagement (referred to as initial attendance), one to four as low engagement and five and more as strong engagement (referred to as adherence). Subjects have been categorized according to their generational status: first- or second-generation immigrant or non-immigrant (Hypothesis 1).

Thirdly, the degree of collaborative care has been measured through the presence of communication, which has been operationalized as occasional or intermittent contacts with other professionals, and the presence of co-intervention, operationalized as simultaneous, active and regular interventions by more than one practitioner (Hypothesis 2).

The quantitative analysis consists of descriptive analyses identifying the sociodemographic differences between the immigrant and non-immigrant groups. The relationship between the generational status and the engagement level has been tested using Pearson's chi-square analysis or Fisher's exact test. All Pearson's chi-square analyses were based on the following assumptions (Field, 2009): observations are independent of each other; no cell should have expected value (count) less than 1, and no more than 20% of the cells have

expected values (counts) less than 5. In the case where chi-square analyses were not possible for statistical purposes, Fisher's exact tests were used. In relation to the effect size, we used Cramer's V for all analyses (all contingency tables of the present study are bigger than 2x2) and we referred to Cohen's guidelines (1988) for the interpretation of Cramer's V effect size (Kotrlik, Williams, & Jabor, 2011; Volker, 2006).

For post-hoc analyses, we looked at standardized adjusted residuals, whose distribution acts like a Z-scores distribution and therefore, we used the criteria of $z \pm 1.96$ to determine the significance of a relation (Sharpe, 2015).

Results

Sample Characteristics

The sample is constituted of 25.9% youth of first-generation immigrants, 35.7% of second-generation immigrants, 11.6% of non-immigrants and 26.8% were non-identified due to missing information about youth's and parents' place of birth. Table 2 presents the proportions of first- and second-generation immigrants in comparison to the population served by these two CSSS (Agence de la santé et des services sociaux de Montréal, 2015a; Paquin & Centre de santé et de services sociaux de la Montagne, 2014).

Table 2

Proportions of First- and Second-Generation Immigrants by Territories (as per 2011 Census) (in Percentage)

Location	First-generation immigrants	Second-generation immigrants
Sample of the study	25.9	35.7
CSSS De la Montagne	53.3	22.7
CSSS Bordeaux-Cartier-Saint-Laurent	52.3	n.a.
Montreal	36.4	20.0
Province of Quebec	13.6	8.9

Note. CSSS = Centre de santé et de services sociaux. n.a. = not available.

All requests to YMH services are reviewed at the YMH access point situated in the CSSS, and then oriented to primary services (internal) or to specialised services (external). Based on chi-square test, there are no significant differences in terms of orientation to services between immigrants and non-immigrants (p = .632), as presented in Table 3.

Table 3

Orientation to Services for Immigrant and Non-Immigrant Youth and their Families in Primary Youth Mental Health Services (in Percentage)

Orientation to	First-generation	Second-generation	Non-

services	immigrants $n = 136$	immigrants $n = 187$	immigrants $n = 62$
External services only	7.4	5.9	9.7
Internal services only	82.4	81.3	74.2
External + Internal services	10.3	12.8	16.1

The following results include the patients being referred to internal services (primary, situated in the CSSS) and exclude patients being referred to external services, for which information was not available in the CSSS service file. Also, for each statistical analysis, missing information was removed from analyses.

As shown in Table 4, the proportion of girls in the subgroups of the first-, second-generation immigrants and non-immigrants is between 42.1% and 51.6%. The mean age of the youth ranged between 12.7 and 13.6 years old. Also, a high majority of the youth, either immigrants or non-immigrants, speak French, English or both of the Canadian official languages.

There is a high diversity of origin of the families, where first-generation youth are mostly from South and East Asia (20.8%), South and East Europe (14.6%), Central America and the Caribbean (13.9%) and North Africa (12.3%), which is relatively similar to the parents' region of birth.

A certain amount of information about the parents' profile was not available in the analyzed files: 26.8% of families were uncategorizable as immigrants or non-immigrants because of missing information on youth's or parents' place of birth. Moreover, information about the parents' knowledge of French or English and their level of education was partial, missing for respectively 63.8% and 81.2% of referrals. In terms of single parenthood, the first- and second-generation groups have higher rates, respectively 36.9% and 39.8%, in comparison to 28.1% for non-immigrants.

Table 4

Sociodemographic Characteristics of the Sample (in Percentage)

Sociodemographic characteristics	First-generation immigrants *n* = 130	Second-generation immigrants *n* = 182	Non-immigrants *n* = 57	Total sample *n* = 489
Gender: Male/Female	50.0/50.0	48.4/51.6	57.9/42.1	48.4/51.6
Age, years, mean (SD)	13.6 (3.84)	12.7 (3.90)	12.8 (3.79)	13.2 (4.01)
Knowledge of Canadian official languages – Youth				
French only	56.6	54.4	46.4	52.8
English only	19.4	10.0	30.4	19.4
French and English	18.6	34.4	23.2	25.9
Neither	5.4	1.1	0.0	1.9
Knowledge of Canadian official languages – Parents				
1 of 2 parents speak French and/or English	19.6	27.5	0.0	24.9
2 parents speak French and/or English	56.5	65.0	100.0	65.0
Both parents do not speak French nor English	23.9	7.5	0.0	10.2
Region of birth – Youth				
South and East Asia	20.8	-	-	6.5
South and East Europe	14.6	-	-	4.6
Central America & Caribbean	13.9	-	-	4.3
North Africa	12.3	-	-	3.8
North America	4.6	100.0	100.0	70.2
Region of birth – Parents (Parent1/Parent2)				
South and East Asia	21.1/21.8	27.5/30.6	-	21.1/22.0
South and East Europe	13.3/14.5	8.2/13.8	-	8.6/11.7
Central America and the Caribbean	14.8/13.7	15.4/14.4	-	12.4/11.7
North Africa	14.1/13.7	13.2/11.9	-	11.2/10.3
North America	3.1/2.4	14.2/7.5	100/100	24.6/20.6
Single parent family	36.9	39.8	28.1	39.0

Note. The last column includes requests for both youth that were categorizable as immigrants/non-immigrants and those with missing information on their generational status.
SD = Standard deviation.

Table 5 demonstrates deprivation factors among families of the study. The social and material deprivation components were assessed, using the 2011 Quebec deprivation index. Based on the combination of the material and social deprivation indices, results show that a much higher proportion of non-immigrants are most materially and socially privileged (16.1%), in comparison to immigrants. The immigrant groups have a higher proportion of families most materially and socially deprived, respectively 8.1% for first-generation immigrants and 5.2% for second-generation immigrants, in comparison to non-immigrants (1.8%).

Table 5

Quebec Deprivation Index (2011) of the Sample (in Percentage)

Material and social deprivation indices		First-generation immigrants $n = 123$	Second-generation immigrants $n = 173$	Non-immigrants $n = 56$	Total sample $n = 465$
Material	The most privileged	14.6	28.9	30.4	26.7
	50% medians	44.7	46.8	44.6	45.4
	The most deprived	40.7	24.3	25.0	28.0
Social	The most privileged	22.0	24.3	30.4	23.4
	50% medians	50.4	54.3	48.2	52.9
	The most deprived	27.6	21.4	21.4	23.7
Material & Social	**The most privileged**	**4.1**	**4.6**	**16.1**	**6.2**
	The most deprived	**8.1**	**5.2**	**1.8**	**4.7**

Note. The combination of the material and social deprivation indices appears in boldface.

Unless otherwise stated, the analysis of the following factors in relation to engagement is based on the total sample, with the exclusion of patients being externally referred ($N = 489$).

Engagement and Sociodemographic Characteristics

We undertook preliminary analyses to probe relations between the following sociodemographic variables and the degree of engagement: through a one-way ANOVA, we

looked at age of the child (p = .470) and through Pearson's chi-square test, we looked at youth gender (p = .385), single parenthood (p = .354) and also at the material (p = .779) and social (p = .984) deprivation indices. As none of these variables were significantly linked to engagement, no sociodemographic covariate was used during subsequent analysis. Parents' education level was not sufficiently documented in the analyzed files and therefore was not examined in relation to engagement.

Engagement and Generational Status (Hypothesis 1)

A Pearson's chi-square test was performed in relation to the first hypothesis of the study, namely the engagement rate and the generational status (first, second-generation immigrants or non-immigrants). Results showed no significant association between the two variables (p = .111), but because the p value was marginally significant, we decided to partition our sample and compare 3x2 the sub-groups using chi-square tests.

Differences in terms of engagement were significant between first-generation immigrants and non-immigrants χ^2 (2) = 7.248, V = .198, $p < .05$, suggesting a small effect size, and not significant between first and second-generation immigrants (p = .832) and between second-generation immigrants and non-immigrants (p = .053). Based on p values, we decided to undertake post hoc analyses comparing first- and second-generation immigrants to non-immigrants.

Post hoc analyses are presented in table 6 and showed that for both comparisons, there is a significantly higher number of immigrants, both first- and second-generation, not coming to any appointments and a significantly lower number of non-immigrants with a null engagement.

In the group of patients who are strongly engaged, both first- and second-generation immigrants are significantly less frequent and non-immigrants significantly more numerous. In all sub-groups, almost half of the patients are strongly engaged (48.4% for first-generation immigrants, 51.9% for second-generation immigrants and 66.7% for non-immigrants).

Differences are not significant in terms of a low engagement rate.

Table 6

Engagement Rates of Immigrant and Non-Immigrant Youth and their Families in Primary Youth Mental Health Services (in Percentage) and Results of Post Hoc Analyses

Engagement (no of app.)		First-generation immigrants *n* = 128	Non-immigrants *n* = 57	Second-generation immigrants *n* = 181	Non-immigrants *n* = 57
Null (0 app.)	%	32.0	14.0	29.8	14.0
	Adj. res.	**2.6**	**-2.6**	**2.4**	**-2.4**
Low (1-4 app.)	%	19.5	19.3	18.2	19.3
	Adj. res.	0.0	0.0	-0.2	0.2
Strong (5 + app.)	%	48.4	66.7	51.9	66.7
	Adj. res.	**-2.3**	**2.3**	**-2.0**	**2.0**

Note. Significant adjusted standardized residuals appear in boldface.

Engagement and Languages

The knowledge of French and/or English by youth and parents has been documented. Using Fisher's exact test, there was no significant association between youth linguistic knowledge of French and/or English and engagement into care (p = .893).

Between parents knowledge of Canadian official languages and engagement, the Fisher's exact test was marginally significant (p = .055) and with a small effect size (V = .160). In 63.8% of cases, information on parents' linguistic knowledge was missing.

Based on the marginal p value, post hoc analyses were conducted. Table 7 shows that when both parents speak at least one of the two Canadian official languages, youth with low engagement rate are significantly less numerous and youth with high engagement rate significantly more frequent. In the situation when only one parent speaks either French or English, there is a significant lower number of youth strongly engaged. When both parents do not speak either French and\or English, there was no significant difference in relation to engagement.

Table 7

Engagement Rates of Youth and their Families in Primary Youth Mental Health Services Based on Parents' Knowledge of French and English (in Percentage) and Results of Post Hoc Analysis

Engagement (no of app.)		1 of 2 parents speak French and/or English *n* = 43	Both parents speak French and/or English *n* = 115	Both parents do not speak French nor English *n* = 18
Null	%	8.0	10.8	3.4
(0 app.)	Adj. res.	1.9	**-2.5**	1.2
Low	%	5.1	10.2	0.6
(1-4 app.)	Adj. res.	1.0	-0.1	-1.3
Strong	%	11.4	44.3	6.3
(5 + app.)	Adj. res.	**-2.4**	**2.2**	-0.1
Total	%	24.4	65.3	10.2

Note. Significant adjusted standardized residuals appear in boldface.

The study also documented the use of an interpreter: 18.5% of first-generation families and 7.7% of second-generation families benefited from the help of an interpreter. The chi-square analysis between engagement and the use of an interpreter for first- and second-generation immigrants was not significant (p = .100).

Engagement and Referrals

In order to refer to the YMH access point of a CSSS, physicians or non-medical practitioners complete a request-for-service form. Youth and family formulating needs to a practitioner or presenting themselves at one of the institution of the CSSS during drop-in hours were also taken into account.

In the present study, exactly 31.4% requests were multi-informants, meaning that two or three stakeholders discussed the concern or completed the referral request upon mutual agreement. More than one source could have been involved in the referral process. Table 8 presents the sources of referrals of youth and families in the sample.

Table 8

Referrals Involved for Youth and their Families in Primary Youth Mental Health Services (in Percentage)

Referrals	Total sample $n = 488$
GP's / Hospitals	43.0
Parents / Family	28.9
School teams	27.9
CSSS's teams	17.2
Self-referral (youth)	10.5
Youth protection services	4.7
Emergency	2.0
Other	1.6
Community organizations/Foundations	0.8

Note. GP's = general practitioners. CSSS = Centre de santé et de services sociaux.

In order to appreciate the relation between the source of referral and engagement, we undertook chi-square and Fisher's exact tests and results revealed that the relation was not significant for referrals involving GP's/hospitals ($p = .270$); parents/family ($p = .055$); CSSS's team ($p = .555$); self-referral (youth) ($p = .089$); youth protection services ($p = .780$); emergency ($p = .308$); others ($p = .644$) and community organizations/foundations ($p = .538$).

The relation was significant between engagement and referrals from school teams, χ^2 (2) = 13.236, V = .165, $p \leq .001$, where Cramer's V suggests a small effect size. As presented in table 9, school teams were involved in the referral in almost one third of requests for YMH care.

For youth being referred by school teams, there is a significant low proportion of them not coming to any appointment and a significant high percentage of them strongly engaged. For youth where school teams were not involved in the referral, there is a significant large number of youth not engaged in a YMH episode of care and they are significantly less numerous in the group of youth strongly engaged.

These numbers are not significantly different for youth with low engagement rate (1-4 app.).

Table 9

Engagement Rates of Youth and their Families in Primary Youth Mental Health Services Based on School Referrals (in Percentage) and Results of Post Hoc Analysis

Engagement (no of app.)		School teams n = 484	
		No	Yes
Null	%	28.3	6.2
(0 app.)	Adj. res.	**3.6**	**-3.6**
Low	%	12.4	6.8
(1-4 app.)	Adj. res.	-1.8	1.8
Strong	%	31.2	15.1
(5 + app.)	Adj. res.	**-2.0**	**2.0**
Total	%	71.9	28.1

Note. Significant adjusted standardized residuals appear in boldface.

Engagement and Important Life Events

In this study, requests for YMH services often included contextual information. In 39.0%, more than one important event was mentioned in the referral request and in 30.9% no event of life was reported in the request for services. Seven main types of life circumstances emerged from the referrals of the study: abuse; family and environmental stressors (parental job loss,

grief, school change, move); bullying; trauma; family conflicts; immigration, love relationships difficulties and others. Table 10 presents their proportions among youth and families of the study.

Table 10

Important Life Events for Youth and their Families in Primary Youth Mental Health Services (in Percentage)

Important life events	Total sample $n = 487$
Family Conflicts	33.7
Family and Environmental stressors	26.9
Bullying	17.2
Abuse	15.2
Immigration	10.3
Trauma	6.8
Love relationships difficulties	4.9
Others	2.9

Using chi-square and Fisher's exact tests, results were not significant for abuse (p = .485*);* family and environmental stressors (p = .077*)*; trauma (p = .612*)*; immigration (p = .608*)* and love relationships difficulties (p = .926*)* and others (p = .371).

Significant relationships emerged between family conflicts χ^2 (2) = 8.711, V = .134, p < .05, bullying χ^2 (2) = 6.467, V = .115, p < .05 and engagement. The effect sizes of these analyses suggest a small association with engagement. Family conflicts were mentioned in one third of referrals (33.7%) and bullying in 17.2% of referrals.

Post hoc analyses for these two situations are presented in Table 11. On the one hand, for patients with conflicting families, there is a significant small percentage of youth that were not attending any appointment and a significant high percentage that were strongly engaged. On the other hand, for patients with no family conflicts, patients attending no appointment at all were significantly more numerous and significantly less frequent in the category of youth strongly engaged. For patients coming to 1-4 appointment, numbers are not significantly different.

For youth suffering from bullying, the relation lies with the non-engaged youth (0 appointment): bullied youth are significantly less coming to any appointment. There are no significant differences for youth that are bullied in the low and strong engagement categories.

Table 11

Important Life Events for Youth and their Families in Primary Youth Mental Health Services (in Percentage) and Results of Post Hoc Analyses

Engagement (no of app.)		Family conflicts $n = 485$		Bullying $n = 485$	
		No	Yes	No	Yes
Null	%	25.6	8.9	30.5	3.9
(0 app.)	Adj. res.	**2.7**	**-2.7**	**2.4**	**-2.4**
Low	%	12.8	6.4	14.8	4.3
(1-4 app.)	Adj. res.	0.1	-0.1	-1.6	1.6
Strong	%	27.8	18.6	37.5	8.9
(5 + app.)	Adj. res.	**-2.7**	**2.7**	-1.1	1.1
Total	%	66.2	33.8	82.9	17.1

Note. Significant adjusted standardized residuals appear in boldface.

Engagement and Youth Clinical Profile

The youth clinical profile has been divided into 14 categories, as presented in Table 12: anxio-depressive problems, behavioural problems, mixed problems, attachment or relational problems, psychotic or bipolar disorders, PTSD, learning or developmental disorders, ADHD, autism spectrum disorders, adjustment disorder or external stressors, intellectual disability, eating disorders, and substance abuse. 16.0% of youth had no diagnosis attributed.

Table 12

Youth Clinical Profile for Youth and their Families in Primary Youth Mental Health Services (in

Percentage)

Youth clinical profile	Total sample *n* = 489
Anxio-Depressive problems	40.9
Behavioural problems	16.6
Mixed problems	7.4
Attachment or Relational problems	14.1
Psychotic or Bipolar disorders	1.6
PTSD	4.7
Learning or Developmental disorders	6.3
ADHD	15.1
Autism Spectrum disorders	4.9
Adjustment disorder or External stressors	15.3
Intellectual Disability	1.8
Eating disorders	3.7
Substance Abuse	3.3
Others	5.7

Note. PTSD = post-traumatic stress disorder. ADHD = attention deficit hyperactivity disorder.

Chi-square and Fisher's exact tests were calculated for these diagnoses. Tests results were non-significant for: anxio-depressive problems (p = .628); behavioural problems (p = .711*)*; mixed problems (p = .631*)*; learning disability or developmental disorders (p = .819*)*; ADHD (p = .793*)*; autism spectrum disorders (p = .222*)*; intellectual disability (p = .266*)*; eating disorders (p = .620*)*, psychotic or bipolar disorders (p = .685) and others (p = .795).

Results yielded statistically significant chi-squares for attachment or relational problems χ^2 (2) = 16.366, V = .184, p < .001, adjustment disorder or external stressors χ^2 (2) = 11.291, V = .153, p < .01, PTSD χ^2 (2) = 6.709, V = .118, p < .05 and substance abuse χ^2 (2) = 6.512, V = .116, p < .05. The effect size values for these significant relations suggest a small effect size.

As shown in Table 13, post hoc analyses were conducted and showed that for these four categories of diagnosis, the difference lies between patients with null engagement and patients with a strong engagement. For attachment or relational disorders, adjustment disorder or external stressors and PTSD, the results were all similar for patients who have either of the three diagnoses: there are significantly smaller numbers of youth with this diagnosis that are not

engaged (0 app.) and significantly higher numbers of youth that are strongly engaged. Also, in the absence of any of those three diagnoses, significant higher proportions of patients have a null engagement and a significant low proportion of them are strongly engaged.

Youth consulting or being referred for substance abuse are the only group that is significantly more associated to no attendance (not coming to first appointment) and non-adherence (less youth with substance abuse are likely to be strongly engaged). Patients without this diagnosis are significantly more coming to the first session and more strongly engaged.

For these four diagnoses, there is no significant difference for youth only coming to 1-4 appointments.

Table 13

Youth Clinical Profile of Youth and their Families in Primary Youth Mental Health Services (in Percentage) and Results of Post Hoc Analyses

Engagement (no of app.)		Attachment/ Relational disorders n = 485		Adjustment disorder/External stressors n = 485		PTSD n = 485		Substance abuse n = 485	
		No	Yes	No	Yes	No	Yes	No	Yes
Null (0 app.)	%	32.2	2.3	31.1	3.3	33.8	0.6	32.4	2.1
	Adj. res.	**3.3**	**-3.3**	**2.6**	**-2.6**	**2.1**	**-2.1**	**-2.4**	**2.4**
Low (1-4 app.)	%	17.1	2.1	16.9	2.3	18.6	0.6	18.6	0.6
	Adj. res.	1.0	-1.0	1.1	-1.1	0.7	-0.7	0.0	0.0
Strong (5 + app.)	%	36.9	9.5	36.5	9.9	43.1	3.3	45.9	0.6
	Adj. res.	**-3.9**	**3.9**	**-3.3**	**3.3**	**-2.5**	**2.5**	**2.3**	**-2.3**
Total	%	86.2	13.8	84.5	15.5	95.5	4.5	96.7	3.3

Note. Significant adjusted standardized residuals appear in boldface.

Engagement and Type of Therapy

Different types of therapy were offered to youth and families during the subsequent care follow-up, which was classified as either individual, systemic or a combination of both therapies.

Individual therapy included individual psychotherapy for the youth and/or medication; systemic approach meant intervention with the parents/family in the form of family therapy or when a psychosocial intervention was offered and mixed therapy meant a combination of both individual and systemic approaches during the same episode of care.

The results show that more than half of youth and families (53,3%) have benefited from a combination of individual and systemic approaches, while almost one third of patients (30,7%) have received individual therapy alone and 16,0% received systemic therapy.

Using Fisher's exact test, the relation between engagement and types of therapy is significant ($p < .001$), suggesting that engagement is different whether individual, systemic or mixed therapy is implemented. The effect size value ($V = .250$) suggests a moderate association between engagement and types of therapy.

Post-hoc analyses were performed as presented in Table 14, and showed that with Mixed therapy, there is a significantly smaller number of patients not engaged and lowly engaged and a significantly higher number of patients strongly engaged. With Systemic therapy, it is the opposite, where patients not engaged and lowly engaged are significantly in a higher proportion, whereas patients strongly engaged are significantly in a lower proportion. With Individual therapy, there is no significant difference between observed frequencies and frequencies expected under the null hypothesis of independence. Therefore, strong engagement in YMH therapy is positively associated with Mixed therapy, but less frequent with Systemic therapy alone.

Table 14

Type of Follow-Up Offered to Youth and their Families in Primary Youth Mental Health Services (in Percentage)

Engagement (no of app.)	Individual n = 92	Systemic n = 48	Mixed n = 160

Null	%	0,7	1,3	0,0
(0 app.)	Adj. res.	0,1	**3,4**	**-2,6**
Low	%	8,3	7,3	7,7
(1-4 app.)	Adj. res.	1,0	**4,0**	**-3,9**
Strong	%	21,7	7,3	45,7
(5 + app.)	Adj. res.	-1,1	**-5,0**	**4,7**
Total	%	30,7	16,0	53,3

Note. Significant adjusted standardized residuals appear in boldface.

Engagement and Collaborative care (Hypothesis 2)

In relation to our second hypothesis and the presence of collaborative care, actions related to communication with other professionals and co-intervention have been assessed. Chi-square and Fisher's exact tests were used to compare the relation between the presence of communication and co-intervention with engagement for the immigrant and non-immigrant groups. Results were all significant as presented in Table 15. Effect sizes in these situations suggest a relatively strong association between either form of collaborative care and engagement for the immigrant and non-immigrant groups.

Table 15

p Values for Analyses with Collaborative Care Offered to Youth and their Families in Primary Youth Mental Health Services

	First-generation immigrants $n = 128$		Second-generation immigrants $n = 181$		Non-immigrants $n = 57$	
	Communication	Co-intervention	Communication	Co-intervention	Communication	Co-intervention
χ^2 or Fisher's value	37.527	27.148	46.271	35.534	16.551	10.166
ddf	2	2	2	2	n.a.	n.a.
Cramer's V	.541	.463	.506	.443	.532	.425
p value	.000***	.000***	.000***	.000***	.000***	.004**

Note. * $p < .05$. ** $p < .01$. *** $p < .001$. n.a. = not applicable.

Table 16 presents post hoc analyses. In presence of communication, there is significantly fewer youth and families coming to no appointments and significantly more patients coming to five appointments and more, thus strongly engaged. In situations with no communication, there is a significantly higher number of young patients and families not engaged and a significantly smaller number of patients strongly engaged. Communication does not significantly influence immigrant youth that have low engagement rate (1-4 appointments), but significantly impacts non-immigrants coming to 1 to 4 sessions.

Then as well, with co-intervention, patients not attending any appointment are significantly infrequent, while patients strongly engaged are significantly numerous. With no co-intervention during treatment, the relationship is in the opposite direction, where significantly more patients have a null engagement rate, and significantly less of them are strongly engaged. Co-intervention does not significantly influence youth and families with low engagement rate.

Therefore, both forms of collaborative care (communication and co-intervention) is positively associated to engagement of youth and families of the study, a significant relation for first-, second-generation immigrants and non-immigrants.

Table 16

Collaborative Care During Follow-Up with Youth and their Families in Primary Youth Mental Health Services (in Percentage) and Results of Post Hoc Analyses

Engagement (no of app.)		First-generation immigrants $n = 128$				Second-generation immigrants $n = 180$				Non-immigrants $n = 57$			
		Communication		Co-intervention		Communication		Co-intervention		Communication		Co-intervention	
		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Null (0 app.)	%	30.5	1.6	30.5	1.6	28.7	1.1	28.7	1.1	14.0	0.0	14.0	0.0
	Adj. res.	**5.4**	**-5.4**	**4.5**	**-4.5**	**6.6**	**-6.6**	**5.4**	**-5.4**	**2.9**	**-2.9**	**2.2**	**-2.2**
Low (1-4 app.)	%	13.3	6.3	14.8	4.7	10.5	7.7	13.3	5.0	15.8	3.5	17.5	1.8
	Adj. res.	0.8	-0.8	1.0	-1.0	-0.3	0.3	0.7	-0.7	**2.2**	**-2.2**	1.9	-1.9
Strong (5 + app.)	%	17.2	31.3	22.7	25.8	20.4	31.5	25.4	26.5	22.8	43.9	35.1	31.6
	Adj. res	**-5.7**	**5.7**	**-5.0**	**5.0**	**-5.8**	**5.8**	**-5.5**	**5.5**	**-3.9**	**3.9**	**-3.2**	**3.2**
Total	%	60.9	39.1	68.0	32.0	59.7	40.3	67.4	32.6	52.6	47.4	66.7	33.3

Note. Significant adjusted standardized residuals appear in boldface.

Summary

Given the multiplicity of tests in the study and therefore, the inflation of the type I error, we have opted for a more conservative approach and used a Bonferroni correction. The value that has been used is 0.05 / 50 tests = 0.001 (α = .001). Table 17 presents these results, when taking into account the Bonferroni correction. When using the Bonferroni correction, the results that were significant were those related to school referrals, youth diagnosis of attachment or relational disorders, type of therapy as well as communication for first-, second-generation immigrants and non-immigrants and co-intervention for first- and second-generation immigrants.

Table 17

Factors in Relation to Engagement of Youth and their Families in Primary Youth Mental Health Services (Based on p Values) using a Bonferroni correction (α = .001)

Factors	Significant	Not significant
Orientation to services	--	Orientation (internal/external)
Sociodemographic characteristics	--	Age Gender Single parenthood Material and social deprivation
Generational status	--	Generational status (first-, second-generation immigrants or non-immigrants)
Languages (French and/or English)	--	Youth's linguistic knowledge Parent's linguistic knowledge[†] Interpreter
Referrals	School teams***	GP's/Hospitals Parents/Family[†] CSSS's team

		Self-referral (Youth) Emergency Youth protection services Community organizations/ Foundations Others
Important life events	--	Family Conflicts* Bullying* Abuse Family and Environmental stressors Trauma Immigration Love relationships difficulties Others
Youth clinical profile	Attachment or Relational problems***	Adjustment disorder or External stressors** PTSD* Substance abuse* Anxio-depressive problems Behavioural problems Mixed problems Psychotic or Bipolar disorders Learning or Developmental disorders ADHD Autism spectrum disorders Intellectual disability Eating disorders Others
Type of therapy	Type of therapy (systemic, mixed)***	Type of therapy (individual)
Collaborative care	Communication ***: for 1st-, 2nd-gen. imm. and non-imm. Co-intervention ***: for 1st- and 2nd-gen. imm.	Co-intervention**: for non-imm.

Note. * $p < .05$. ** $p < .01$. *** $p < .001$. † marginal analysis.

Discussion

The results of this study have added on to the present literature on predictors of engagement for immigrant communities in the context of collaborative care in YMH services. They as well underlined the multiplicity and complexity of factors influencing the engagement of immigrant youth and families in YMH services. We will first address sociodemographic factors in relation to engagement, then discuss implications of the results in relation to the two hypotheses presented in the current study and finally, address multi-level factors that are significantly related to engagement in primary YMH care.

Engagement and Sociodemographic Characteristics

Although a number of studies have identified socioeconomic factors to be related to engagement in YMH care, our study did not lead to such conclusions.

Material and social deprivation indices were not significantly related to engagement. Previous literature that used different measures of the SES, such as the household income, showed that the SES was related to engagement, although results on the direction of this influence were divergent. The relation between recent migration, poverty and YMH is complex: more importantly than immigration status, a chronic experience of poverty becomes part of a downward spiral where families are facing long-term effects of deprivation and financial strain, leading to higher risk of family stress, conflicts, parental depression, harsh discipline and more internalizing and externalizing difficulties for the youth (Beiser, Hou, Hyman, & Tousignant, 2002). These factors, i.e. family stress, parental distress (Staudt, 2007), child diagnosis (Gopalan et al., 2010; McKay & Bannon, 2004), and parenting practices (Carson et al., 2010; Friars et al.,

2007) have been previously linked to engagement of families in YMH services, thus pointing to an indirect link between engagement and deprivation.

For children, factors such as age, gender and single parenthood were not significantly related to engagement in our study. This differs from previous studies, where evidence on child's age and engagement is ambiguous, but evidence is more confirmed about a negative association between child's gender (male), single parenthood and engagement (Gopalan et al., 2010; McKay & Bannon, 2004).

Engagement and Generational Status (Hypothesis 1)

This section will look at the first hypothesis of the current study, which was:

Immigrant youth and their families are less likely to attend and be strongly engaged in YMH treatment than non-immigrants; this effect is more important for first-generation than second-generation immigrants.

Results about differences between immigrants and non-immigrants in terms of engagement have to be interpreted with caution, as post hoc analyses were undertaken based on a marginal p value. Under the Bonferroni correction, these results are not considered significantly different.

In terms of patients with a null engagement rate (initial attendance), results indicated that, in comparison to non-immigrants, both first- and second-generation immigrants are less likely to come to a first appointment. These results are consistent with previous studies, where ethnic-minority youth and families are less likely to access and use YMH services (de Haan et al., 2014; Ingoldsby, 2010; Johnson et al., 2008).

The largest proportion of dropout was prior to the first meeting, which is similar to other findings. For example, in a specialized Transcultural clinic in Montreal, 15% of families were no

shows (not coming to any sessions) (Measham et al., 2001). In our study, it is 32.0% of first-generation immigrants and 29.8% of second-generation immigrants who did not show up at their first session. The proportions of no-show prior to first session in our study are higher than those in this third-line clinic of Montreal.

In terms of patients with a strong engagement rate, results indicate that less first- and second-generation immigrants are coming to five appointments and more, in comparison to non-immigrants. Interestingly though, almost half of families from the three sub-groups have attended five appointments and more, thus considered strongly engaged in treatment, alluding to the overall quite strong engagement of the sample.

The literature offers some potential explanations when looking at pre- and post-migration factors. Important stressors are often part of the migration process: a survey among newcomers in Montreal found that 47% of them witnessed organized violence and 28% suffered persecution (Rousseau & Drapeau, 2002). Hence, it is possible that for some of them, trust and willingness to disclose personal and family information is a challenge when seeking public services (Carson et al., 2011; Gearing, Mian, Barber, & Ickowicz, 2006; Guzder et al., 2013), thus presenting another barrier to initiating treatment. Post-migration factors, in the form of stressors in the host society, are also critical in the perceptions and experiences of immigrant families when receiving services (Measham, Rousseau, & Nadeau, 2005). The fear of being discriminated or past negative experiences with the health system and its practitioners could act as barriers that impede their disposition towards host-country institutions and services (Guzder et al., 2013; Snell-Johns et al., 2004). Logistical barriers possibly encountered by immigrants might have impacted their access to YMH services. In the sample, there are more first- and second-generation immigrants

who are most materially and socially deprived and less who are privileged in comparison to non-immigrants. As material and social deprivation is yet another stressor, it is possible to presuppose that some of these immigrant families are more vulnerable to experience barriers, such as lack of transportation and childcare options, limiting their ability and willingness towards services.

Nonetheless, it is interesting to note that even though engagement, in terms of initial attendance and adherence, is lower for first- and second-generation immigrants when compared to non-immigrants, there are still large numbers of all groups who are strongly engaged. These results suggest that services are able to engage those families under certain conditions.

A point of interest associated with generational status is regarding the sample composition: there are less first-generation immigrants and more second-generation immigrants in the sample, in comparison to the population of the territories served by the two CSSS of the study. This could indicate a more limited access to primary YMH services for these populations. Difficult and limited access to primary mental health services by ethnocultural communities have been documented in the literature, namely due to several barriers they encounter. However, this may also call to the healthy immigrant phenomenon: in spite of the immigration processes, immigrants are generally healthier than their non-immigrant counterparts in the first years of resettlement. This phenomenon generally lasts the first five years; after that, immigrants level with their counterparts in terms of health (Pottie et al., 2011).

Engagement and Collaborative Care (Hypothesis 2)

The next section will discuss results in relation to the second hypothesis of the study, which was:

> *The presence of collaborative care positively impacts engagement rates for immigrants and non-immigrants, but this effect is more significant for both immigrant groups.*

Results have confirmed the second hypothesis, where presence of collaborative care, either as communication or co-intervention, positively impacts engagement levels for first-, second-generation immigrants and non-immigrants. The effect of collaborative care is more important for immigrants than non-immigrants, based on the important effect sizes and the value of the adjusted standardized residuals. These results are still significant when using the Bonferroni correction.

It has been demonstrated that collaborative care models implemented into primary care practices show positive outcomes in relation to better access to care and to more efficient YMH services (Colucci et al., 2015; Rousseau et al., 2013). Our results indicating a positive impact on engagement reinforce the importance of efficacious communication channels, facilitated and personalized processes of referrals, and coordination of services as promoted by collaborative care principles.

It has also been documented that the involvement of patients in the treatment planning process and the implementation of the intervention plan ensure a more holistic approach to their needs and willingness to treatment, which predicted higher attendance rates (Littell, 2001) and have been encouraged by collaborative care models.

When working with recent immigrants, collaborative care initiatives with primary care professionals knowledgeable of the family context allow the possibility to address the

multiplicity of challenges encountered by families, taking into account housing, financial strain, precarious status and unfamiliarity with services (Lucie Nadeau et al., 2014). Also, given that collaborative care promotes communication between different stakeholders involved in an immigrant family's life, this brings the benefit of a multidisciplinary perspective and addresses different dimensions of engagement. In one-third of referrals of our study, it's two or more different institutions that were involved in the referral, which might signal collaboration between institutions and professionals as early as the referral process.

Colucci et al. (2015) demonstrated that coordinating care offer provided by different agencies and offering personalized referral during the whole episode of care had a positive impact on therapeutic engagement. This also ensures to avoid duplication of clinical work by different stakeholders. Furthermore, collaborative care models in YMH settings are compatible with the use of an eco-systemic model of care, as shared decision and responsibility among practitioners and institutions is encouraged (Chenven, 2010).

In our study, the high rates of strongly engaged patients, immigrants and non-immigrants, are likely influenced by the collaborative approach of the teams. The complementarity of collaborative care and eco-systemic models of care are encouraged when working with immigrant families in a primary YMH setting.

Collaborative care also promotes continuity of care, namely by preventing fragmentation of care and by complementing service provision. On the institutional level, L Nadeau, Rousseau, Séguin, and Moreau (2009) mentioned that synergy between different clinical stakeholders is beneficial for all partners, as it provides an interactive platform and contributes to a better understanding of each others' roles, responsibilities, limitations, and allows individuals to work based on each others' strengths.

However, certain elements are essential to a successful implementation of a collaborative care model. An enabling organisational environment for interdisciplinary and intersectional collaboration has to provide flexibility, engagement of clinical and management structures and encouragement and facilitation of communication channels between institutions and practitioners (Rousseau et al., 2014).

The next section will address different characteristics in relation to engagement, which could offer further guidance in the interpretation of these previous results and the implementation of engagement strategies in YMH.

Engagement, Languages and Interpreters

Our study examined engagement in relation to the youth's and parents' linguistic knowledge of French and English, the two official Canadian languages.

On the one hand, results indicated that youth's knowledge did not significantly influence engagement. The composition of the sample shows that a high majority of immigrant youth speak either French, English or both. We suppose that very often, children and adolescents can speak the host country's language as they are rapidly enrolled in the host-country school upon their arrival in a new country (Leanza et al., 2015). Clinical experience has shown that, unless they have developmental issues, most youth will learn the host country's language within the first year of stay.

On the other hand, results about parents' linguistic knowledge indicated significant post hoc analyses, but based on marginal p value. In the study, if both parents are speaking either French and/or English, they are more likely to be strongly engaged than families with only one parent speaking either of those languages. No significant difference was found when neither spoke French or English, although the small size of this subgroup might limit the interpretation of this result. A concern regarding linguistic knowledge information is the possible under-representation of recent immigrants (less than one year in the host country) who are accessing primary YMH services. However, the high proportion of missing information in the analyzed files restricts the interpretation of our results on parents' linguistic knowledge. Nonetheless, it is well known that linguistic barriers influence access to care and the subsequent use of services for immigrant populations (Bowen, 2001; Brisset et al., 2014; Park, Cho, Park, Bernstein, & Shin, 2013). Studies among adult populations with mental health difficulties also showed that language barriers are associated to higher dropout rates (Morrison, Wieland, Cha, Rahman, & Chaudhry, 2012). In the context of YMH therapy, parents limited knowledge of French and/or English brings many challenges, such as parent's consent to care and their subsequent engagement in the therapeutic process (Ellis et al., 2014).

In our study, the use of an interpreter has not been significantly related to engagement. This result differs from previous studies, where the involvement of an interpreter in health care improves access to care (Brisset et al., 2014). Although our study haven't found a significant relation between the use of an interpreter and engagement, the importance of using an interpreter in mental health care have been pointed out, because of the centrality of communication and sharing of complex ideas and feelings (Rousseau, Measham, & Moro, 2011). Studies have

underlined the benefits of working with interpreters in health and social services settings, such as reported improvement of communication, feeling of being understood and a higher likelihood to pursue treatment after the assessment period (Tribe, 2009).

Engagement and Referrals

Involvement of school teams in the referral process has significantly influenced engagement rates in our results. Although little research has investigated the relation between sources of referrals and degree of retention in YMH services, the role of the school staff in identifying difficulties, offering services and thus, acting as an important partner in treatment for distressed youth has been identified (Farmer & Farmer, 1999). Certainly, school is an important environment in the youth's and family's life. In our study, proportions of referral sources reveal that the two studied CSSS received a diversity of requests, mostly from health and social services, which is similar to findings of a study conducted at the specialized Transcultural clinic of Montreal (Measham et al., 2001).

Results are also comparable to a study by Anagnostopoulos et al. (2004), with children in a community mental health clinic, where the primary source of referral for immigrant children and their families was school (48.6%), whereas for non-immigrants, it was medical and social services. However, the source of referral did not significantly impact the immigrant and non-immigrant use of services in that study.

There are few possible explanations to the positive relationships of referrals involving schools and the degree of adherence to treatment. By being involved in the referral, different school-based professionals thus identified and recognized the need for services and/or the

importance of connecting with primary services. A particularity in Quebec regarding public school is that many social workers and few nurses who are working in primary care also work in schools. Their presence likely helps in the referral process and the capacity of schools to refer towards primary care. School involvement in the referral may also contribute to the interaction and complementarity of services and practitioners' expertise between schools and primary YMH institutions, thus combining efforts for the improvement of youth's condition. They may also participate in the implementation of the intervention plan at school and foster communication with parents, youth and other services. In fact, models of collaborative care in the two studied CSSS encourage school professionals to participate in child psychiatric consultations at the CSSS and build on trust already established between school staff and primary care practitioners.

The literature questions if referrals that are court ordered by youth protection services influence the engagement process. In this case, families may have never desired or even recognized a need for services (McKay & Bannon, 2004), which might negatively impact family's engagement into care. In our study, very few referrals involved youth protection services (4.7%), thus it is unlikely that that aspect had an important influence in our sample.

Engagement and Important Life Events

Many life events were documented in the request-for-service form, but two main events were significantly associated to engagement, namely family conflicts and bullying.

In relation to family conflicts, our results show that patients consulting with family conflicts are more likely to be strongly engaged, whereas families with no conflicts are more

likely to not engage into services. These results differ from previous studies, where parents tend to look out for help in times of crises, but in the meantime, are more likely to dropout because of family difficulties. Families experiencing more psychosocial difficulties and family-related problems also tend not to complete treatment (Gopalan et al., 2010). However, as 53.3% of families in the study benefited from mixed therapy in a context of collaborative care, those conditions might have fostered engagement of families with conflicts. As acculturative differences between offspring and parents might be responsible of conflicts in immigrant families (Ellis et al., 2013), these families might benefit from therapy as a space of mediation and neutral communication. Within our research program on collaborative care, a qualitative study with migrant youth and their parents in YMH therapy presented that participants have discussed about the improvement of communication and the reduction of family conflicts over the sessions (L Nadeau, Jaimes, Johnson-Lafleur, & Rousseau, 2017).

Bullying was also significantly linked to the degree of engagement into care, but only for the attendance at first appointment. Our findings are quite limited, indicating that bullied youth are less likely to come to any appointment than youth who do not face bullying. Literature suggests that in adolescence, youth fear that peers will know of their mental health difficulties, and thus be labeled with mental health problems and stigmatized by their peers (Gopalan et al., 2010). These elements have been linked to adolescents' limited use of services. Therefore, this concern might be accentuated for youth that are already socially targeted and bullied by other children and might explain why these youth avoid receiving mental health services.

Engagement and Youth Clinical Profile

Our results reveal that, in congruence with past research (Johnson et al., 2008; Miller et al., 2008), engagement rates vary according to the youth diagnosis. Findings of the current study showed that there is a positive relationship between strong engagement and youth with diagnosis of attachment or relational problems, PTSD or adjustment disorders or external stressors. Youth with different diagnosis than the above conditions significantly do not attend treatment (not coming to first appointment) and are not strongly engaged. Relatively scarce information is available on youth retention in treatment with either of those specific diagnoses, as studies most often analyzed youth with conduct disorders and their relatively low attendance and adherence rates into therapy.

Those three diagnoses refer to either internalized or mixed (internalized and externalized) symptoms. Interestingly, most studies about youth clinical profile and engagement are with a clinical population having externalized symptoms (conduct or behavioural disorders), for which many studies have demonstrated that these patients are more likely to drop out of treatment (Friars et al., 2007; McKay & Bannon, 2004; Snell-Johns et al., 2004). One study examined youth with mood and anxiety problems and found that youth with high levels of these problems were more likely to stay engaged in treatment (Baruch, Vrouva, & Fearon, 2009; Johnson et al., 2008). In our sample, the non-significant result of youth with anxio-depressive symptoms may be due to the sample including a multiplicity of severity of diagnoses.

In the specific case of PTSD, Gopalan et al. (2010) have identified specific barriers to engagement of youth who experienced trauma, partially related to the symptom profile (internalized and/or externalized symptoms), following the post-traumatic reaction. Our results

suggest that families whose child suffer from PTSD may seek help only when the child exhibits serious behavioural problems and after following strong and urgent recommendations of school or daycare staff. Another possibility is that parents may be relatively unaware of their child symptoms or uninformed on PTSD manifestations, and once being aware of their child's condition, will fully invest in treatment and attend more than five appointments.

Finally, in relation to youth being referred for substance abuse, results indicated that these youth were significantly more likely not to attend any sessions and less likely to be strongly engaged. Our findings confirm the perspective of previous studies, where youth with substance abuse problems tend to drop out prematurely or struggle completing treatment. A research from Schroder, Sellman, Frampton, and Deering (2009) determined that for youth attending specialized programs for alcohol and drug treatment, only dynamic characteristics, such as motivation and expectations towards the treatment, positive interactions with staff and an active role in treatment were linked to therapeutic retention. These dynamic factors could help explain our results.

Careful interpretation has to be given to relations between diagnoses and engagement because of cofounding effects of having more than one diagnosis and the interplay of family and environmental factors.

Engagement and Type of Therapy

Another important finding in the current study is regarding the type of therapy that has been implemented during follow-up. Analyses showed that individual therapy alone did not

significantly impact levels of engagement, systemic therapy alone was negatively associated to a strong engagement and mixed therapy was positively linked to a strong engagement.

Systemic therapy (which referred to family intervention/therapy and/or psychosocial interventions) was more associated with a null and weak engagement, a result that could be related to parental perceptions and expectations of treatment. Within our study, systemic therapy mostly involved family intervention/therapy and thus implied addressing family issues. Some parents might feel that, in order for the treatment to be effective, an individual intervention with the child is needed, either with or without family intervention. Also, parents might not expect, want or be able to be actively involved in treatment, especially if they are not recognizing parental contribution to the problem.

Results also show that some youth and family referred for systemic therapy had a weak engagement rate. This could indicate that some families came for an initial evaluation period (1-4 sessions), but when a decision is taken about the type of therapy, parents drop out as they do not agree with the clinical recommendations.

In another study of our research program looking at the type of therapy and youth outcomes (Lecompte, Nadeau, Johnson-Lafleur, & Rousseau), an association was found between presenting more family conflicts (greater intensity) and being referred to systemic therapy (rather than mixed therapy). It is possible that, in the presence of important family conflicts, clinicians tend to privilege systemic therapy in order to focus the treatment on the family system. This finding appears to diverge from the results of the current study, where systemic therapy tends to lead to a null and low engagement rates but the presence of family conflicts leads to a strong engagement rate. Although the presence of family conflicts does not indicate about intensity of

conflicts, these are contrasting results. It is that arguably oriented towards a complex picture regarding the engagement of conflicting families, where a multiplicity of clinical situations is represented in one large category of family conflicts. This raises the necessity to deepen our understanding of the complex reality of conflicting families and the severity of those conflicts.

Mixed therapy, which includes family and individual interventions, gives an opportunity to identify and address family issues as well as individual symptomatology. The fact that only mixed therapy is significantly and positively linked to a strong engagement tends to indicate benefits of working separately with parents/family and youth in the context of YMH care. In the sample of the current study, it is interesting to highlight that more than half of the youth and families have been offered mixed therapy

In the above stated study on the type of therapy and youth outcomes, mixed therapy showed a more important decrease in the youth's symptoms compared to systemic therapy. On the other hand, systemic therapy showed a more important decrease in family conflicts when compared to mixed therapy. Thus, the choice of therapy needs to be put in perspective with the objectives of the therapy.

Although the percentage of mixed therapy and systemic therapy in our study indicates a decision to work on family issues in most clinical situations, there are circumstances when it may be less beneficial, at least at first, to involve the family, namely when family members can act as an obstacle to youth engagement. A study by Staudt (2007) addressed the notion of perspective divergence, where parents with feelings of helplessness or negativity about treatment tend to drop out prematurely. Qualitative findings from our research program have shown that for

families with particular family situations, it may be necessary to start the therapeutic process with individual therapy, when it is not possible to directly address the issue with the family as a group (Lucie Nadeau, Lecompte, Johnson-Lafleur, Koukoui, & Rousseau, 2017).

In summary, our results argue for the importance of continuation of addressing the disparities between immigrants and non-immigrants, given differences in terms of their access and engagement to care. They also argue for the importance of collaborative care. As well, all factors of this study that are significantly related to engagement were either linked to a null engagement (initial attendance) or to a strong engagement (strong adherence) levels, which indicates that most families in our study either did not show up at the first session or started treatment and stayed engaged. This may give an indication about the importance to address potential barriers to youth and family engagement very early in the therapeutic process.

At the service level, significant associations were found in terms of type of therapy between mixed therapy and a strong engagement of patients, as well as in terms of referrals, between the involvement of school teams in the referral process and a strong engagement. The link between schools and primary care services from the beginning of the episode of care can be seen as an early manifestation of collaboration and reflection of close relationships between the CSSS and the schools.

At the parent-level, the presence of family conflicts as well as the knowledge of French and/or English by both parents is related to a lasting engagement.

At the individual-level, results also revealed that youth with specific symptomatology, such as attachment or relational problems, PTSD or adjustment disorders or external stressors

tend to stay longer in treatment, whereas substance abuse children are less likely to start a treatment and remain engaged. Youth suffering from bullying are less likely to attend treatment.

These results suggest that the simultaneous presence of collaborative care supported by both the clinical and the organizational levels as well as an offer of services compatible with an eco-systemic approach have created favourable conditions to the retention of youth and families into care.

The two CSSS of our study, which were working within a collaborative care model with conditions associated (promoting communication and trustful working relations, recognition of partners' roles and contributions, flexibility of services), likely contributed to an organizational context that influenced treatment outcomes, service quality and patient's engagement in services. Glisson (2012) has shown an association of an organisational culture promoting flexibility and communication with positive outcomes of patients. One could think that the organizational culture within the two CSSS of the study was beneficial to youth' and families' engagement.

Limitations

Some limitations of this study should be noted. First, there are some biases generally associated with the use of file reviews, such as certain information being incomplete, absent or the relative variance in the information recorded (Gearing et al., 2006). In our study, although some information was missing such as the youth's generational status, collected information attests of the considerable efforts made by health institutions of this study to document patient's information and ensure the high quality of institutional documentation. Many efforts in terms of

file documentation have been made in previous years, in order for clinical files to accurately represent clinical interventions and meetings. We are thus confident about the quality of the documentation to overall represent clinical follow-ups. Another limit in our study is the absence of children' and families' voices, as information is based on documentation filled by practitioners and professionals involved in the episode of service.

Second, the measure of engagement used, i.e. the number of appointments attended by youth and/or family, is one limited measure of engagement, which does not integrate other dimensions of engagement. Nonetheless, as treatment attendance is the most prevalent engagement measure, it allowed comparability of this study to other results in the literature on engagement in YMH.

Third, the complexity of problems analyzed in the current study is due to the important number of factors analyzed as well as the relatively limited sample. Results based on marginal p value must be taken with caution. We recommend to specifically taking these variables into account into future research on engagement with ethnically diverse populations.

To our knowledge, it is the first study to document and analyze a multiplicity of predictors of engagement of youth and families in a primary YMH services with culturally diverse populations. The singularity of this study also refers to the diversity of the sample in terms of clinical profiles, referrals and types of therapy.

Conclusion

This thesis has explored factors related to engagement of youth and their families in primary YMH services from two multiethnic neighbourhoods of Montreal, with a focus on immigrant families. Based on a retrospective file review of YMH requests in two CSSS, the study examined the relation between engagement and characteristics of the young patient, his/her family, the clinical relation and the organization. The results confirm that many factors at different levels interact to influence youth's and family's initial attendance and adherence rates.

As the study reported, first- and second-generation immigrants, in comparison to non-immigrants, are less likely to attend YMH treatment and they are less likely to be strongly engaged. This adds on the existing literature that shows that immigrant families have a more difficult access to YMH care. Given that the study has been done in clinical environments with a known expertise in transcultural mental health, it suggests that ongoing efforts are needed on barriers to mental health care for immigrants as well as training primary care practitioners and their organizations on working around these barriers.

The study also highlights the importance and benefits of collaborative care, as it positively impacts engagement levels for first-, second-generation immigrants and non-immigrants, this effect being more important for immigrants than non-immigrants. The study also tends to show that schools are important partners for engagement in collaborative YMH care. This is the first study to link collaborative care, involvement of schools and engagement in YMH care.

The other significant results of our study suggest important elements to consider in order to promote engagement into therapy in YMH: informing treatment with respect to individual and familial contributions to the clinical situation, ensuring adequate communication with parents and considering a potential influence of diagnosis on engagement into treatment.

It is important to take into consideration these factors when youth and their families access primary YMH services, because dropping out prematurely from treatment negatively affects clinical outcomes and organization of services.

This research used the number of sessions as the measure of youth's and family's engagement, which refers to the behavioural dimension of engagement. However, other dimensions of engagement, such as the attitudinal dimension could also be examined in relation to the process of engagement for ethnocultural minority communities. Future research should therefore include probing about distinct factors of youth's and theirs parents' engagement decisions. This could be explored through qualitative interviews with youth and parents. Other venues of research could also include inquiring about the specific perspective of immigrant youth on services received, in order to develop strategies adapted to them, their age and their clinical profile. Research on engagement interventions could also integrate a more complete notion of engagement, based on its different conceptualisations, adding its multiphase and multidimensional aspects to the multifactorial perspective.

Although showing limitations, this research is a useful step towards a better understanding of engagement for immigrants in primary YMH care, suggesting important factors

to take into consideration when planning and implementing interventions. This could inform YMH service offer to integrate interventions promoting an improved and genuine engagement of ethnically diverse populations.

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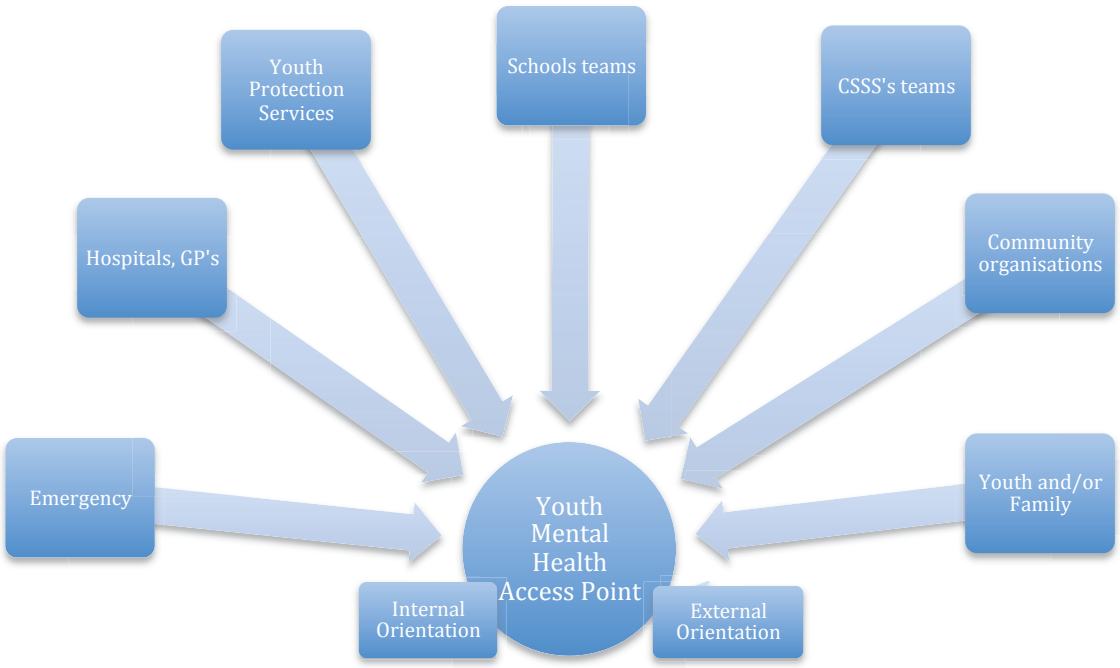
Appendix A

Trajectory of a request for YMH services in the province of Quebec



Appendix B

Data Collecting Form

Collecte des données : dossiers

1. Identification

Site :_____ Numéro de dossier : _____ Code participant : _____

2. Caractéristiques sociodémographiques

Date de naissance : : Jour_____/Mois_____/Année_____ **Âge** : ___

Sexe : ◻ Garçon ◻ Fille

Taille du ménage : ____ **Famille monoparentale** : ◻ (oui)

Niveau d'éducation des parents : ◻ Primaire ◻ Second ◻ Technique ◻ Universitaire

Pays de naissance (jeune) : _____ **Pays de naissance (parents)** : _____

Statut migratoire : ◻ Citoyen ◻ Résident permanent ◻ Statut précaire

Temps écoulé depuis la migration : ◻ < d'1 an ◻ 1-5 ans ◻ > 5 ans

Connaissance de la langue (fr/ang) : ◻ Oui ◻ Non Interprète : ◻ Oui ◻ Non

Statut économique : Code postal : _____ **Précarité financière notée** ◻ (oui)

3. Demande de service au guichet SMJ (pour un suivi ou une consultation pédo)

a. Date : Jour_____/Mois_____/Année_____

b. Référent : ◻ Urgence ◻ École ◻ Médecin ◻DPJ ◻ Parents
◻ Jeune ◻ Autre équipe CSSS (dont scolaire): _____ ◻ Autre : _____

c. Problème évoqué dans la demande :

Symptômes			Événements de vie
◻ anxiété	◻ Dépression/détresse/tristesse/ sx associés (faible estime de soi, perte motivation/intérêt)	◻ Prob. d'attention	◻ Abus
◻ Agressivité	◻ Opposition	◻ Impulsivité/ Hyperactivité	◻ Deuil
◻ Prob. de comportement NS		◻ Tr. de développement (TED/TSA, limites intell., …)	◻ Intimidation
◻ Éléments psychotiques → ◻ hallucination ◻ délire ◻ bizarrerie			◻ Trauma
◻ Idéation/agir suicidaire		◻ Automutilation	◻ Pr. familiaux
◻ Prob. relationnels → ◻ amis ◻ famille		◻ Difficulté de gestion émotionnelle, instabilité, …	◻ Séparation/divorce
◻ Prob. d'apprentissage (retard ou échec scolaire)		◻ Absentéisme scolaire	◻ Immigration
◻ Prob. d'abus de substance		◻ Prob. alimentaire	◻ Autre _____
◻ Prob. de sommeil	◻ Énurésie	◻ Autre _____	

4. Examen de la demande par le guichet

a. Date : Jour_____/Mois_____/Année_____

b. Orientation de la demande :

□ Évaluation/Consultation avec un pédopsy du CLSC (≠ un pédopsyc. de l'hôpital)

□ Suivi assigné à un intervenant de l'équipe SMJ

□ Référé à l'interne → □ JED □ CAFE □ EFJ □ TED-DI □ SMA

□ Référé à l'externe → □ Hôpital : Quel service : _____ □ Autre CSSS

□ Décision différée : _____

5. Épisode de soins (le suivi clinique)

a. Premier contact téléphonique : Jour___/Mois____/Année_____
b. Premier contact en présence : Jour___/Mois____/Année_____
c. *Évaluation* et/ou *Consultation avec pédo CSSS* : personnes contactées

□ Jeune □ Parent(s) □ Fratrie □ École □ DPJ □ Pédopsychiatre
□ Org. comm □ Autres intervenants SMJ □ Autre équipe CLSC
□ Autre clinique □ Psychologue privé □ Autre : _____

d. *Suivis réalisés* avec le jeune et la famille (quelque soit l'équipe) :

Individuel	**Familial**	**Psychosocial**	**Autre**
□ Psychothérapie (Arts, Spécifique, Varié)	□ Intervention auprès des parents □ en personne □ par tél.	□ Démarches psychosociales (loisir, sport, etc)	□ Concertation □ Contact école □ Contact DPJ/CJ □ Contact autre : _____
□Médication (un, 2 +)	□ Thérapie familiale		□ Évaluation psychologique (tests neuro)
Co-intervention (suivi actif/rég.) : □ École Intervenants : _____ □ DPJ Intervenants : _____ □ Autre Intervenants : _____			

e. Nb total de rencontres réalisées (**évaluation+consultation**) : Directes (parents/enfant) □1 □2-4 □5-10 □+10
Indirectes (co-intervention) □1 □2-4 □5-10 □+10

f. Problématique telle que définie *en cours de suivi* par les intervenants CSSS impliqués :

□ Tr. internalisés : _____ □ Tr. externalisés : _____

□ Tr. de l'attachement/relationnels □ Tr. psychotique/bipolaire □ Tr. d'adaptation/ESPT

□ Tr. d'apprentissage □ TDA □ Autre Préciser : _____

** □ Cocher si un diagnostic a été posé par un pédopsychiatre : _____

6. Épisode de services :

□ En cours
□ Jamais débuté : Expliquer : _____
□ Suspendu/fermé : Expliquer : _____
Dernier contact : Jour____/ Mois_____/Année_____

7. Recours ultérieur à des services CLSC : □Oui □Non _____
8. Comment. généraux (discontinuités, remarques): _____

9. Date de rédaction de la fiche : _____