



RESEARCH ARTICLE

What do justice-involved youth want from integrated youth services? A conjoint analysis

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Abstract

Background: Many youth in the criminal justice system are affected by mental health and/or substance use (MHS) challenges, yet only a minority receive treatment. One way to increase access to MHS care is integrated youth services (IYS), a community-based model of service delivery where youth can access evidence-based treatment for their MHS problems and other wellbeing needs, in one location. However, it is unknown what IYS services justice-involved youth prioritize. **Objective:** This study explored what components of IYS justice-involved youth deem to be the most important in meeting their MHS service needs, in comparison with non-justice-involved youth, by conducting a secondary analysis of data gathered from a larger Ontario-wide study. **Method:** Using a conjoint analysis, $n = 55$ justice-involved youth, and $n = 188$ non-justice-involved youth, completed thirteen choice tasks representing different combinations of IYS. **Results:** Both justice-involved and non-justice-involved youth exhibited preferences for a broad range of core health services, including mental health services, substance misuse counseling, medication management, and physical or sexual health services. They also preferred a broad range of additional support services, in addition to fast access to care in a community setting that specializes in mental health services, with the incorporation of e-health services. Justice-involved youth prioritized working with a trained peer support worker to learn life skills and help them with the services they need. The importance of youth playing a leadership role in making decisions within IYS organizations was also a distinguishing preference among justice-involved youth. **Conclusions:** Tailoring IYS to meet the service preferences of justice-involved youth may enhance service utilization, potentially leading to better outcomes for justice-involved youth and their communities.

Key Words: justice-involved youth, caregiver, patient preferences, integrated care, mental health and substance use

Résumé

Contexte: Nombre de jeunes dans le système de justice pénale sont affectés de problèmes de santé mentale et/ou d'utilisation de substances (SMS), pourtant seule une minorité reçoit un traitement. Une façon d'élargir l'accès aux soins SMS consiste dans les services intégrés à la jeunesse (SIJ), un modèle communautaire de prestation de service dans lequel les jeunes peuvent avoir accès à un traitement fondé sur les données probantes pour leurs problèmes de SMS et autres besoins de bien-être en un seul lieu. Cependant, on ne sait pas à quels SIJ les jeunes impliqués dans la justice accordent la priorité. **Objectif:** La présente étude a exploré quelles composantes des SIJ sont jugées les plus importantes

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par les jeunes impliqués dans la justice pour répondre à leurs besoins de service de SMS, en comparaison avec les jeunes non impliqués dans la justice, au moyen d'une analyse secondaire des données recueillies d'une étude plus vaste à l'échelle de l'Ontario. **Méthode:** À l'aide d'une analyse conjointe, $n = 55$ jeunes impliqués dans la justice, et $n = 188$ jeunes non impliqués dans la justice ont répondu à treize tâches à choix représentant différentes combinaisons de SIJ. **Résultats:** Tant les jeunes impliqués dans la justice que les jeunes non impliqués ont affiché des préférences pour une large gamme de services de santé de base, notamment les services de santé mentale, la consultation pour abus de substances, la gestion des médicaments, et les services de santé physique ou sexuelle. Ils préféraient également une large gamme de services de soutien additionnels, en plus d'un accès rapide aux soins dans un milieu communautaire qui se spécialise en services de santé mentale, avec l'incorporation de services de santé en ligne. Les jeunes impliqués dans la justice accordaient la priorité au travail avec un pair aidant formé pour apprendre les compétences de la vie et les aider dans les services dont ils ont besoin. L'importance pour les jeunes de jouer un rôle de leadership dans la prise de décisions au sein des organisations de SIJ était également une préférence distincte chez les jeunes impliqués dans la justice. **Conclusions:** Adapter les SIJ pour répondre aux préférences de services des jeunes impliqués dans la justice peut améliorer l'utilisation des services, et mener potentiellement à de meilleurs résultats pour les jeunes impliqués dans la justice et leurs communautés.

Mots clés: *jeunes impliqués dans la justice, soignant, préférences des patients, soins intégrés, santé mentale et utilisation de substances*

Introduction

Approximately 25% of Canadian youth experience mental health and/or substance use (MHS) problems (1, 2). These problems are particularly notable in youth involved in the criminal justice system (3, 4). Meta-analytic data show that the prevalence rates of MHS problems in justice-involved youth are high across a range of common disorders (4). The associated challenges of untreated MHS challenges are pervasive, affecting social, academic, and occupational functioning (5, 6). Justice-involved youth are at a particularly high risk for impairment, given the higher prevalence and severity of MHS problems in this population (3, 4, 7, 8).

Effective early intervention can mitigate the effects of MHS challenges and optimize positive youth outcomes (9, 10, 11, 12). For justice-involved youth, MHS treatment can redirect them away from a criminal trajectory (10, 13, 14). Conversely, untreated MHS challenges, particularly substance abuse, increases the risk for criminality and recidivism (e.g., 15, 16). Unfortunately, only a minority of justice-involved youth with MHS problems access treatment (8, 17, 18). For example, a U.S. meta-analytical report showed that about 45% of incarcerated adolescents had received either mental health or substance use services at some point in their lives (18).

Integrated Youth Services

One way to increase access to youth MHS services is integrated youth services (IYS; e.g., 19, 20, 21). An integrated youth service is a community-based model of service delivery through which youth can access evidence-based treatment for their MHS problems and other wellbeing needs,

such as physical health, housing, and education concerns, in one location (20). Youth may be more likely to attend treatment at agencies where integrated services are provided (22).

There is a growing evidence-base demonstrating that an integrated approach that addresses the biopsychosocial needs of justice-involved youth may be best practice in supporting this population (e.g., 23, 24, 25). Given that the IYS model hinges on addressing a spectrum of youth needs (26), IYS are an optimal avenue for implementing services targeting this marginalized group of youth. Furthermore, service utilization, treatment completion (27), and a decrease in recidivism (28), have been associated with justice-involved youth who receive integrated care.

Although IYS are recognized as an optimal strategy in delivering services to youth, determining which services youth want to receive within an IYS is in a nascent stage. Furthermore, despite the various differences in MHS prevalence, presentation, and treatment engagement, it is unknown in what ways justice-involved youth differ from their non-justice-involved counterparts in terms of what their service preferences might be. Use of a conjoint analysis (29) may help to answer this question.

Using Conjoint Analysis to Understand Service Preferences

The conjoint analysis methodology holds that a service can have multiple attributes, and that within each attribute exists multiple levels (29). The conjoint analysis combines different levels of different service attributes in unique service combinations and asks respondents to choose between the proposed service packages in complex decision scenarios.

By imitating complex decision making in the real-world (30), an electronic conjoint analysis prompts participants to make choices about their preferences for various hypothetical service options (29).

The conjoint analysis, and analogous discrete choice experiment, are popular methodologies in psychology research (31). Recently, a DCE study by Henderson and colleagues (32), from which this study conducts a secondary analysis of data, made contributions to understanding what services Ontario youth prefer within IYS. Henderson and colleagues (32) found three latent classes among youth who have nuanced preferences. Specifically, a *Focused Services* class most preferred fast access to MHS services, a *Holistic Services* class prioritized a large range of MHS and social services, and the *Responsive Services* class preferred individually tailored IYS services (e.g., culturally sensitive services). Importantly, this study also found consensus among the three latent classes in that most youth preferred a wrap-around service approach that encompassed a range of physical health, mental health, and social services, in a specialized setting with low wait times and flexible hours.

Despite the findings from the Henderson and colleagues (32) study, it did not examine the preferences of justice-involved youth. Given the potential differences in the MHS prevalence, presentation, and treatment engagement between justice-involved youth and non-justice-involved youth, it is reasonable to expect that justice-involved youth may differ from their counterparts in their service preferences. Tailoring IYS to meet the service preferences of justice-involved youth may ultimately enhance service utilization, potentially leading to better outcomes for justice-involved youth with MHS challenges.

The Present Study

A secondary analysis of data generated from an Ontario-wide conjoint analysis exploring the integrated youth services (IYS) preferences of youth, caregivers, and service provider groups (32, 33, 34) was conducted for this study. This study extended the larger conjoint analysis by contrasting the specific IYS component preferences of justice-involved youth when compared to non-justice-involved youth, in order to guide the design of services that align with justice-involved youths' preferences. The following research question was addressed: What components of IYS do justice-involved youth deem to be the most important in meeting their MHS service needs, in comparison with non-justice-involved youth?

Method

Survey Development

Development of the study has been described in previous published literature by Hawke and colleagues (34). This study was part of a larger study examining integrated youth service preferences across general samples of service-seeking youth, caregivers, and service providers. The conjoint analysis survey tool was developed through collaboration among the lived experience engaged research team, including youth co-researchers. The items were developed pragmatically to include service options that currently exist or were recommended. It was then piloted in July 2019 among four youth at two youth-serving MHS organizations within Ontario.

Participants

A total sample of $N = 243$ youth ($n = 55$ justice-involved youth; $n = 188$ non-justice-involved youth) participated in the current study. In order to participate, youth had to be Ontario residents between the ages of 14 and 29 who self-selected for the study based on the advertised target of youth who have experienced MHS challenges. Previous MHS service use was not required. A total of 297 youth were recruited over a 5 month period from September 2019 to January 2020. Of this sample, 54 youth were excluded from the current study because they did not meet eligibility criteria (i.e., were not Ontario youth with MHS challenges). Of the remaining 243 youth, $n = 55$ endorsed justice-involvement (see below for assessment of justice-involvement). The proportion of justice-involved youth recruited in the current study is consistent with a previous Canadian study whose sample consisted of youth that presented at various clinical and non-clinical service sectors (i.e., 20% to 40%; 35).

Procedure

This study was approved by the Research Ethics Boards of the Centre for Addiction and Mental Health and Toronto Metropolitan University. Participants were recruited as part of the larger, Ontario-wide study by emailing a survey link to a database of over 600 MHS community agencies in Ontario (36). Prior to youth participation, informed consent was obtained through the survey link. Sawtooth Software, Version 9 (37) was used to administer the conjoint analysis. In addition to the conjoint analysis survey, participants also completed a questionnaire regarding sociodemographic information and service use, as well as a mental health screener. Median survey completion time was 17.52 minutes.

Measures

Justice Involvement

Justice involvement was assessed via the sociodemographic questionnaire. Youth were asked “Have you ever had legal system involvement?” Respondent choices were: “No, never”; “Yes, in the past 12 months”; or “Yes, more than a year ago.” Youth who endorsed having legal system involvement within the past year or more and also endorsed at least one of the following met inclusionary criteria for justice-involvement; “Do you have any legal charges?”; “Have you ever been arrested?”; “Are you currently on probation?”

Global Assessment for Individual Needs-Short Screener

The Global Assessment for Individual Needs-Short Screener (GAIN-SS; 38) was administered as a screener for mental health and substance use problems. The GAIN-SS is a 29-item questionnaire that asks youth to indicate if they have experienced problems associated with internalizing disorders, externalizing disorders, substance use disorders, and crime and violence problems. Responses were recorded using the following: 4 = *past month*, 3 = *two to three months ago*, 2 = *four to 12 months*, 1 = *1+ years ago*, and 0 = *never*. This measure has demonstrated good internal consistency ($\alpha = .96$), excellent validity ($r = .84$ to $.94$), sensitivity (90%), and specificity (92%; 38). Based on published guidelines, a clinical cut-off score for the *Internalizing Scale* was set at four (39), a clinical cut-off score for the *Externalizing and Crime and Violence Scale* was set at three (38), and a clinical cut-off score for the *Substance Use Disorder Scale* was set at two (40). Youth responses to the GAIN-SS were also used to cross-validate the study’s approach to defining justice-involvement (see Results, below).

Conjoint Analysis

The conjoint analysis was composed of 12 attributes with four levels each. Sawtooth Software, Version 9 (37) randomly produced 999 versions of the survey and randomly assigned participants to complete one of the created versions. Thirteen choice tasks were shown to each participant, with three concepts per task, and three levels per concept (see Figure 1). One task was identical across all participants, in order to test for respondent reliability and validity (i.e., “hold-out” task).

Data Analyses

Stage 1. A first-choice simulation was used to test the reliability of the conjoint analysis, with justice-involvement entered as a covariate. How well the model predicts participant responses was determined by comparing caregiver

responses on the fixed-choice task (i.e., “hold-out” task) to predicted participant responses based on utility values generated by Hierarchical Bayes (HB) estimates.

Stage 2. A hierarchical Bayes (HB) analysis was conducted in Sawtooth Software Inc. (37) in order to determine Attribute Importance Scores (i.e., an indication of the relative importance of each attribute compared to the other attributes), with justice-involvement entered as a covariate. A MANOVA was performed, with justice-involvement as the independent variable and the Importance Scores for each attribute as the dependent variables to determine between-group differences in attribute preference. Where MANOVAs were significant, univariate ANOVAs with Bonferroni corrected p -values were run to determine whether attribute preferences were statistically different among groups.

Stage 3. Standardized, zero-centered individual utility values (which indicate the preference for each level within each attribute) generated by HB through Sawtooth Software (37) were used to analyze group differences in preferences among levels within each attribute. A series of MANOVAs was conducted in order to determine which levels distinguish participant groups, with justice-involvement as the independent variable and utility values for each level within an attribute as the dependent variables. Where MANOVAs were statistically significant, univariate ANOVAs with Bonferroni corrections were computed to identify the significant differences.

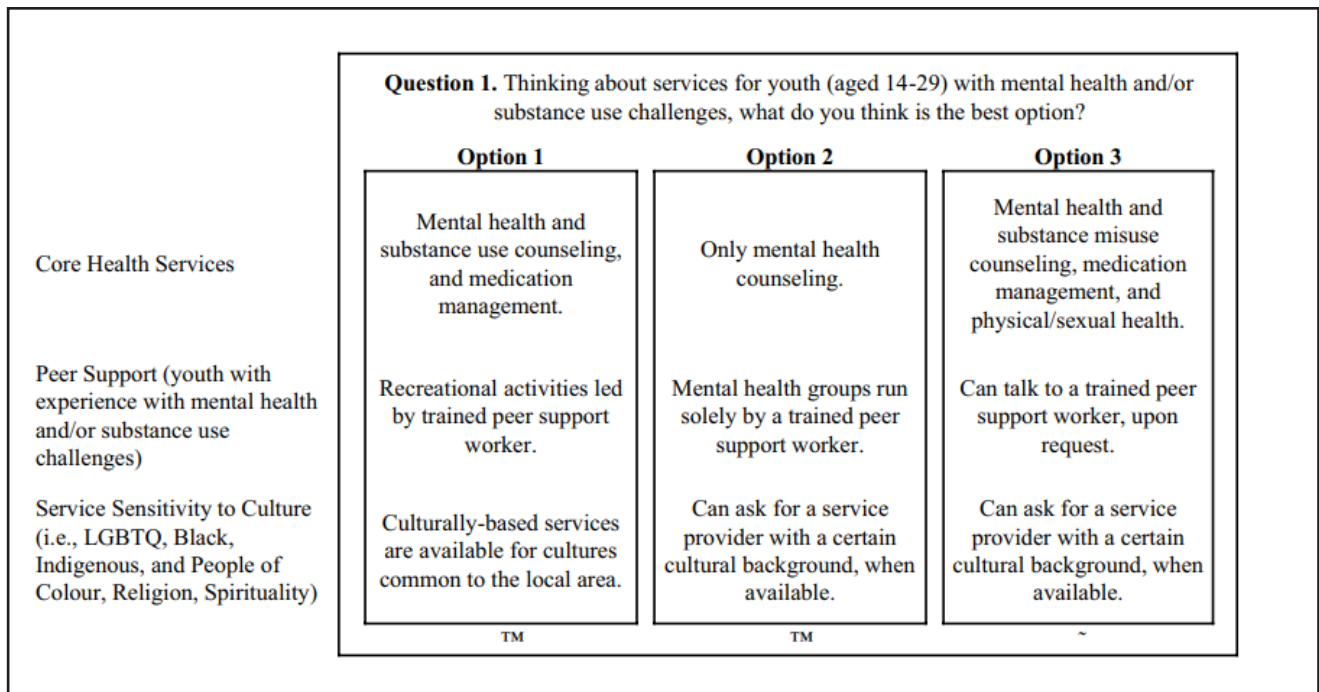
Stage 4. A randomized first choice simulation was run; this is a simulation analysis that predicts what percentage of justice-involved and non-justice-involved youth would prefer specified combinations (or *scenarios*) of IYS levels.

Results

Participant Characteristics

Justice-involved and non-justice-involved youth differed on most sociodemographic factors, with the exception of age and race/ethnicity. Justice-involved youth ($M_{age} = 23.02$, $SD = 2.39$) and non-justice-involved youth ($M_{age} = 22.35$, $SD = 3.60$) were similar in age, with no statistically significant difference between groups, $t(132.26) = 1.62$, $p = .108$, $d = 0.22$. There were also no statistically significant differences in race/ethnicity between groups, with the majority of justice-involved and non-justice-involved youth being White (83.6% and 65.4%, respectively). Sociodemographic information with Chi-square statistics, effect sizes, and Bonferroni-corrected post-hoc tests are displayed in Table 1.

Figure 1. A sample choice task in the conjoint analysis



Conjoint Analysis

Stage 1. A first-choice simulation accurately predicted participant responses at a rate of 71.2%, which is substantially higher than chance (i.e., 33.3%), suggesting reliability of the HB model's estimates.

Stage 2. The relative importance of each attribute by group is presented in Table 2. The top three attributes for justice-involved youth, in order from most to least important, were: (1) Core Health Services, (2) Other Services, and (3) Wait Time. The least important attributes for justice-involved youth were (1) Caregiver Involvement, (2) Engagement, and (3) Age Range. For non-justice-involved youth, the top three attributes were: (1) Core Health Services, (2) E-Health Services, and (3) Other Services, with the least important attributes being (1) Age Range, (2) Engagement, and (3) Peer Support.

Pillai's Trace test was significant, $V = .481$, $F(11, 231) = 19.42$, $p < .001$, $\eta_p^2 = .481$, indicating statistically significant group differences in the relative importance of attributes. Univariate ANOVAs with Bonferroni corrected p -values demonstrated statistically significant between-group differences in the importance of the following attributes: Caregiver Involvement (small effect), Peer Support (large effect), E-Health Services (small to medium effect), and Engagement (small to medium effect). Caregiver Involvement

and E-Health Services attributes were significantly less important to justice-involved youth when compared to non-justice involved youth; in contrast, Peer Support and Engagement attributes were given higher importance among justice-involved youth compared to non-justice involved youth.

Stage 3. Results for the utility values are presented in Table 3. Statistically significant, mainly large, effects were found within all 12 attributes, with the exception of the attribute Other Services, where no statistically significant group differences were found. Results for each of the 12 attributes are presented below.

- 1. Core Health Services.** Both groups most preferred "Mental health and substance misuse counseling, medication management, and physical/sexual health" over all other combinations of core health service options, with no significant differences in preference between groups.
- 2. Other Services.** Both groups most preferred a "Choice of education, employment, housing, income support, and legal support services" within this level, with no significant differences in preference between groups.

Table 1. Sociodemographic and clinical characteristics of justice-involved (YJ) and non-justice-involved (non-YJ) participants, with significance tests and effect sizes

Group	YJ (n = 55) % (n)	Non-YJ (n = 188) % (n)	χ^2 (df)	p	Φ
Gender			47.30 (2)	< .001	.442 [†]
Woman	22.2 (12)*	64.9 (122)*	46.24 (1)	< .001	
Man	77.8 (42)*	26.6 (50)*	31.36 (1)	< .001	
Transgender/non-binary	0 (0)	8.5 (16)	4.84 (1)	.028	
Race/Ethnicity			8.46 (4)	.076	.187 [†]
White	83.6 (46)	65.4 (123)			
Other	7.3 (4)	11.7 (22)			
Asian	1.8 (1)	12.8 (24)			
Black	5.5 (3)	5.9 (11)			
Indigenous	1.8 (1)	4.3 (8)			
Socioeconomic Status			25.03 (3)	< .001	.322 [†]
Live comfortably	14.8 (8)	30.3 (57)	5.29 (1)	.022	
Meets needs with a little left	77.8 (42)*	41.0 (77)*	23.04 (1)	< .001	
Just meet basic expenses	3.7 (2)*	25.5 (48)*	12.25 (1)	< .001	
Does not meet basic expenses	3.7 (2)	3.2 (6)	.040 (1)	.842	
Region of Residence			26.29 (2)	< .001	.333
Rural to Small Population	49.1 (27) *	18.1 (33)*	21.16 (1)	< .001	
Medium Population	27.3 (15)	23.6 (43)	.36 (1)	.549	
Large Urban Population	23.6 (13)*	58.2 (106)*	20.25 (1)	< .001	
Physical Health			11.56 (1)	.001	.218
Good to excellent	94.5 (52)	72.9 (137)			
Fair to poor	5.5 (3)	27.1 (51)			
Mental Health			15.43 (1)	< .001	.252
Good to excellent	83.6 (46)	54.3 (102)			
Fair to poor	16.4 (9)	45.7 (86)			
Student Status			4.19 (1)	.041	.132
Part- or full-time enrollment	70.4 (38)	54.8 (103)			
Not enrolled	29.6 (16)	45.2 (85)			
Education Level			6.69 (2)	.035	.167
High school or less	20.0 (11)	27.6 (51)	1.21 (1)	.271	
Some college/university	54.5 (30)	35.1 (65)	6.76 (1)	.009	
Graduated college/university	25.5 (14)	37.3 (69)	2.56 (1)	.110	
Employment Status			12.36 (3)	.006	.226
Full-time	22.6 (12)	33.5 (63)	2.25 (1)	.134	
Part-time	52.8 (28)*	28.2 (53)*	11.56 (1)	< .001	
Unemployed	11.3 (6)	24.5 (46)	4.41 (1)	.036	
Other	13.2 (7)	13.8 (26)	.010 (1)	.920	
Housing			32.83 (4)	< .001	.3681
Lives independently	3.7 (2)	11.7 (22)	2.89 (1)	.089	
With a partner	59.4 (32)*	19.7 (37)*	32.49 (1)	< .001	
With family	27.8 (15)*	52.7 (99)*	10.24 (1)	< .001	
With friends	5.6 (3)	11.7 (22)	1.69 (1)	.194	

continued

Table 1. continued					
Group	YJ (n = 55) % (n)	Non-YJ (n = 188) % (n)	χ^2 (df)	p	Φ
GAIN-SS**					
Internalizing Disorder	96.1 (49)	78.9 (146)	8.2 (1)	.004	.186
Externalizing Disorder	96.4 (53)	66.5 (121)	19.32 (1)	< .001	.286
Substance Use Disorder	90.9 (50)	43.1 (81)	39.17 (1)	< .001	.401
Crime and Violence Problems	78.2 (43)	14.9 (28)	82.41 (1)	< .001	.582
*Statistically significant after Bonferroni-corrected post-hoc test					
**Proportion meeting the cutoff with scores suggesting a high likelihood of meeting diagnostic criteria or needing support in that domain.					
¹ Cramer's V (V ϵ) was used as a measure of effect size due to small cell sizes.					

Table 2. The relative importance of each IYS attribute for justice-involved and non-justice-involved youth, and between-group MANOVA Pillai's Trace statistic							
Attribute	Justice-Involved n = 55		Non-Justice-Involved n = 188		F (df)	p	ηp^2
	M	SD	M	SD			
1. Core Health Services	10.10%	3.48	10.86%	3.05	2.53 (1)	.113	.010
2. Other Services	10.03%	3.42	9.69%	2.66	.628 (1)	.429	.003
3. Caregiver Involvement	7.27%	2.64	8.44%	2.53	8.88 (1)	.003*	.036
4. Peer Support	9.08%	2.59	4.87%	2.04	159.60 (1) ^a	< .001*	.398
5. Cultural Sensitivity	8.22%	3.49	8.82%	2.71	1.83 (1) ^a	.178	.008
6. E-Health Services	8.49%	2.98	10.19%	2.90	14.51 (1)	< .001*	.057
7. Age Range	6.36%	2.40	6.67%	2.29	.792 (1)	.375	.003
8. Time of Appointments	8.32%	3.52	8.23%	5.53	.044 (1) ^a	.835	.000
9. Wait Time	9.62%	3.89	9.06%	2.46	1.66 (1) ^a	.199	.007
10. Location	7.86%	2.46	8.77%	2.30	6.38 (1)	.012	.026
11. Engagement	7.21%	3.32	5.67%	2.77	11.90 (1)	.001*	.047
12. Information Sharing	7.46%	3.07	8.74%	2.88	8.18 (1)	.005	.033
Total	100%		100%				
^a Levene's test of equality of error variance statistically significant							
*Statistically significant at the Bonferroni corrected p-value of .0042							

3. Caregiver Involvement. Both groups showed the greatest preference for the level “Caregivers involved in family counseling with youth, with youth consent,” with no statistically significant differences in preference between groups.

4. Peer Support. Both groups most preferred that “Youth can be matched to an ongoing trained peer support worker to learn life skills and help them with services they need.” However, justice-involved youth found this level significantly more desirable than non-justice-involved youth, representing a large effect.

5. Cultural Sensitivity. Justice-involved youth demonstrated the strongest preference for the level “Can ask for a service provider with a certain cultural background, when available.” Non-justice-involved youth demonstrated the strongest preference for the level “Services are culturally sensitive and trauma-informed,” in contrast, justice-involved youth preferred this level least, with differences between groups reaching statistical significance and a large effect size.

6. E-Health Services. Non-justice-involved deemed “E-health services are offered 24/7 alongside in-person services during office hours” as most preferable, however, justice-involved youth

found it significantly less preferable, giving most preference to the level “Can schedule or reschedule appointments via email, text or online.” Notably, “E-health services are offered 24/7 alongside in-person services during office hours” was the most preferred level among all 48 levels for non-justice-involved youth.

7. **Age Range.** Both groups most preferred “Services for ages 12-29, in a setting that also has services for adults 29+.” However, non-justice-involved youth preferred this age range significantly more than justice-involved youth.
8. **Time of Appointments.** Statistically significant group differences were found across all four levels within this attribute, with small to large effect sizes. Justice-involved youth showed preference for appointment times Monday to Friday, 9AM-5PM. In contrast, non-justice-involved youth showed preference for Monday to Friday, 9AM-9PM.
9. **Wait Time.** Statistically significant group differences were found across all four levels within this attribute, with predominantly large effect sizes. Justice-involved youth most preferred to “See a counselor for the first time after about 72 hours.” In contrast, non-justice-involved youth most preferred seeing a counselor immediately, with longer wait times given increasingly less preference across the levels.
10. **Location.** Both groups most preferred that the location of services be offered in a “Building or office in the community that specializes in mental health services,” however, non-justice involved youth preferred this significantly more than justice-involved youth.
11. **Engagement.** Statistically significant group differences were found across all four levels within this attribute, with small to large effect sizes. Both groups most preferred that “Youth and caregivers play a leadership role in making decisions for the organization,” with justice-involved youth preferring this significantly more than non-justice-involved youth. Notably, this preference to play a leadership role was among justice-involved youth’s top five most preferred levels.
12. **Information Sharing.** Justice-involved youth preferred that “All personal information is available to caregivers, with youth consent” most, while non-justice involved youth found this significantly less preferable, representing a large effect. Rather, non-justice-involved youth preferred that “Youth

and service provider work together to decide what personal information to share with caregivers and how that can be helpful,” while justice-involved youth found this significantly less preferable, also representing a large effect.

Stage 4. Results from the simulation are presented in Table 4. The randomized first choice simulation demonstrated that when justice-involved youths’ top preferred level within each of the 12 attributes is included in a hypothetical IYS scenario (i.e., *Scenario 1*), 71.3% of justice-involved youth preferred the model, compared to a mere 6.4% of non-justice-involved youth. When non-justice-involved youths top preferred level within each of the 12 attributes was included in a hypothetical IYS scenario (i.e., *Scenario 2*), preference for the model increased substantially among non-justice-involved youth, to 93.6%. In contrast, preference for the model decreased among non-justice-involved youth, to 28.7%.

Discussion

This study used a conjoint analysis to examine the IYS preferences of justice-involved youth, contrasting their preferences to those of non-justice-involved youth. The ultimate goal of this study was to understand what service aspects may promote access to care in justice-involved youth, in order to inform IYS design in Ontario.

This study revealed consensus on a variety of top IYS preferences among justice-involved and non-justice involved youth, which can inform IYS models in Ontario. It is clear that justice-involved and non-justice-involved youth alike wish to see an array of core health services that includes mental health and substance misuse counseling, medication management, and physical/sexual health. This is consistent with findings from the larger Ontario-wide study (32), from which this study’s data are drawn, as well as other literature exploring the service preferences of youth (22). Furthermore, all youth are unanimous in their preference for a broad range of additional IYS services, namely, education, employment, housing, income support, and legal support services. Because continued disengagement in these domains may exacerbate MHS difficulties (41), connecting both justice-involved and non-justice-involved youth with support in these areas is paramount. In the context of strained resources and service limitations, these results highlight areas for service prioritization to best respond to the service preferences of justice-involved youth.

Findings from this study also demonstrate that fast access to care is a priority among both justice-involved and non-justice-involved youth, which reflects literature to date (32, 42, 43). Incorporation of e-health services was also a

Table 3. Utility values of IYS levels for justice-involved and non-justice-involved youth, and between-group MANOVA Pillai's Trace statistic on attributes with follow-up ANOVA results on levels

Attribute Levels	Justice-Involved n = 55		Non-Justice-Involved n = 188		V	F (df)	p	ηp2
	M	SD	M	SD				
1. Core Health Services					.043	3.59 (3,239)	.014	.043
Only mental health counseling.	-42.57	43.78	-60.95	35.69		10.12 (1) ^a	.002*	.040
Mental health and substance misuse counseling.	-10.34	26.79	-9.55	22.17		.049 (1)	.826	.000
Mental health and substance misuse counseling, and medication management.	20.58	31.26	24.66	20.41		1.30 (1) ^a	.255	.005
Mental health and substance misuse counseling, medication management, and physical/sexual health.	32.32	48.90	45.84	42.37		4.03 (1) ^a	.046	.016
2. Other Services					.019	1.58 (3,239)	.195	.019
Education and employment services.	-11.87	28.31	-14.25	23.96				
Housing, shelter and income support services.	18.63	26.66	12.34	24.57				
Legal support services.	-48.53	37.70	-45.86	32.13				
Choice of education, employment, housing, income support, and legal support services.	41.76	42.26	47.77	36.79				
3. Caregiver Involvement					.426	59.18 (3,239)	<.001	.426
No caregiver involvement.	2.12	29.20	-47.24	23.16		170.70 (1) ^a	<.001*	.415
Caregivers receive own counseling.	2.35	35.40	15.08	32.96		6.14 (1)	.014	.025
Caregivers involved in family counseling with youth, with youth consent.	19.27	30.75	29.18	27.31		5.28 (1)	.022	.021
Caregivers involved in decisions regarding youth counseling, with youth consent.	-23.74	36.50	2.97	30.70		29.49 (1)	<.001*	.109
4. Peer Support					.401	53.24 (3,239)	<.001	.401
Recreational activities led by trained peer support worker.	-46.20	25.28	-13.74	21.09		91.83 (1)	<.001*	.276
Can talk to a trained peer support worker, upon request.	-2.74	24.61	-10.22	19.23		5.63 (1) ^a	.018	.023
Mental health groups run solely by a trained peer support worker.	-1.09	29.30	2.07	21.02		.79 (1) ^a	.375	.003
Youth can be matched to an ongoing trained peer support worker to learn life skills and help them with services they need.	50.03	28.66	21.90	19.48		70.37 (1) ^a	<.001*	.226
5. Cultural Sensitivity					.185	18.09 (3,239)	<.001	.185
Cultural background is not considered when picking a service or service provider.	7.06	43.68	-38.69	44.14		45.94 (1)	<.001*	.160
Can ask for a service provider with a certain cultural background, when available.	9.19	35.83	10.33	24.49		.073 (1) ^a	.787	.000
Services are culturally sensitive and trauma-informed.	-20.08							
Culturally-based services are available for cultures common in the local area.		48.88	24.78	41.84		45.23 (1) ^a	<.001*	.158

Table 3. Continued

Attribute Levels	Justice-Involved n = 55		Non-Justice-Involved n = 188		V	F (df)	p	η^2
	M	SD	M	SD				
6. E-Health Services					.194	19.13 (3,239)	<.001	.194
No e-health or electronic services.	-29.17	33.40	-53.51	27.82	29.64 (1) ^a	<.001*	.110	
Can schedule or reschedule appointments via email, text or online.	28.90	29.58	21.69	27.09	2.89 (1)	.091	.012	
E-health services are offered 24/7 alongside in-person services during office hours.	17.44	45.21	52.87	34.72	38.35 (1) ^a	<.001*	.137	
All services are delivered only through a website, e-mail, text, or phone app.	-17.17	33.83	-21.06	25.50	.845 (1) ^a	.359	.003	
7. Age Range					.302	34.42 (3,239)	<.001	.302
Services for ages 12-24, in a youth-only setting.	-16.03	31.44	-22.73	23.64	2.91 (1) ^a	.089	.012	
Services for ages 12-29, in a youth-only setting.	-10.50	24.99	17.70	20.11	74.57 (1) ^a	<.001*	.236	
Services for ages 12-24, in a setting that also has services for children 0-12.	10.22	32.54	-20.93	28.32	48.04 (1) ^a	<.001*	.166	
Services for ages 12-29, in a setting that also has services for adults 29+.	16.31	25.39	25.95	24.77	6.37 (1)	.012*	.026	
8. Time of Appointments					.525	88.15 (3,239)	<.001	.525
Monday to Friday, 9AM-5PM.	22.50	36.13	-37.21	25.55	189.85 (1) ^a	<.001*	.441	
Monday to Friday, 9AM-9PM.	3.55	31.89	-6.04	25.17	5.43 (1) ^a	.021*	.022	
Monday to Friday, 9AM-9PM, and Saturday, 9AM-5PM.	-3.90	24.37	29.80	21.01	101.64 (1)	<.001*	.297	
24/7.	-22.15	57.66	13.45	47.45	21.64 (1) ^a	<.001*	.082	
9. Wait Time					.466	69.49 (3,239)	<.001	.466
See a counselor for the first time immediately, during office hours.	14.46	32.42	46.23	26.70	54.46 (1) ^a	<.001*	.184	
See a counselor for the first time after about 72 hours.	32.11	37.65	18.48	33.40	6.68 (1)	.010*	.027	
See a counselor for the first time after about 1 month.	-56.15	37.27	-24.53	30.81	40.59 (1) ^a	<.001*	.144	
See a counselor for the first time after more than 1 month.	9.57	32.15	-40.18	26.95	132.46 (1) ^a	<.001*	.355	
10. Location					.199	19.78 (3,239)	<.001	.199
Building or office in the community that specializes in mental health services.	24.92	31.82	39.42	23.42	13.71 (1) ^a	<.001*	.054	
Youth cafe and recreation centre.	5.32	35.63	23.40	30.13	14.08 (1) ^a	<.001*	.055	
Hospital or doctor's office.	-1.59	35.05	-34.07	33.87	38.53 (1)	<.001*	.138	
School setting.	-28.65	31.14	-28.75	26.16	.001 (1) ^a	.981	.000	

Table 3. Continued								
Attribute Levels	Justice-Involved n = 55		Non-Justice-Involved n = 188		V	F (df)	p	ηp ²
	M	SD	M	SD				
11. Engagement					.151	14.14 (3,239)	<.001	.151
Youth and caregivers give feedback, e.g., anonymous surveys.	-27.64	40.31	-1.34	35.14	22.26 (1)	<.001*	.085	
Youth and caregivers are on staff at the organization.	0.12	24.15	-20.38	22.19	34.87 (1)	<.001*	.126	
Youth and caregivers are on an advisory group that gives feedback on services and evaluation.	-1.48	21.73	7.11	16.54	9.87 (1) ^a	.002*	.039	
Youth and caregivers play a leadership role in making decisions for the organization.	29.01	31.07	14.62	27.09	11.21 (1)	<.001*	.044	
12. Information Sharing					.285	31.83 (3,239)	<.001	.285
No sharing of personal information with caregivers.	-27.31	34.56	-31.72	28.74	.909 (1) ^a	.341	.004	
All personal information is available to caregivers, with youth consent.	19.20	31.99	-20.11	28.68	75.77 (1)	<.001*	.239	
Service provider decides what information to share with caregivers, with youth consent.	2.01	29.74	1.62	23.72	.010 (1)	.919	.000	
Youth and service provider work together to decide what personal information to share with caregivers and how that can be helpful.	6.11	38.17	50.21	33.96	67.77 (1)	<.001*	.219	
^a Levene's test of equality of error variance statistically significant *Statistically significant at the Bonferroni corrected p-value of .0125								

Table 4. Randomized first choice simulation results of each group's ideal IYS scenario, with standard errors and 95% confidence intervals						
	Non-Justice-Involved Youth n = 55			Justice-Involved Youth n = 188		
	Shares of Preference	SE	95% CI	Shares of Preference	SE	95% CI
Scenario 1	71.3%	5.2%	61.2%-81.4%	6.4%	1.4%	3.6%-9.1%
Scenario 2	28.7%	5.2%	18.6%-38.8%	93.6%	1.4%	90.9%-96.4%
SE = Standard Error						
CI = 95% Confidence Interval						
Scenario 1 refers to when the most preferred level of justice-involved youth is implemented across all 12 attributes						
Scenario 2 refers to when the most preferred level of non-justice-involved youth is implemented across all 12 attributes						

high preference among justice-involved and non-justice-involved youth, consistent with other research exploring service preferences of youth across justice-involved and non-justice-involved populations (44). Finally, both youth groups preferred that the location of services be offered in a community setting that specializes in mental health services, in comparison with school, medical, and community settings. This is consistent with Henderson and colleagues (32) findings that youth across latent classes prefer community-based care, as well as other IYS models that use community-based settings to increase accessibility to MHS care (20, 45).

While support for the above foundational aspects to IYS care was found, so were preferences that clearly distinguish justice-involved youth from their non-justice-involved counterparts. Among the most important of these distinctions were justice-involved youth prioritization of peer support, and engagement in IYS by playing a leadership role. Indeed, justice-involved youth strongly preferred ongoing support from a trained peer support worker. This parallels research that demonstrates the importance of peer support at this developmental stage (46), and the preference of many youth to speak with peers rather than psychologists or psychiatrists in mental health services (47), which appear to be particularly strong among justice-involved youth. Notably, positive peer mentorship, often provided by an older youth with former involvement in the criminal justice system (48, 49), may serve to reduce MHS stigma, a major barrier to treatment among justice-involved youth. Furthermore, the limited research conducted in this area suggests that peer mentorship of justice-involved youth may improve protective factors and reduce recidivism (48).

Engagement in an IYS leadership role was also a preference among justice-involved youth. This preference is distinct from non-justice-involved youth, in which engagement in any form was among the lowest preferred service characteristics. Engaging justice-involved youth in an IYS leadership role could have substantial benefits, including skill acquisition, empowerment, and social engagement (50, 51). Engagement may also impact positive development through the mentorship of prosocial adults, which in turn can foster a sense of connectedness to community and increase social trust (52, 53). Youth engagement in the design and delivery of IYS services may also make services more relevant to other youth (54), potentially enhancing the effectiveness and efficiency of services.

Model Simulation

Findings from model simulation support the need for flexible options that would enhance engagement among justice-involved youth. For example, an IYS that includes the option to work with an ongoing trained peer support worker would be attractive to nearly three-quarters of justice-involved youth, suggesting that services that incorporate this feature may increase the likelihood of engaging justice-involved youth and hence, the outcomes they achieve. However, an IYS model based on justice-involved youth preferences would be far less acceptable to non-justice-involved youth. Conversely, an IYS model based on non-justice-involved youth preferences would be acceptable to only 28.7% of justice-involved youth based on the simulation. This highlights the potential drawbacks in approaching Ontario IYS models as a “one-size-fits-all” service, and the benefit of creating flexible options for justice-involved and non-justice-involved youth in one location.

The need for flexible integrated services is consistent with Henderson and colleagues (32) call for a multitude of diverse services to meet the IYS preferences of Ontario youth. This finding also parallels literature regarding the importance of youth accessing fundamental elements of IYS (e.g., fast access to MHS services), as well as the incorporation of specific services based on youth need and local feasibility (e.g., peer support; 20). Fortunately, justice-involved and non-justice-involved youth have consensus on many of their top priorities, therefore the incorporation of flexible options would be relatively minor. For example, in addition to options for peer support and engagement, e-health services may be used for appointment scheduling (a preference of justice-involved youth), or to supplement in-person services (a preference of non-justice-involved youth). Constellations of effective services that align with the preferences of justice-involved youth hold the potential to attract a greater proportion of youth to access services, to encourage them to stay in services longer, and to produce more favorable outcomes.

Limitations

A limitation to this study is that justice-involved youth participants were not representative of the general justice-involved youth population in Ontario (55, 56). Most justice-involved youth in the present sample were White, reported a somewhat high SES, lived in rural to small population centres, and were engaged in employment and education, which is not consistent with Canadian statistics (56). These sociodemographic irregularities may be a sampling issue. For example, recruitment flyers for these studies were circulated among community agencies that serve youth with MHS needs. If justice-involved youth are not engaging in

these agencies, recruitment efforts would not have reached them. Furthermore, it is also possible that fewer black, Indigenous, and people of colour (BIPOC) who are justice-involved youth do not identify as having MHS challenges (57). Not identifying as having MHS challenges may result in self-selection out of the study. It is imperative that future research continue to develop strategies to engage justice-involved youth, specifically BIPOC youth samples, in order to give marginalized populations a voice and increase the ecological validity of findings (51).

A further limitation to these studies is that a small sample size and low statistical power prohibited participants from being matched on sociodemographic factors such as gender, where there was a large unequal representation between justice-involved and non-justice involved youth groups. Similarly, moderator analyses could not be conducted to analyze within-group differences in various sociodemographic variables. Although the study was piloted with youth and appeared to be understood, it is possible that the formulation of the question introduced a confound by querying the participants about their preferences for youth in general rather than specifically for themselves. It should also be noted conjoint analysis findings should not be the sole source of information to design services, as local engagement and other sources of evidence are also paramount. Future research may wish to address these limitations in order to answer research questions with more precision.

Data for this study were collected prior to the COVID-19 pandemic. Impacts of the pandemic on youth mental health and substance use (58), as well as changes to service delivery models in general (57, 58, 59), could have an impact on the future MHS service preferences of youth and caregivers. As such, a replication of this study in post-pandemic times is warranted.

Conclusion

This was the first known study to examine the specific IYS component preferences of justice-involved youth. Like their non-justice-involved counterparts, justice-involved youth exhibited preferences for fast access to a broad range core health and additional services in a community setting, that incorporates e-health services. These service characteristics should form the foundation of IYS care in Ontario. In addition, the option to work with a trained peer support worker, and to play a leadership role in making decisions for IYS organizations, may be important to engage justice-involved youth in a trauma-informed manner that enables them to contribute safely. An IYS model that is designed to include these elements, in addition to flexible options in peer support and engagement, has the potential to enhance

service utilization in justice-involved youth, a notoriously underserved population.

Conflict of Interest

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