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# Infusing wellness opportunities into integrated youth services

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## Abstract

**Background** Appropriate health services and health promotion strategies for young people with mental health and substance use (MHSU) concerns are critical for recovery. Foundry, an integrated youth services (IYS) initiative for young people ages 12–24 in British Columbia (BC), Canada, has recently added leisure and recreational activities (referred to as the Wellness Program) into its services. The objectives of this study were to: (1) describe how the Wellness Program was implemented over a two-year period into IYS (2) provide an overview of what the Wellness Program is, who accessed the program since inception and initial evaluation results.

**Methods** This study was part of the developmental evaluation of Foundry. A phased approach was used to implement the program at nine centres. Data was accessed from Foundry's centralized platform 'Toolbox' and included activity type, number of unique youth and visits, additional services sought, information about how youth found out about the centre, and demographics. Qualitative data was also accessed from focus groups ( $n=2$ ) conducted with young people ( $n=9$ ).

**Results** Over the two-year period, 355 unique youth accessed the Wellness Program, with 1319 unique visits. Almost half (40%) of youth identified the Wellness Program as the first point of access to Foundry. A total of 384 different programs were offered targeting five wellness domains (physical, mental/emotional, social, spiritual, and cognitive/intellectual). The majority of youth identified as young girls/women (58.2%), 22.6% as gender diverse, and 19.2% as young men/boys. The mean age was 19 years, and most participants were between the ages of 19–24 years (43.6%). From the thematic analysis of focus groups, we found young people enjoyed the social aspect of the program with peers and facilitators, and identified program improvements that are being considered as the program grows.

**Conclusions** This study provides insight into the development and implementation of leisure-based activities (known as the Wellness Program) into IYS and can be used as a guide by international IYS initiatives. The initial reach of programs over two years is promising, and these programs are acting as a potential gateway for young people to access other health services.

**Keywords** Wellness, Youth, Mental health, Substance use, Integrated youth services, Health promotion, Leisure activities

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## Background

Mental health and substance use (MHSU) challenges present early in life, as 50–70% develop during childhood or adolescence [1], and the peak age of onset is 14.5 years [2]. In Canada, MHSU disorders affect 1 in 4 youth, with 12–24-year-old individuals experiencing the highest incidence of MHSU disorders of any age group [3, 4]. Population mental health concerns exist across all ages and have been exasperated by the COVID-19 pandemic, with some suggesting a global mental health crisis [5, 6]. Young people are a particularly at-risk population during this time with increasing mental health concerns [7, 8]. It has been suggested that young people have been disproportionately affected by the pandemic with employment loss, social isolation, and loss of infrastructures and supports such as school closures [9, 10]. Stemming from this, an international call has been made to invest in services to support the long-term mental health needs of young people, including health promotion/prevention, early intervention, and crisis care [6, 10]. As we navigate pandemic phases and recovery, it is vital now more than ever to intervene with the full range of MHSU services and interventions including health promotion strategies for young people.

Leisure-based activities (defined as voluntary and non-workplace or educational aspects of social life) have been highly debated throughout the COVID-19 pandemic [11]. Norman and colleagues [11] analyzed how leisure activities were understood and represented in media coverage during the pandemic in Canada. The authors acknowledge the contention about restrictions and closures perpetuating anger and frustrations, but also about leisure activities being a source of hope when re-opening and their potential for the health and economic recovery for Canadians. Leisure activities have the potential to play an important role for health promotion and prevention of worsening mental and physical health for young people. They can reduce stress, provide protective health benefits, play a role in recovery from mental illness [12], improve self worth and self-esteem [13], and promote quality of life [14]. Jae-Kim and Cho [15] identified the potential role leisure activities can play during the current pandemic and future pandemics in South Korea. A Finnish study identified that high social leisure time in adolescence was associated with a lower incidence of psychiatric disorders, particularly affective, anxiety, and substance use disorders [16]. Participation in leisure-based activities with peers has been shown to reduce feelings of social isolation and to promote psychological stability during the pandemic [15]. However, activities with peers need infection control and modification. For instance, physical activity (bodily movement that results in energy

expenditure) can be modified to either do safely with peers (e.g., outdoors, virtually from home) or individually. Physical activity has been recommended as an important strategy to reduce the increased MHSU challenges brought on by the pandemic and lockdowns [17, 18], and acknowledged as a valuable health promotion tool for young people [19–21].

Integrated Youth Services (IYS) are community-based (preferably in a single location), youth- and family-centred, and provide multidisciplinary care in a youth-friendly environment [6, 22, 23]. The needs of young people and their families/caregivers are prioritized in the design of services and care [24]. IYS initiatives include headspace™ in Australia [25], Jigsaw™ in Ireland [26], Les Maisons des Adolescents in France [27], and Youth One Stop Shops (YOSS) in New Zealand [28]. Canadian IYS initiatives include Foundry [24, 29] and Youth Wellness Hubs Ontario (YWHO) [29]. IYS are a model of care that can also provide leisure-based activities as part of their services. Participation in leisure is identified as a goal for many youths accessing IYS [24], however little is known about the implementation of leisure-based activities for health promotion within this model. Leisure-based activities encompass and will be referred to as the Wellness Program for the purpose of this study. As part of developmental evaluation, the objectives of this study were to (1) describe how the Wellness Program was implemented and evaluated over a two-year period into IYS in British Columbia (BC), Canada, and (2) provide an overview of what the Wellness Program is, who accessed the program since inception, and initial program evaluation results.

## Methods

### Context

Foundry is an IYS that provides care for young people ages 12–24 years in BC, Canada [24] and as of May 2023, fifteen Foundry centres are open, with seven more in development. The centres exist in communities representative of small, medium, and large population centres in Canada [30]. Virtual services also support youth from across the province [8]. Foundry has five core service streams, including mental health, substance use, peer support, physical (including sexual) health, and social services. Based on an internal 2019 survey of 10,000 youth, Foundry identified a need to build leisure and physical activity into services not only as an adjunct to MHSU supports but in recognition that holistic care is central to individual wellness. With the support of private donors, Foundry implemented the Wellness Program at nine centres. Communities were asked to co-design programming that met the needs of youth accessing their centres.

## Study design

Ethics approval was received from the University of British Columbia (ID: H21-01510). This study was done as a component of Foundry's developmental evaluation which has supported the implementation of Foundry's complex, diverse, and innovative interventions and allowed the capacity for real time decision-making to change and adapt the evolving system [31, 32]. The program was designed and implemented over six phases (defined below) and evaluated using mixed methods primarily in Phase 5 and Phase 6. To support implementation, a multidisciplinary team of researchers, a research and evaluation associate, youth peer evaluators, and various leadership team members was created at Foundry Central Office (FCO), Foundry's central administrative and implementation team.

## Program design and implementation

The following describes the phased approach used to design and implement the Wellness Program, and is a summary from a written log kept by the project coordinator during the timeline provided.

### *Phase 1: Community asset development September-October 2019*

Communities were given the opportunity to assess the needs of youth in their region. The project coordinator informed centre staff at eight Foundry centres of the initiative to implement the Wellness Program. Staff then shared this by word of mouth with youth, family and peer support workers and those interested in providing input were given the project coordinator's contact information. An environmental scan was conducted in collaboration with centre staff to identify assets, gaps and community need in services through team meetings, individual meetings, centre tours, discussions, and the administration of a survey (survey questions provided as [supplementary material](#)). The interested community members were asked to describe how meaningful activities – such as spending time outdoors, exploring creative expression, or participating in physical activities – could impact the wellness of diverse, Foundry-accessing youth. Examples of questions posed include, “What does Wellness mean to you? What does Wellness mean to the youth you serve? What community resources/services would you use? What are the main barriers for youth in accessing these resources/services?” The only restriction from the first funder was that programs needed to be offered in-person to reduce screen time. Proposals, budgets and requests for funding was reviewed with

centre managers and teams and discussions were had about opportunities for community partnerships and resource sharing.

### *Phase 2: Gathering momentum September-December 2019*

The project coordinator worked closely with eight centres and communities to support project management, access and flow funds, program co-development and ongoing engagement. The project coordinator liaised with a provincial dietician, and supported centre staff to identify assets and strengths in their communities. They also liaised with implementation coordinators at centres for collaborative work, and began exploring opportunities for youth empowerment with employment roles such as peer support workers or cultural coordinators, and explored Indigenous program opportunities. The project coordinator collaborated with FCO to: identify evaluation tools/protocols (e.g., integrating and tracking through Toolbox) and research opportunities, and implement group programming within IYS. Formal community partnerships were established with local and provincial agencies. Centres worked with their community members to develop and draft an outline for their Wellness Program and co-design a custom curriculum to meet their unique needs. The project coordinator sent initial draft curriculum content to centres. Centres then sought input from Youth Advisory Committees, peer support workers, and Indigenous youth and families. Content was also reviewed by FCO staff. Changes were then made to the content, specifically inclusion of the voice of youth in conceptualizing wellness, tools and templates for group development and facilitation, and risk management.

### *Phase 3: Pilot programs and partnerships January 2020-April 2020*

Pilot Programs began at each centre (e.g., Healthy by Nature outdoor program). The project coordinator identified centre champions, developed waivers, liability and consent forms, as well as service agreements and contracts with community partner organizations. They also provided ongoing centre support and practical toolkits and resources while continuing to develop the wellness curriculum. In parallel, an evaluation team co-designed the evaluation framework and research questions to understand the impact of this pilot phase. Youth Peer Evaluators working with FCO's Research and Evaluation teams were consulted when establishing a framework.

### *Phase 4: Pandemic pivot April 2020-December 2020*

The COVID-19 global pandemic was declared in March 2020 [33]. Public health measures required communities to adapt programs to conform with provincial restrictions and regulations for in-person gatherings. To meet

the coordination needs of communities, an FCO working group was formed to support implementation of the Wellness Program within the new pandemic restrictions. As it became apparent that the public health measures would last for an extensive period of time, several workshops were offered from FCO to support program facilitation. For instance, a group facilitation training session was offered for peer support workers across the centres. A need was identified to change the original curriculum into a user-friendly engaging practical resource (which became the Wellness Program Guide further described in Phase 6). The project coordinator explored definitions of wellness from the youth perspective at centres and from staff at Foundry Central Office.

#### ***Phase 5: Knowledge exchange and adaption January 2021–April 2021***

The project coordinator continued to collaborate with community partners, provided a report and updates to funders, and held a Foundry network-wide knowledge exchange workshop to share information about the Wellness Program offered at different centres. They also supported centres with creative problem-solving during pandemic restrictions to offer hybrid program ideas or smaller in-person scenarios and began exploring opportunities for youth peer engagement within the Wellness Program and development of the program with an Indigenous perspective. A team comprised of a researcher, a research and evaluation associate, and four youth peer evaluators began program evaluation (including conducting of focus groups with young people).

#### ***Phase 6: Wellness program guide and evaluation April 2021–December 2021***

The project coordinator consulted and worked with the Foundry Indigenous Wellness Team, centre champions and FCO team members to develop and publish the Wellness Program Guide which outlines program vision, intent, examples and working templates to run programs [34]. The Table of Contents of the Wellness Program Guide is included in Table 1 for reference. The aim established is the Wellness Program should complement other health services offered and target five domains of wellness: physical, social, emotional/mental, cognitive/intellectual, spiritual/cultural (See Table 2 for definitions) [35]. The vision statement is “Move your body, Calm your mind” [34]. Program objectives include the emphasis on social inclusion and connection with self, others, nature, engagement with community partners, and the enhancement of the service model by infusing wellness opportunities. Ongoing support was provided for centres to provide programming with constantly changing provincial restrictions.

#### **Data collection and analyses**

Ethics approval was received from the University of British Columbia Behavioural Research Ethics Board (ID: H21-01510). Data for this study were collected from two sources, the first being Foundry’s centralized data platform called ‘Toolbox’ for all young people who accessed the Wellness Program over a two-year period (September 2019– September 2021). These data are routinely collected in accordance with the BC Freedom of Information and Protection of Privacy Act (FIPPA) and the BC Personal Information Protection Act (PIPA) for the purposes of service delivery, evaluation and research. Informed consent was received from youth prior to survey completion, and youth do not have to complete the survey in order to receive services (i.e., completion of the surveys is voluntary). Youth voluntarily consent to the data being used for research purposes by indicating they have read and understood the purpose of the survey and how data are collected, stored and reported. Data are de-identified, stored, accessed, and analyzed in a secure research environment. Data are not linked in any way back to personal identifiers. Specific to the Wellness Program, data was collected on activity type, number of unique youth and visits. The forms also collected information about the type of services sought in addition to the Wellness Program (physical health, sexual health, mental health, substance use, youth peer support or social service); information about how the youth found out about Foundry; and demographic data including identity, age, sexual orientation, ethnic/cultural background. Descriptive analyses were conducted calculating proportions (n/N, %) for all variables.

In addition to ‘Toolbox’ data, qualitative data collected as part of Foundry’s developmental evaluation was also accessed. Young people (aged 16–24 years) who participated in the Wellness Program at any Foundry centre across BC, Canada since program inception (September 2019) were eligible to participate. Young people were invited to participate and recruited through Foundry’s social media and through staff offering the program at centres and offered a \$30 gift card for participation. Verbal consent was gained by young people at the time of the focus group. These data are routinely collected in accordance with the BC FIPPA and the BCPIPA for the purposes of service delivery, evaluation and research (as further described above). Semi-structured virtual focus groups ( $n=2$ ) were conducted with young people ( $n=9$  participants) via the platform Zoom® from April–September 2021. It was optional for participants to have their video camera on, and participants could use the chatroom feature and type versus answer verbally. Focus groups were conducted to meet evaluation objectives outlined in (Table 3), and explore the experiences of

**Table 1** Table of contents of the wellness guide [34]

| Section                                      | Section content                               | Pages |
|--|---|-------|
| Acknowledgements                             |   | 1     |
| Introduction                                 | Background and Context of Wellness Program    | 2-4   |
|  | Purpose of This Guide                         |       |
| What is Wellness?                            | Youth Perspective                             | 6-12  |
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| Types of Wellness Activities                 | Community-Based Activities                    | 45-49 |
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|  | Small Group Activities                        |       |
|  | Large Group Activities                        |       |
|  | Individual Activities                         |       |
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| Activities Within the Domains of Wellness    | Physical Wellness                             | 50-62 |
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|  | Social Wellness                               |       |
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| Community Partnerships                       | BC Parks Foundation                           | 65-67 |
|  | Power To Be                                   |       |
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|  | Creating New Partnerships                     |       |
| Research                                     | Wellness Research Projects                    | 68-69 |
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young people. The focus group guide is provided as [Supplementary Material](#).

All focus groups were audio-recorded and transcribed verbatim. All exact text from the chat feature of zoom was integrated into the transcripts at the appropriate times. To maintain confidentiality, participant numbers were assigned to each participant, and any identifying

information was removed from transcripts. QSR International's NVivo © 12 Software was used to facilitate qualitative data analysis. A blend of deductive and inductive analytical approach was used in a multi-step process to conduct a thematic analysis [36]. This included becoming familiar with data- audio recordings were listened to, then re-listened to while reading and re-reading



**Table 2** Wellness domains and definitions adapted from Payne, Ainsworth, and Godbey [35]

| Wellness domain        | Definition   | Activity aim   |
|------------------------|--|--|
| Physical               | Move more, eat well, sleep better                          | Physical activity, nutrition, sleep, connections to nature, outdoor recreation   |
| Social                 | Build connections, share experiences, find role models     | Making friends and feeling included, sharing lived experiences, connecting with mentors and Elders, low-pressure activities, healthy relationship skills |
| Emotional/Mental       | Express yourself, live in the moment, cope with stress     | Stress management, self-care, relaxation and mindfulness, self-awareness and self-acceptance, hope and optimism  |
| Cognitive/Intellectual | Boost your brain, try new things, empower yourself to lead | Creative and brain-boosting activities, leadership and volunteering opportunities, goal setting, exploring interests, learning new skills                |
| Spiritual/Cultural     | Feed your soul, find purpose, connect with your culture    | Discovering purpose in life, spiritual practices, cultural activities, cultural teachings, creating harmony and connection with the earth                |

**Table 3** Program evaluation objectives

|              |   |
|--------------|---|
| Objective 1. | To understand the extent to which the program was implemented as intended   |
| Objective 2. | To understand the extent to which the wellness activities have enhanced Foundry's services  |
| Objective 3. | To understand young people's satisfaction and involvement with the program and to understand the extent to which participants report the program impacted their health and wellness |
| Objective 4. | To understand the extent to which awareness and understanding of how technology is impacting youth is increased   |
| Objective 5. | To understand the extent to which the activities have resulted in opportunities for collaboration and partnership   |

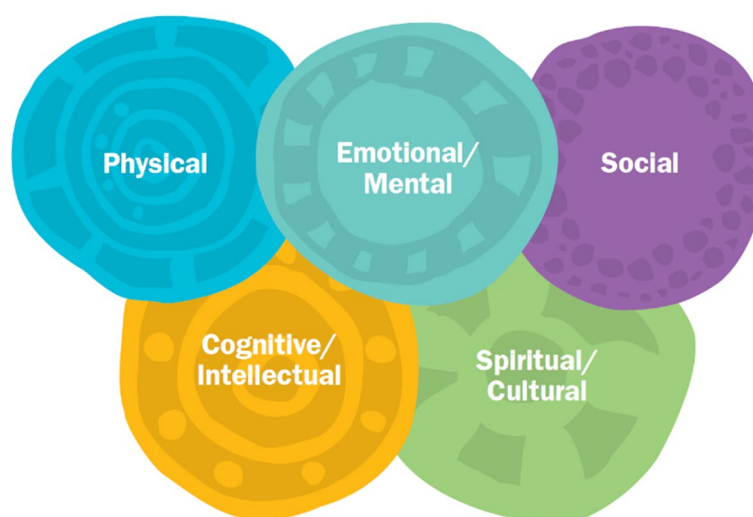
transcripts and notes were taken. Next, open broad codes were generated in NVivo© software based on the evaluation objectives and interview guide topics. Researcher (author KG) coded half of one focus group transcript with two youth peer evaluators to discuss coding, answer any questions and ensure understanding of the research process. The broader codes were then reviewed to search for and identify data-driven ideas and patterns (and ultimately developed into themes) and this step was considered inductive. Themes were then reviewed across and within the entire data set, defined and named. Writing of themes was an iterative and an integrated process throughout to aim for a comprehensive analysis. KG met with the youth peer evaluators, reviewed all coding and the identified themes to stimulate discussion and encourage reflexive acknowledgment of results and perspectives in the research process [37]. To aim for quality thematic analysis, the 15-point “checklist” for good thematic analysis was consulted (pg 96) [38].

## Results

Results are based on ‘Toolbox’ data collected at Foundry centres over the two-year period after program launch (September 2019–September 2021). The results suggest a wide range of leisure activities offered within the Wellness Program across this IYS network. A total of 384 different leisure activities were offered within five wellness domains (Fig. 1). Table 2 provides an overview of each

wellness domain, its definition, and examples of domain-promoting activities. Work by author BM (Fig. 2) provides a summary of the number of activities offered in each of the five wellness domains. The most commonly represented domain was cognitive/intellectual ( $n = 129$ ; 36%), followed by emotional/mental ( $n = 59$ ; 17%), social ( $n = 54$ ; 15%), physical ( $n = 45$ ; 13%) and spiritual ( $n = 2$ ; 0.1%). There were 64 (18%) activities with acronyms and names that could not be classified and thus labelled as “other”. Examples include ‘KOB CMP’; ‘KVR RADAR’; ‘BLIP’; and ‘Drop-in’ (See Table 4 for a list of all activities). The Wellness Program offered a combination of individual, small or large group; community-based; in person and virtual activities. Examples of activities included Bob Ross Paint Nights, Book Clubs, Dungeons and Dragons, Hiking, Yoga, and Community Cooking. See Table 4 for a list of all names of activities in the Wellness Program offered and the corresponding wellness domain the activity targeted.

Three hundred and fifty-five unique youth accessed the Wellness Program, with 1319 unique visits. Figure 3 provides a summary of the number of unique youth and visits by month. The highest number of unique visits occurred in July 2021 ( $n=122$ ; 9.2 %) and August 2021 ( $n=119$ ; 9%), and no visits occurred in April and May 2020. The highest number of unique youth visited the program in August 2021 ( $n=89$ ; 25%), and no youth visited in April and May 2020. Almost



**Fig. 1** Wellness domains

half (40%;  $n = 142$ ) of youth identified that the Wellness Program was the first point of access to Foundry. In addition, 75% ( $n = 265$ ) of youth accessed other programs at Foundry either before or after accessing the Wellness Program. The most commonly accessed services in addition to the Wellness Program were mental health ( $n=119$ ; 45%), walk-in counselling ( $n=85$ ; 32%), and physical health ( $n=76$ ; 29%) (Fig. 4). When asked about how youth found out about Foundry ( $n = 175$  responses), most identified a healthcare provider ( $n=36$ ; 20.6%), school counselor/teacher ( $n=35$ ; 20%), family member ( $n=32$ ; 18.3%), friend ( $n=25$ ; 14.3%), or a worker ( $n=20$ ; 11.4%). When asked, “If the centre was unavailable, I would have gone to ...” ( $n = 173$  responses), 56 (32.9%) said nowhere/I wouldn’t have gotten help, 38 (22%) said family members/friends, and 30 (17.3%) answered my healthcare provider.

The demographic profile of youth accessing programs is provided in Table 5. All demographic questions were optional, so the number of responses differ from the total number of youth accessing the program. The majority identified as young girls/women ( $n= 103$ ; 58.2%), followed by gender diverse ( $n=40$ ; 22.6%) or young boys/men ( $n=34$ ; 19.2%). The mean age was 19 years, and most participants were between the ages of 19–24 years ( $n= 154$ ; 43.6%). Youth identified as heterosexual ( $n= 69$ ; 40%), bisexual ( $n= 41$ ; 24%), gay or lesbian ( $n=15$ ; 9%) or preferred not to answer ( $n=19$ ; 11%). For ethnicity/cultural background, 104 (58.2%) young people were White, 35 (19.2%) Indigenous, 7 (3.9 %) Chinese, and 7 (3.9%) Filipino.

### Results of thematic analysis

A total of 9 young people participated in 2 focus groups. See Table 6 for a full break down of demographic information of participants. A total of 7 young people filled out the optional demographic survey. The average age of participants was 17 years, almost half ( $n=3$ ) identified as female, and in regard to ethnic/cultural background almost half were Caucasian/white ( $n=3$ ). Results specific to the evaluation objectives (described in Table 3) are presented here, further in-depth results of the thematic analysis will be presented elsewhere.

### Theme 1: Program successes

Young people explained that they appreciated and valued the social aspects of the program to connect with peers, and the facilitators, especially at a particularly isolating time during the global pandemic. Young people described the program facilitators with words such as “Welcoming; inclusive; accommodating; respectful; open to suggestions”. One young person explained the social aspect in further detail:

*“... people had the chance to sort of have banter and talk, if it’s while cooking or painting and things like that which uh I think helped immensely when trying to make friends amid a pandemic... specifically for the online events, acquaintances and companionships were made”.*

Another young person stated, “It helped with isolation and kept me from completely losing my marbles during quarantine”.

**Table 4** Wellness program activities within wellness domains

| Wellness domain        | Activities offered                                  |
|------------------------|---|
| Cognitive/Intellectual | Activate: Tie Dye (Virtual)                         |
|                        | Activate: Tie Dying (In Person)                     |
|                        | Aromatherapeutic Crafts                             |
|                        | Art Social Group                                    |
|                        | Art Therapy   |
|                        | Art Therapy   |
|                        | Art Therapy   |
|                        | Art with Creative Life                              |
|                        | Arts and Crafts                                     |
|                        | Beading Poppy                                       |
|                        | Bob Ross Paint and Pizza                            |
|                        | Bob Ross Paint Night                                |
|                        | Book Club: Harry Potter ©                           |
|                        | Brownies on Thursday                                |
|                        | Candy Apples  |
|                        | Cheap Eats Granville                                |
|                        | Cheap Eats St. Helen's                              |
|                        | Coffee & Creative Monday                            |
|                        | Community Meal Planning                             |
|                        | Cooking and Lifeskills                              |
|                        | Cooking Classes                                     |
|                        | Craft Event   |
|                        | Crayon Art  |
|                        | Creative Journaling                                 |
|                        | DIY Zen Garden                                      |
|                        | Dungeons and Dragons                                |
|                        | Dungeons and Dragons                                |
|                        | Game nights   |
|                        | GAME READY  |
|                        | GAME READY  |
|                        | Gamer's Unite                                       |
|                        | Gamer's Unite                                       |
|                        | Games Granville                                     |
|                        | Gourd Painting                                      |
|                        | Healthy Relationships Dialogue                      |
|                        | How to Survive a Pandemic: A Mindful and Artful Way |
|                        | Knitting  |
|                        | Life Hacks  |
|                        | Life Hacks  |
|                        | Nintendo Switch Party                               |
|                        | Online: Rock Decorating                             |
|                        | Paint and Pizza                                     |
|                        | Paint and Pizza                                     |
|                        | Paper Quilling                                      |
|                        | PCA Cooking   |
|                        | Peer Support Baking                                 |
|                        | Pottery Group                                       |
|                        | Pottery Group                                       |
|                        | Pottery   |

Table 4 (Continued)

| Wellness domain | Activities offered                              |
|-----------------|---|
|                 | Pottery   |
|                 | Preserving Food                                 |
|                 | Quilling  |
|                 | Renfrew Cooking Group                           |
|                 | Renfrew Games Group                             |
|                 | Renfrew Gardening Group                         |
|                 | Renfrew Lifeskills                              |
|                 | Rock Painting                                   |
|                 | Saint Helen's Clean Sweep                       |
|                 | Saint Helen's Cooking                           |
|                 | Saint Helen's Meal Planning                     |
|                 | Self-Esteem Workshop                            |
|                 | Self-Esteem                                     |
|                 | Sketching in Nature                             |
|                 | Slime Making                                    |
|                 | Sundaes   |
|                 | TYES- D&D                                       |
|                 | Virtual Bingo                                   |
|                 | Virtual Games 0520                              |
|                 | Virtual Group: Drawing Tutorial                 |
|                 | Young Adult Game Night (17+)                    |
|                 | Youth D&D                                       |
|                 | Community Cooking Group                         |
|                 | Cookies for Mental Health Week                  |
|                 | Kettle Breakfast                                |
|                 | Kettle Cooking                                  |
|                 | Kettle Gardening Group                          |
|                 | Kettle Home Skills Drop-In                      |
|                 | Kettle Meal Planning                            |
|                 | Kettle on Burrard - Cheap Eats / Community Walk |
|                 | KOB Gardening Group                             |
|                 | KOB Gardening                                   |
|                 | Make and Take Bannock Bites                     |
|                 | Maker Monday - Activity                         |
|                 | Mason Jar Crafts                                |
|                 | Mosaic Colouring                                |
|                 | Paint Like Bob Ross                             |
|                 | St. Helen's Cheap Eats                          |
|                 | Thursday Mosaic                                 |
|                 | Thursday Painting                               |
|                 | Tie Dye on Thursday                             |
|                 | T-shirt Designs                                 |
|                 | TYES - Arts & Crafts: Playdough                 |
|                 | TYES - Arts and Crafts - Coloring Page          |
|                 | TYES - Arts and Crafts Bracelet Making          |
|                 | TYES - Arts and Crafts Independence             |
|                 | TYES - Arts and Crafts Rock Painting            |



Table 4 (Continued)

| Wellness domain  | Activities offered                                     |
|------------------|--|
| Emotional/Mental | TYES - Arts and Crafts                                 |
|                  | TYES - Bead Animal Making                              |
|                  | TYES - Collage Making                                  |
|                  | TYES - Lava Lamps                                      |
|                  | TYES - Mascaraed Mask                                  |
|                  | TYES Arts and Crafts - Origami                         |
|                  | TYES Arts and Crafts - Rock Painting                   |
|                  | TYES Arts and Crafts - Tye Dye                         |
|                  | TYES ARTS AND CRAFTS GARDEN-ING                        |
|                  | TYES Arts and Crafts                                   |
|                  | TYES Arts and Crafts: Free for All Paint               |
|                  | TYES Arts and Crafts: Light Sabers                     |
|                  | TYES Arts and Crafts-Bracelets                         |
|                  | TYES Arts and Crafts-Dream Catchers                    |
|                  | TYES Arts and Crafts-Firefly Jar                       |
|                  | TYES Arts and Crafts-Nutrition                         |
|                  | TYES Arts Crafts                                       |
|                  | TYES- Healthy Boundary's                               |
|                  | TYES- Muffins  |
|                  | TYES- Splatter Painting                                |
|                  | Tyes/arts and crafts Brownies                          |
|                  | Wellness Wednesday Goals                               |
|                  | Wellness Wednesdays - Internet Safety/Social Media     |
|                  | Wellness Workshop Series - Belonging: Finding Our Kind |
|                  | Wellness Workshop Series - Food and You                |
|                  | Wellness Workshop Series - Stuck on Sleep              |
|                  | Wellness Workshop Series                               |
|                  | BCCYIC Week 2021: Movie Night                          |
|                  | Body Image 101   |
|                  | CBT for Social Anxiety                                 |
|                  | CBT Foundations for Anxiety/Depression                 |
|                  | CBT Foundations  |
|                  | CBT Mood Management                                    |
|                  | CBT Skills Group                                       |
|                  | CBT Skills May 2021                                    |
|                  | CBT  |
|                  | Chill Out Friday - Disney's Mulan                      |
|                  | Chill Out Fridays - Disney Soul                        |
|                  | Cinema Therapy   |
|                  | DBT Comp   |
|                  | DBT Prep   |
|                  | DBT Skills Group                                       |
|                  | DBT Skills Training                                    |

Table 4 (Continued)

| Wellness domain | Activities offered               |
|-----------------|----------------------------------|
| Physical        | DBT Skills                       |
|                 | DBT Skills                       |
|                 | DIALECTICAL BEHAVIOUR THERAPY    |
|                 | Eco Art Therapy                  |
|                 | EFFT Caregiver Group             |
|                 | EFFT Caregiver Workshop          |
|                 | Get Grounded                     |
|                 | Get Grounded                     |
|                 | Girls Group- Meditation          |
|                 | ICY Art Group                    |
|                 | Mending Mindsets (Anxiety Group) |
|                 | Mind Me                          |
|                 | Mind Me                          |
|                 | Mindful Gardening Group          |
|                 | Mindful                          |
|                 | MindShift Anxiety Group          |
|                 | Positive Affirmations            |
|                 | SP20 YMIND                       |
|                 | Spa Day                          |
|                 | Stress Management                |
|                 | Therapeutic Arts                 |
|                 | Therapeutic Performance          |
|                 | Wellness Wednesday Depression    |
|                 | WW Anxiety                       |
|                 | YMIND                            |
|                 | Y-mind                           |
|                 | YMIND                            |
|                 | Youth Mind                       |
|                 | Youth Mindfulness                |
|                 | Youth Mindfulness                |
|                 | Disc Golf                        |
|                 | Garden Group                     |
|                 | Healthy By Nature- Boundary Bay  |
|                 | Healthy By Nature                |
|                 | Healthy By Nature: Mike Lake     |
|                 | Hiking Group - POWER TO BE       |
|                 | Hixon Falls                      |
|                 | Indoor Rock Climbing             |
|                 | KOB Coffee Walk                  |
|                 | LOUTET FARM GROUP                |
|                 | Loutet Farm                      |
|                 | Lower Falls Hike                 |
|                 | Mindful Movement A               |
|                 | Mindful Movement B               |
|                 | Mindful Movement Yoga            |
|                 | Mindful Movement                 |
|                 | Outdoor Sports                   |
|                 | Quarantine Fitness Crew          |
|                 | Quarantine Fitness Crew          |
|                 | Quarantine Fitness Group         |

Table 4 (Continued)

| Wellness domain | Activities offered         |
|-----------------|----------------------------|
| Social          | Rec Outing                 |
|                 | Renfrew Recreational Group |
|                 | Renfrew Walks              |
|                 | RockWall Climbing Outing   |
|                 | Self Defense with KB       |
|                 | Skate Boarding             |
|                 | Virtual Yoga               |
|                 | Virtual Yoga               |
|                 | Walking Group              |
|                 | Water Balloon Fight        |
|                 | Wild Play Adventures       |
|                 | Workout for Wellness       |
|                 | Workout in the Park        |
|                 | Yoga Group                 |
|                 | Yoga Group                 |
|                 | Yoga                       |
|                 | Youth Group - Skating      |
|                 | Youth Rec Night            |
|                 | Zoomba Group               |
|                 | Zoom-ba Group              |
|                 | 2SLGBTQAI+                 |
|                 | BBQ Night                  |
|                 | Caregiver Support Group    |
|                 | Community HangOut          |
|                 | Costume Community Clean Up |
|                 | D&D                        |
|                 | Foundry PG Youth Group     |
|                 | Foundry Youth Group        |
|                 | FPG Youth Group            |
|                 | Girls Group                |
|                 | Girls Group                |
|                 | Girls Social Group         |
|                 | LGBTQ2S+                   |
|                 | LGBTQ2S+                   |
|                 | Peer Group -               |
|                 | PG Foundry Youth Group     |
|                 | Pumpkin Carving Day        |
|                 | Pumpkin Carving Event      |
|                 | Queer Cafe© (FODxQC)       |
|                 | Queer Cafe©                |
|                 | Queer Cafe (18-24)         |
|                 | Queer Cafe                 |
|                 | Queer Cafe                 |
|                 | STH Breakfast Group        |
|                 | Talking Heads (Renfrew)    |
|                 | Tuesday Chat on Zoom       |
|                 | Youth Advisory Committee   |
|                 | Youth Group                |
|                 | Community CMP              |

Table 4 (Continued)

| Wellness domain    | Activities offered                        |
|--------------------|---|
| Spiritual/Cultural | Fall 2021 UNYA 2S Group                   |
|                    | Friday 13th Youth Group                   |
|                    | FYG Movie Night                           |
|                    | Girls Group MC College                    |
|                    | Halloween Movie Night                     |
|                    | Hearing Voices Group                      |
|                    | Inner City Jamz                           |
|                    | Jurassic World Watch Party                |
|                    | Monday Kettle Drop-In                     |
|                    | Social Summer Series                      |
|                    | Toast and Tea                             |
|                    | TransMission Peer Group                   |
|                    | TYES - Arts and Crafts - Karaoke          |
|                    | TYES - Arts and Crafts Charades           |
|                    | TYES - Arts and Crafts Movie The Simpsons |
|                    | TYES - Arts and Crafts Movie              |
|                    | TYES - Arts and Crafts Movies             |
|                    | TYES - Chill Out Friday Movie Night       |
|                    | TYES Arts and Crafts - Bingo/Board Games  |
|                    | Young & Recovering                        |
|                    | Young & Recovering                        |
|                    | Young and Recovering                      |
|                    | YOUunity Lounge                           |
|                    | Henna on a Thursday                       |
|                    | Thursday Beading                          |

In addition to the social aspect, young people appreciated the opportunity to branch out and try new things. A young person explained:

*"I found myself picking up different hobbies that I don't think I would've ever turned to if it wasn't for Foundry, such as painting, such as even making what was it, I think it was like mood boards. What I may have deemed as sort of like arts crafts maybe childish, the Foundry embraced and really kind of captured it as an artistic and wellness activity".*

### **Theme 2. Desired program improvements**

Young people talked about wanting more options for virtual or hybrid programming, specifically with accessibility interests in mind. Participants talked about how online events can reduce barriers to participation (such as transportation or social anxiety). One young person explained, "Having it virtually so we feel included and less isolated in person and virtually". Another young person stated,

*"I mean it's nice through COVID it was definitely still through a screen, but even just baking cookies with everybody like on the phone kind of thing, it was nice, it was a good connection, it was good to get like hands on".*

Young people identified they wanted better communication about and within the programs. From program leaders, they wanted discussions around mental health and other health topics. One person stated "More in depth conversation would have helped me feel more connected". Youth also discussed a lack of clarity around the program, and a lack of advertising about it. One person explained this, "My one criticism is there's like no marketing so like people don't know that Foundry holds socials and the only reason I know is 'cause the youth worker in my school told me". Another young person explained this communication breakdown as an accessibility issue:

*"I do think it is a little bit hard to get involved in them ... just because there tends to be tighter knit groups and also just like, not as much accessibility if you don't know what you're doing. I think it could be more clear, at least for my location where it is and what's happening and how to get into them".*

### **Theme 3. The ideal Wellness Program**

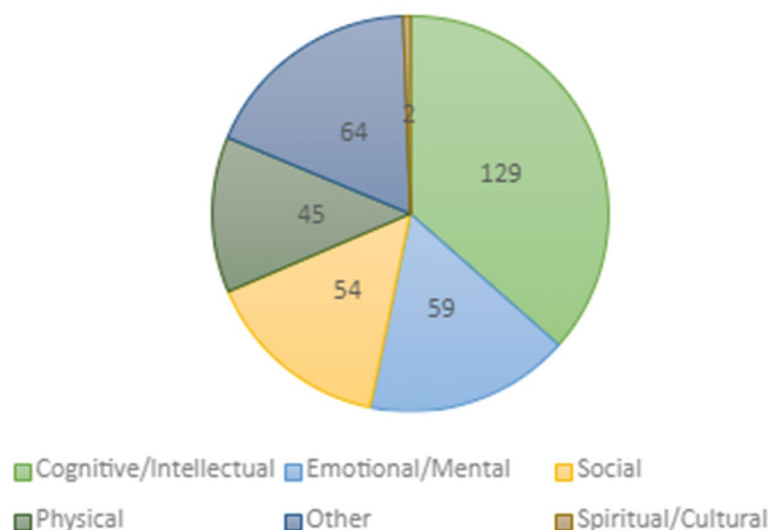
Young people shared that their ideal program would be accessible, educational and fun, arts-based, social, and include a range of activities. One young person

highlighted the need for social interactions and education, "I dislike the repetition of the same conversation topics that seems surface level. The topics don't let us get to know each other very well". Another young person summarized the need for a range of physical activities, "I would love to do activities like canoeing for example, because just being in the water, being out in nature, I have like a list written down of things I want to do after the pandemic is over. I would love to go bowling, go ice-skating, like using your body".

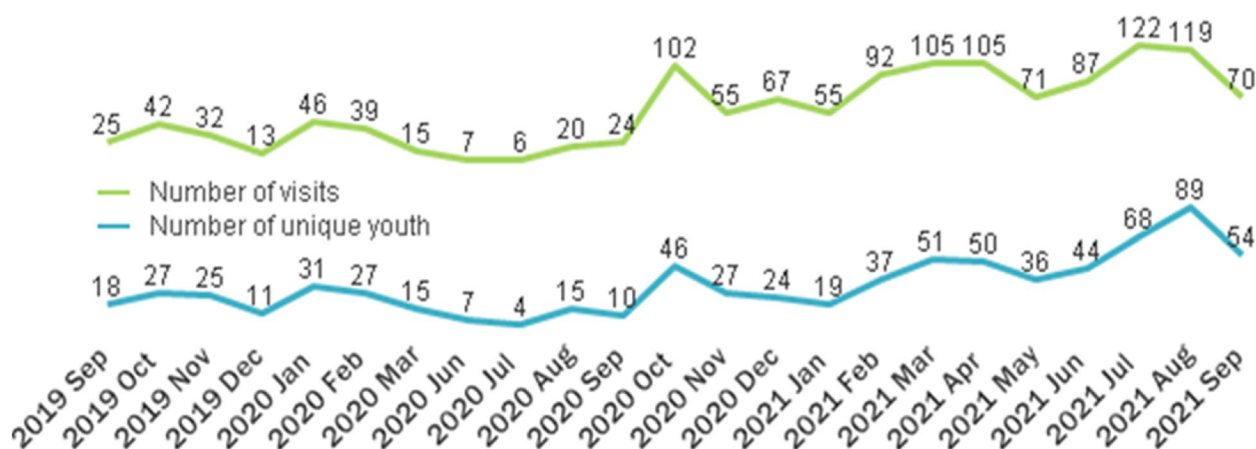
## **Discussion**

To the best of our knowledge, this is the first study to describe development and phased implementation of leisure-based activities (known as the Wellness Program) across an IYS network. This study was done as part of a developmental evaluation [31, 32] to understand the complex system that is Foundry. At a provincial level, the BC Ministry of Mental Health and Addictions announced significant investment of government dollars for child and youth mental health support with prevention, early intervention, and wellness promotion being identified as key pillars [39]. This study helps to understand how an IYS such as Foundry can quickly adapt to the needs of youth and emerging circumstances (e.g., COVID) to co-design services that can be offered alongside traditional health services to address these key pillars. Promisingly, 355 unique youth accessed the Wellness Program over a two two-year period after program launch with 1319 unique visits. The highest number of visits occurred in July 2021 ( $n=122$ ; 9.2 %) and August 2021 ( $n=119$ ; 9%), with the greatest number of unique youth also visiting in August 2021 ( $n=89$ ; 25%). No visits occurred in April and May 2020. This corresponds with the start of the COVID-19 pandemic lockdown, subsequent waves, and ease of restrictions in the province of BC. The province entered Step 3 of its Restart Plan July 1st, 2021, marked as a major milestone allowing indoor and outdoor group gatherings [40]. Almost half (40%) of youth identified that the Wellness Program was the first point of access to Foundry, indicating that these programs could be a gateway to other services and have the potential for early identification, intervention and treatment for other conditions. Youth commonly accessed mental health services (45%) in addition to the Wellness Program, indicating that young people may be participating in leisure activities as an adjunct service for their mental health. Perhaps this is due to program aspects (such as physical activity) having the potential to reduce anxiety and depression symptoms for young people [20] and potential to be a valuable mental health promotion tool [41]. Results from the focus groups with young people are important and being considered as the program continues to evolve and

## Wellness Activity Categories



**Fig. 2** Wellness activities offered within each wellness domain



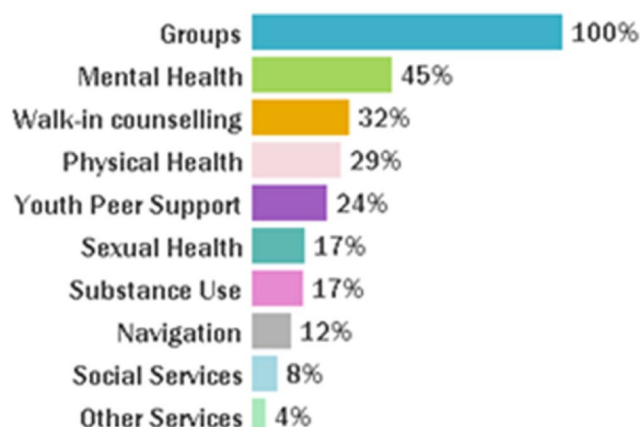
**Fig. 3** Number of unique youth and visits by month

is scaled-up across the province at new centres. This includes the positive social aspect, a desire for hybrid in-person and online programming, improved communication in regard to what the program entails, and for Foundry to strive to offer an ideal program that is accessible, educational and fun, arts-based, social, and include a range of activities.

At a national level, youth mental health has been identified as a top priority for health care in Canada [42]. However, studies done during the pandemic have suggested mental health and substance use concerns for

young Canadians [9, 43–45], identifying trans and gender diverse youth a particularly at-risk population during this time [45]. Hawke and colleagues [45] identified that trans and gender diverse youth are experiencing more mental health concerns, have fewer social supports, and have more unmet mental health and substance use service needs. In our study, 40 (22.6%) of youth identified as gender diverse (the second highest gender identity), and the most commonly accessed service in addition to the program was mental health services (45%). It is possible that these gender diverse youth accessed the program for

## % of Youth Accessed by Service Type (n=355)



**Fig. 4** Summary of other foundry services accessed by youth participating in the wellness program

**Table 5** Demographic characteristics of youth who accessed the wellness program

|                                      |                                |
|--------------------------------------|--------------------------------|
| Gender identification, n (%)         | Total responses <i>n</i> = 177 |
| Young girl/woman                     | 103 (58.2)                     |
| Gender diverse                       | 40 (22.6)                      |
| Young boy/man                        | 34 (19.2)                      |
| Age in years, n (%)                  | Total responses <i>n</i> = 353 |
| <12 years                            | 4 (1.1)                        |
| 12-15 years                          | 102 (28.9)                     |
| 16-18 years                          | 80 (27.7)                      |
| 19-24 years                          | 154 (43.6)                     |
| >24 years                            | 13 (3.7)                       |
| Ethnic or cultural background, n (%) | Total responses <i>n</i> = 179 |
| White                                | 104 (58.2)                     |
| Additional options                   | 41 (22.6)                      |
| Indigenous                           | 35 (19.2)                      |
| Chinese                              | 7 (3.9)                        |
| Filipino                             | 7 (3.9)                        |
| Sexual Orientation, n (%)            | Total responses <i>n</i> = 172 |
| Heterosexual                         | 69 (40)                        |
| Bisexual                             | 41 (24)                        |
| Prefer not to answer                 | 19 (11)                        |
| Gay or lesbian                       | 15 (9)                         |
| Additional options                   | 14 (8)                         |
| Questioning                          | 10 (6)                         |
| Asexual                              | 3 (2)                          |

reasons such as social supports, mental health concerns, and unmet service needs. A longitudinal study identified that mental health concerns of young people are evolving over time (in alignment with COVID-19 infection rates

**Table 6** Demographic characteristics of youth who participated in focus groups

| Demographic information <sup>a</sup> | Young people ( <i>n</i> =7)  |
|--------------------------------------|--|
| Age (years)                          | Mean = 17<br>Range = 15-23   |
| Gender Identity                      | Female ( <i>n</i> =3)<br>Not sure/Questioning ( <i>n</i> =2)<br>Gender Fluid ( <i>n</i> =1)<br>Non-binary ( <i>n</i> =1)                         |
| Ethnic/Cultural background           | Caucasian/White ( <i>n</i> =3)<br>South Asian ( <i>n</i> =2)<br>Indigenous/Caucasian/Black ( <i>n</i> =1)<br>Indigenous/Caucasian ( <i>n</i> =1) |

<sup>a</sup> All demographic questions were optional, thus number of responses are different from the number of participants

and potentially seasonal factors) [43]. The authors have recommended that it is essential to “engage directly with youth to cocreate pandemic response strategies and mental health service adaptations” (pg. 9) [43]. This study is an example of how the Wellness Program was co-created with diverse communities putting youth and families at the forefront and implemented as an adaptation to existing mental health services in one province. Co-designed leisure activities warrant consideration in other provinces within IYS and other health services as we continue to navigate the ongoing pandemic and future recovery.

At an international level, investment in and consideration of the long-term mental health needs of young people have been deemed essential [46]. Other work has been done in Sweden to advocate for the importance of



leisure activities for young people for health promotion [47]; however, such programs are offered in youth centres separate from health and social services, placing a burden on youth and families to navigate different systems. In the United States of America, subsidized leisure activities for youth are offered within ‘afterschool programs’ and are embedded with other content (e.g. linked to education curriculum), not stand alone or considered part of health services [48]. A review done by Hetrick and colleagues [22] describes international IYS as offering services for mental health, substance use, physical health, and vocational and educational programs. The authors’ synthesis of IYS principles and characteristics included “Services may also provide recreational or arts activities and drop-in or hang-out space” (p. 56) [22]. Consistently, the engagement of young people in the design of services is an integral part of IYS [22, 24], and development and implementation of the Wellness Program was in response to an identified need of young people. This work provides a template to guide other international IYS and health service settings to develop, tailor, and implement customized programming.

### Strengths and limitations

This study provides novel insight into the development and implementation of unique leisure-based activities over a phased approach into IYS and offering alongside traditional health services as a means of health promotion. Although the sample size was small ( $n=9$ ) the perspective of young people and their experience participating in the program as initial program evaluation has helped to understand the program and how it can be improved. The COVID-19 pandemic posed difficulties with navigating the offering, implementation, and tracking of programs. ‘Toolbox’ data did not capture youth participating virtually, thus the numbers reported in this study are likely an underrepresentation. Staff required ‘Toolbox’ training and had limited resources/capacity for data entry during the pandemic. The rapid development and expansion of Foundry centres pose challenges for research and program evaluation to keep up alongside. Each Foundry centre could develop its own unique program, which ultimately led to a wide variety of activities offered, and at times it was challenging to understand details (such as frequency, activities, group size).

### Future directions

As this work was part of developmental evaluation, multiple iterations over the course of the evaluation period are being done [31, 32]. Our team is working to analyze additional qualitative data (1-1 interviews with program staff) to better understand youth and program staff

experiences for program improvement, and to establish how ‘Toolbox’ can be utilized for tracking virtual programs. Youth peer evaluators have presented the results from the focus groups with young people to FCO staff to initiate knowledge exchange. Our team is continuing to share results with staff offering programs (and developing new ones) as Foundry scales up across BC. Future research should explore the impact of the Wellness Program on short- and long-term health outcomes for young people and morbidity prevention considering pre-post and longitudinal designs. Future research could also explore cost-effectiveness of programs and the potential to reduce or mitigate wait times to other costly mental health services, as has been done in other settings such as a university campus and access to counselling services [49].

### Conclusions

This study provides novel insight into the development and implementation of leisure-based activities known as the Wellness Program into IYS which can be leveraged as a health promotion tool. This work provides a template for guidance that can be utilized within international IYS settings to develop, tailor, and implement similar programming suited to needs of young people, their families/caregivers, and communities. The initial reach of the Wellness Program over two years is promising, and it may be acting as a gateway for young people to access other health services. From initial program evaluation, young people enjoyed the social aspect with peers and facilitators, and identified important program improvements that are being considered as the program grows. Further work is needed to understand youth health outcomes and experiences associated with participation in such programs. A multidisciplinary team is continuing to conduct evaluation of the Wellness Program using mixed-methods over multiple iterations as part of developmental evaluation.

### Abbreviations

|      |                                    |
|------|------------------------------------|
| MHSU | Mental health and substance use    |
| IYS  | Integrated youth services          |
| BC   | British Columbia                   |
| FCO  | Foundry Central Office             |
| FIPA | Freedom of Information Privacy Act |
| PIPA | Personal Information Privacy Act   |

### Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12888-023-04809-6>.

**Additional file 1.**

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## Authors' contributions

Author KG led writing of the manuscript, interpretation of the 'Toolbox' data, and analysis of the qualitative data. Authors JA, BM, AE, KT, MW, SB and SM all contributed to revision and writing of the manuscript. GC analyzed data. All authors read and approved the final manuscript.

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## Availability of data and materials

The dataset generated and analysed during the current study are not publicly available due to privacy reasons but are available from author SB on reasonable request.

## Declarations

### Ethics approval and consent to participate

All research was carried out in accordance with relevant guidelines and regulations in the Declaration of Helsinki. Ethics approval was received from the University of British Columbia Behavioural Research Ethics Board (ID: H21-01510). Informed consent was received from youth prior to survey completion, and youth do not have to complete the survey in order to receive services (i.e., completion of the surveys is voluntary). Verbal consent was attained prior to completion of focus groups for the purposes of program evaluation. In accordance with the BC Infants Act of 1996 [50] it is deemed unnecessary to require parental/legal guardian consent for all minors (under the age of 19) to access health services. The capacity of a minor to provide informed consent is determined by assessing the ability of the minor's physical, mental, and emotional development to determine an understanding and full appreciation of the nature and consequences of the proposed services, including the refusal of such services.

### Consent for publication

Not applicable, no individual data is presented or identifying.

### Competing interests

The authors declare no competing interests.

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