



Original Research

Impact of the COVID-19 Pandemic on Youth Recreational Hockey in Southwestern Manitoba, Canada: Opinions and Observations of Player Parents and Hockey Association Directors

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Abstract: This study collected opinions and observations from the parents of youth recreational hockey players registered for league play in southwestern Manitoba in 2020 and 2021 towards the impacts of COVID-19 restrictions on players and their families. We also collected opinions from hockey association directors. We coordinated with the three leagues in southwestern Manitoba to send out an email invitation to registered hockey families with a link to an online questionnaire. The majority of parents and directors disagreed with the restrictions on play imposed by the Province of Manitoba and displayed a large degree of frustration. Many of the players commented on the lack of comfort in wearing masks while playing and missing friends while play was suspended. In addition, most parents also indicated the restrictions had negative mental and physical impacts on their player. Conversely, respondents also reported that they saved money and spent more family time together while play was suspended.

Keywords: COVID-19, Youth Sports, Ice Hockey, Canada, Restrictions on Play, Physical and Mental Impacts, Opinions and Observations

Introduction

The World Health Organization officially declared COVID-19 a global pandemic on March 11, 2020. Since this time, when there was an almost complete shutdown of community services in most countries of the world, the pandemic (and responses) went through several phases. Leisure activity restrictions, including recreational sports, during the pandemic varied by phase and jurisdiction, including in Canada (Detsky and Boguch 2020; Potvin 2020). Recreation activities, particularly those performed indoors, and those requiring travel like youth hockey in some cases, were arguably among the most affected sectors.

One of Canada's most popular recreational activities for youth is ice hockey. This popularity stems from the importance and a feeling of global ownership of the sport in Canadian culture; indeed, the sport is viewed by many Canadians as part of the country's national identity (Allain 2011; Earle 1995). Canada boasts the greatest number of indoor hockey rinks in the world (2,860) and between 2010/11 and 2019/20, an average of 639,445

youth aged 7–18 were registered in organized hockey leagues across Canada, although this fell to 345,481 in 2020/21 during the pandemic (IIHF 2021). The research reported here assesses the social and physical impacts of COVID-19 public health restrictions on youth recreational hockey based on opinions and observations from the parents of players registered for league play in southwestern Manitoba in 2020 and 2021, as well as hockey association directors. The results provide a lens into the impacts of COVID-19 on recreation activities in general, and on ice hockey in Manitoba in particular, but also specifically on the physical and social activity of youth, a segment of the population frequently identified as having been disproportionately negatively affected by the pandemic (Chen et al. 2020; Dunton, Do, and Wang 2020; Reece et al. 2020; Weeland, Keijsers, and Branje 2021).

Literature Review

The health and societal benefits of programmed recreational team sports such as ice hockey are well known. Benefits include physical health, psycho-social development (e.g., cooperation, discipline, leadership, development of social identity, feelings of belonging), motor skills acquisition, and sportsmanship (Bruner et al. 2017; Ellis et al. 2008; Fraser-Thomas and Côté 2006). It is possible that restriction of recreational sports activities, such as those that occurred during the COVID-19 pandemic, may have hindered the development of these benefits.

A plentiful literature on the impact of the COVID-19 pandemic on society has emerged in the past two years. Aspects important to this study include impacts on mental health and well-being, physical activity of children, recreation behavior, and organized youth sports. The most prevalent literature relates to the impact of COVID-19 upon societal mental well-being (e.g., Agorastos et al. 2021; Dozois and MHRC 2021; Shahyad and Mohammadi 2020; Singh and Singh 2020; Ustun 2020). These findings all point to rising levels of negative mental health aspects during the pandemic, such as anxiety, distress, depression, mood swings, frustration, and feelings of isolation. While these examples of impacts have been found in society in general, they have also been observed specifically in children and adolescents (e.g. Chen et al. 2020; Hawes et al. 2021; Mitra et al. 2021; Racine et al. 2021; Viner et al. 2022). Missing social interaction with friends, which occurs during recreational team sports such as ice hockey, is an important variable with respect to this age group.

There have also been studies focusing on the negative impacts of COVID-19 on general physical activity of children, including restrictions on recreational sport participation (e.g., Bates et al. 2020; Breidokienė et al. 2021; Burkart et al. 2022; Chen et al. 2020; Dunton, Do, and Wang 2020; Owen and Bould 2021; Moore et al. 2021; Reece et al. 2020). These findings indicate a decline in physical activity of children during the pandemic both inside and outside of schools, potentially leading to a more sedentary lifestyle and negative physiological impacts such as weight gain.

Literature on the impacts of COVID-19 on recreation behavior is primarily focused on outdoor recreation with mixed results in participation rates, including increase (Beery, Olsson, and Vitestam 2021; Ferguson et al. 2023; Geng et al. 2021; Hansen et al. 2022) and decrease (de Lannoy et al. 2020; Fang et al. 2021), as well as both, depending on demographic group (Landry et al. 2020). Jackson et al. (2021) and de Lannoy et al. (2020) found a significant decline in youth outdoor recreation participation and Jackson et al. (2021) a corresponding link to decline in subjective well-being, while Reed et al. (2022) found that there were greater opportunities for positive youth development through activities such as recreational sports, prior to the pandemic than during the pandemic. Rice et al. (2020) reported differences between urban and rural outdoor recreation participation in which urban residents showed a decline in willingness to travel to outdoor recreation sites.

While there are media accounts on the impact of COVID-19 on organized youth sports (e.g. CBC 2022), there is little scholarly research at this point. The impacts all stem from restrictions on play in organized sports due to the pandemic, both in schools and youth sports associations. Several studies link closure of schools and organized sports during the pandemic to the negative mental and physiological impacts discussed above (Ellis et al. 2022; Fitzgerald et al. 2021; Watson and Koontz 2020; Watson et al. 2022), while Subrananyam and Kinderknecht (2021) and Kelly et al. (2020) identify the potential loss of physical, mental and social benefits provided by youth sport. Teare and Taks (2021) suggest that removal of opportunities for organized sports during the pandemic may shift participation to unorganized sporting activity in the future, and Drummond, Drummond, and Prichard (2020) point to a possible generation lost to sport. Sanderson and Brown (2020) detail the significant amount of financial loss to the youth sports industry due to closures caused by the pandemic.

In the case of hockey and Manitoba specifically, media coverage tended to focus on professional (National Hockey League) and Junior (Canadian Hockey League) levels, reporting, for example, on league play being suspended, as a matter of fan interest rather than impacts on players (e.g., Canadian Press 2020). One notable story highlighted the efforts of the Manitoba AAA U18 league to lobby the provincial government to ease restrictions on youth league play (Shewchuk 2021), notably emphasizing both the physical as well as the developmental and psycho-social impacts on the players of the suspension of league play, paralleling many of the same anticipated impacts reported in the literature reviewed above. Other media coverage included publication of letters to the editor expressing local opinion, both positive and negative, about the province's varying restrictions at different times during the progression of the pandemic (e.g., Doerkson 2021).

Methods

Study Area

A survey methodology was employed for this research. Because of the pandemic, an on-line technique was utilized to administer the surveys for each group: parents with registered youth hockey players and hockey association directors in the three recreational hockey associations in southwestern Manitoba, Canada, an area regionally referred to as Westman (Figure 1). Of the three associations, one is urban, the Brandon Hockey Association, and two are rural, the Westman South and Yellowhead Hockey Associations. The two rural associations are separated by the Trans-Canada Highway (HWY #1). Westman South is composed of fifteen communities and Yellowhead (so named for the Yellowhead Highway, #16), twelve communities.

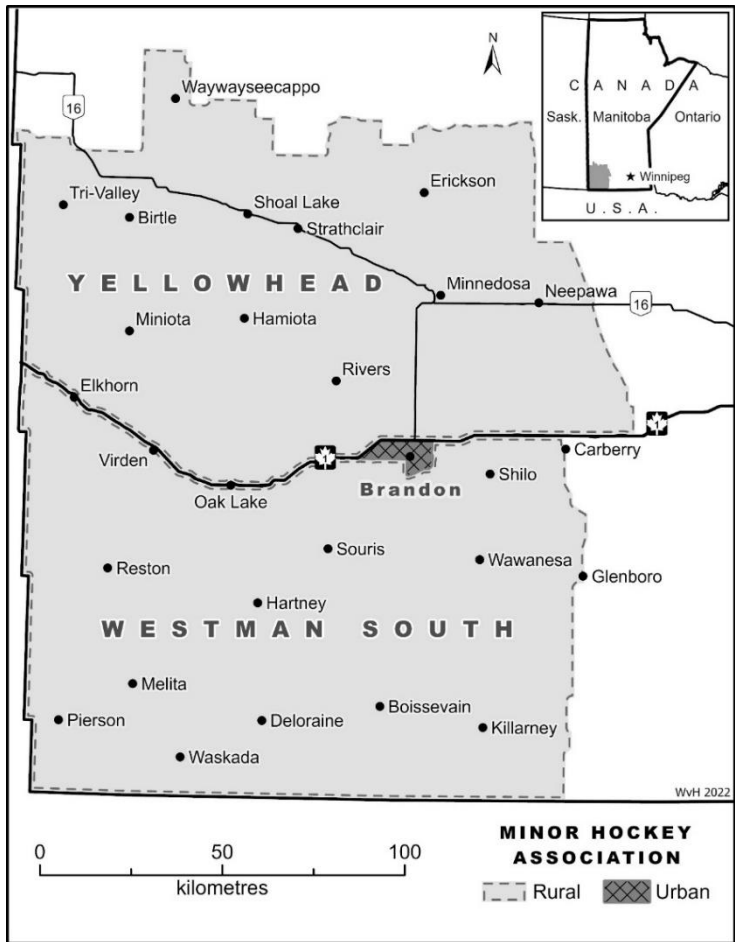


Figure 1: Study Area
 Source: Van Heyst, 2023

Questionnaire Design and Administration

Hockey Parent Questionnaire

The hockey parents' questionnaire was composed of questions developed to collect the background information, opinions, and observations from parents of recreational youth hockey players in the study area during COVID-19 pandemic restriction on play. Specifics included:

Hockey cohort background information:

- Hockey Association
- Age group of player
- League level of player (i.e. house league versus competitive, denoted as A, AA, or AAA)

Opinions:

- Of Hockey Manitoba restrictions on play
- Explanations of opinions

Impacts

- How much, and what type of play occurred during the pandemic
- What players commented on during restrictions on play
- If impacts on the players occurred because of the restriction on play and descriptions of the impact(s) observed (e.g. mental, physical)
- If changes in family routines/behavior were noticed due to restrictions on play

Hockey cohort and opinion of restrictions on play were presented as categorical questions, while the explanations of answers to the questions were open-ended, allowing the parents to explain their opinions and observations in their own words. The questionnaire was approved through the Brandon University Research Ethics Committee (Ethics Certificate number 22812).

We contacted the directors of the three hockey associations and asked them to forward an email to all their registered hockey players' parents. In the case of the two rural associations, the directors were to forward the email on to the hockey directors of each community, who would then forward the email on to the registered players' parents. The email contained an invitation and instructions for the parents with a link to the questionnaire, hosted on Microsoft Forms. In the cover letter to the survey, potential respondents were informed that participation was voluntary.

Table 1 lists the timeline of Manitoba Hockey restrictions on play during the pandemic and notes the timing of our study. As per requirements, Hockey Manitoba implemented restrictions on play based on Manitoba Public Health Orders (PHOs). The study was

undertaken in early to mid-April 2021, during a period when play was just starting up again following the second wave of play suspension, but before the implementation of required immunizations. As a result, we did not receive any opinions on this latter restriction.

Table 1: Timeline of Manitoba Hockey Restrictions on Play during the COVID-19 Pandemic, 2020–2021

<i>Date</i>	<i>Restriction on Play</i>
March 2020	All programs suspended
Sept. 2020	Practices allowed, masks required during play, facilities at 50% capacity and masks required
Oct. 2020	Games allowed (non-contact), players can remove masks on-ice
Nov. 2020	Facilities closed, play suspended
March 2021	Practices allowed, groups of 10 players maximum, masks required at all times for players and non-players
STUDY: early to mid-April 2021	
Aug. 2021	Return to game play, no masks on ice, facilities at 50% capacity for non-players and masks required
Nov. 2021	Proof of immunization required

Association/Town Director and Facility Manager Questionnaires

These two questionnaires were very similar. After asking the respondent to identify which association or town (we grouped all the rural directors) they were representing, the surveys asked for information on the nature of impacts caused by COVID-19 restrictions on play, whether the respondent noticed any social or psychological impacts on players in their association or using their facility, their level of agreement with the restrictions, followed by an explanation of their opinion, what actions the association or facility undertook to abide by the restrictions, how successful they thought these actions were, and whether any of these actions would be carried on in the future. The three association directors, as well as the directors in each town, were contacted directly by email, based on data supplied on the Manitoba Hockey Association website.

Data Analysis

Data were first analyzed descriptively. The open-ended, qualitative responses were examined using content analysis methods that recorded the use of key words and word repetition (Strauss and Corbin 1998) to sort the responses into common themes. The rural hockey parent data was grouped so that rural to urban comparisons could be made with Brandon. We then used the three Hockey Cohort variables to compare between the Opinion and Impacts data, using Mann-Whitney U-tests for the urban versus rural data and Kruskal-Wallis

tests with post-hoc pairwise comparisons for the polynomial Age Group and League Level variables. Hockey association directors' data were analyzed in the same manner.

Results

Hockey Parent Data

We received 174 completed surveys: 62.1 percent were from Brandon Hockey Association parents, 29.9 percent from Westman South, and 8 percent from Yellowhead. We cannot be sure that all parents in all the rural communities received the invitation as the directors of the two umbrella rural associations were to forward the questionnaire invitation email on to the hockey directors of each individual community; whether the email was then forwarded on to all the parents within the communities is unknown. We were able to calculate a response rate for Brandon: we received 108 completed surveys from 722 emails sent, a participation rate of 15 percent. The remaining sixty-eight surveys came from the two rural areas.

Hockey Cohorts

Combining completed questionnaires from Westman South and Yellowhead Hockey Associations allowed for analysis of rural versus urban in the study area. As a result, we collected 37.9 percent rural and 62.1 percent urban responses. Age Group responses were dominated by the U11 and U13 categories, representing 57.5 percent of the responses (Table 2). About half the respondents were parents with children who played at the House League level (54.8%), with the other half spread evenly through the three competitive levels (Table 3). There is a difference in League Levels between urban and rural locations, in that there are more competitive level players in Brandon, the urban hockey association (M-W = 2530, $p = 0.008$).

Table 2: Percentage of completed questionnaires by Manitoba Hockey Age Group

<i>Age Group</i>	<i>Percentage</i>
U7	5.2
U9	11.6
U11	26.7
U13	30.8
U15	18.6
U18	7

Table 3: Percentage of Completed Questionnaires by Manitoba Hockey Player Level

<i>League Level</i>	<i>Total Percentage</i>	<i>Geography</i>	
		<i>Urban</i>	<i>Rural</i>
House League	54.8	48.6	43.5
A	17.3	15	21.3
AA	15.5	20.6	6.6
AAA	12.5	15.9	6.6

Opinions of Restrictions on Play

Table 4 lists the percentages of parental agreement with the restrictions on play put in place by Manitoba Hockey Association. The majority of parents disagreed with the restrictions. There was a significant difference between the urban and rural hockey parents (M-W = 4465.5, $p = 0.004$), in which the urban parents displayed stronger opinions of disagreement than rural parents. There was no significant difference between Age Group (K-W = 8.923, $p = 0.112$). There were, however, significant differences between House League and AA League Levels (K-W = 9.838, $p = 0.020$, pairwise = 0.018), as well as House League and AAA (pairwise = 0.017), in which the parents of players at the higher League Levels displayed greater levels of disagreement with the restrictions on play.

Table 4: Percentages of Opinions Expressed Regarding Restrictions on Play Put in Place by Manitoba Hockey

<i>Opinion</i>	<i>Total Percentage</i>	<i>Geography</i>		<i>League Level</i>			
		<i>Urban</i>	<i>Rural</i>	<i>House League</i>	<i>A</i>	<i>AA</i>	<i>AAA</i>
Strongly Disagree	32.2	38.9	21.2	27.2	34.5	42.3	47.6
Disagree	31.6	32.4	30.3	29.3	37.9	38.5	33.3
Neutral	16.1	13.9	19.7	17.4	17.2	15.4	9.5
Agree	13.8	9.3	21.2	16.3	10.3	0	9.5
Strongly Agree	6.3	5.6	7.6	9.8	0	3.8	0

Table 5 lists the ten most frequent themes with respect to the opinions in Table 4. Almost all parents (93.7%) offered at least one explanation for their opinion. The results are given as frequencies, rather than percentages, as some parents made numerous comments that fit into multiple themes.

Table 5: Frequencies of ten most cited explanation themes for opinions expressed in Table 4

<i>Opinion Theme</i>	<i>Frequency</i>
Frustration over rules/rule incongruities	30
Hockey is a very important outlet for kids	29
Local cohorts could/should have been able to practice together	28
Agreed with restrictions	26
Hypocrisy of being able to attend school vs not being able to play hockey together	25
Felt safety protocols in place were enough to keep play going	25
Hockey season could/should have remained intact	20
Felt PHOs*/restrictions were too severe	15
Against wearing masks on ice	13
Felt Covid-19 case numbers were low enough to resume practices/play	11

* "PHOs" refer to Provincial Health Orders, to which Manitoba Hockey adhered when imposing restrictions on play.

The themes mostly reflect the high level of disagreement with the restrictions on play. All quotes in this paper are presented verbatim, and not edited for spelling or grammar errors. Individual comments often used strong language that is not reflected in the collated theme headings. For example:

The province only cares about money. Gives huge stores the right of way and makes rules for hockey that are lacking any logic. For example you can only have 10 kids on one half of the ice. No hockey team only has 10 kids. So a team of 12 can't practice together. I think Roussin [Manitoba Chief Medical Officer] has never been to a hockey rink or he did this deliberately just to be an ignorant asshat. Either way he should be removed from his post. (Urban, U11, House League, Strongly Disagree parent).

There was no need. Cases were not happening due to children's sports. Even if kids did contract COVID it was not considered fatal. Precautions were in place and being followed. It was just a heavy handed decision made by governments and public health who have no clue what such a decision led to anxiety and probable mental health issues. (Urban, U15, AA, Strongly Disagree parent)

The provinces restrictions has stopped the growth of players at this level. The prospect of scouts for the university levels. The way they handled themselves ... has been shameful. (Rural, U18, AAA, Strongly Disagree parent)

Almost 80 percent of respondents indicated that their child player had participated in some sort of hockey play during the pandemic. There were no significant differences in participation for urban versus rural ($M-W = 3.906, p = 0.162$), age level ($K-W = 8.122, p = 0.150$), or league level ($K-W = 2.056, p = 0.561$). Table 6 reveals that there had been a certain amount of inconsistency in participation type throughout Westman at the time of our data collection. The frequencies add up to more than 100% of respondents as some respondents made more than one comment.

Table 6: Frequencies of Type of Play Occurring during Manitoba Hockey Restrictions on Play

<i>Participation Type Theme</i>	<i>Frequency</i>
Practices only	50
Small number of practice and actual games	50
Normal number of practices and small number of games	18
Small number of games	4
Small number of practice and actual (outdoor) games	3
Next to no practice and no games	2
Normal number of games	1

We also asked the parents to report comments made by their players during the restrictions on play (Table 7).

Table 7: Frequencies of Changes Noted by Players to Parents during Manitoba Hockey Restrictions on Play

<i>Comment Theme on Changes Due to Restrictions on Play</i>	<i>Frequency</i>
Dislikes wearing a mask while playing	67
Misses friends/bonding time on team	26
None	24
Dressing room changes (e.g. physical distancing)	22
Physical distancing (including on ice)	10
Misses playing	10
All of the changes	8
Facility occupancy restrictions (e.g. only one parent)	8
Rule incongruities (e.g. how come my friend on another team has different rules?)	3

Some examples of comments included:

That mask wearing while doing hockey is extremely stupid and makes it very hard to properly breathe.

Friends have been discouraged to play because of wearing masks. It's uncomfortable wearing a mask on the ice because it's difficult to breathe. But he is willing to wear it and following the guidelines if it at least means he gets to play the sport he loves. He felt very distant from his friends and missed out on bonding with his teammates and making new friends. It has been a challenging year on his mental health.

Lack of interaction with peers, time in the changeroom to bond has been detrimental. A team does not bond on the ice, they bond in the changeroom listening to music and visiting with each other.

With respect to impacts on players due to restrictions on play observed by parents, 78.7% indicated that they had observed impacts. There was no significant difference across urban versus rural ($M-W=3924.5$, $p=0.117$), age level ($K-W=8.891$, $p=0.114$), or league level ($K-W=2.211$, $p=0.530$), indicating that impacts were observed in all locations, ages, and levels of play. All of the impacts reported by parents are negative, led by mental health deterioration, which was noted by almost half (47.5%) of parents (Table 8).

Table 8: Frequencies of Impact Types on Manitoba Youth Hockey Players Observed by Parents

<i>Impact Theme</i>	<i>Frequency</i>
Mental health deterioration (e.g., depression, mood changes, anxiety, anger)	81
Lack of socializing	47
Lack of physical outlet/activity	42
Physical health deterioration (e.g., weight gain)	31
Increase in electronics use	17
Lack of skill (i.e., hockey) development	15
Loss of team atmosphere	12
Loss of routine	7
Missing on-ice experience	6
Boredom	5

Examples of comments included:

Less hockey means getting less physical activity and not being active has obvious downfalls. Not being able to engage in hockey which for daughter is also a social activity means her mental health has suffered, she gets bored and just wants to be with her friends.

Depressed, missed his routine. Worked hard for 10+ years to be a 16 year old in U18 AAA Manitoba League and taking away by elected and non-elected public SERVANTS (or should be answerable to the people). ALL these elected officials should be thrown out of office YESTERDAY!

Hockey is a big part of his mental health and with the loss of the social aspect of the game, spending time with friends, exercise and the positive feelings he had playing with a team, I noticed increased sadness and anger at times.

Not allowing her to play hockey has created a lack of interpersonal social and recreational development. She has found a lot of social media connection portals like “house party.”

The last question asked parents whether they observed any changes in their family behavior and routines. The majority of respondents (67.2%) answered yes to this question. There was no significant difference in family changes observed for urban versus rural ($M-W=3625.5$, $p=0.832$) or league level ($K-W=3.578$, $p=0.311$); however, there was a significant difference between age groups ($K-W=14.072$, $p=0.015$), whereby parents of older age groups were more likely to report observation of a change in behavior. Table 9 lists the frequencies of the ten most observed family changes.

Table 9: Frequencies of Changes Noted by Parents of Youth Hockey Players in Family Behavior and Routines

<i>Change to Family Theme</i>	<i>Frequency</i>
Saved money	69
More family time	43
More free time	17
Loss of social circle	8
No travelling (i.e., for games)	7
Loss of physical activity	7
Different activities	6
Less rushing around	5
Lost money (e.g., registration costs)	5
More time to tend to home	5

Although many parents reported benefits like saving money and more family time, many were clear that they would rather have had their children playing. For example:

We enjoyed the additional family time but not at the expense of seeing the emotional toll it took on them from not getting to spend time playing a sport they love and the time with friends. (Urban, U9, House League parent)

“We definitely did so save some money on fuel and food and hotels but the reason our children are in hockey is because were willing to make those sacrifices for the benefit of their physical mental and emotional well-being. (Rural, U13, A parent)

While some benefits such as saving money etc I don’t believe they outweigh the positives of having a child involved in organized sport. (Urban, U15, AAA parent)

We examined whether there was a difference in the number of urban and rural parents that reported saving money, on the theory that rural players need to travel more, thus spending more money; however, the response rates were almost identical (urban, 38.9% of parents; rural, 40.9%).

Hockey Association Director Data

We received ten completed questionnaires from hockey directors: three from Brandon, which has multiple levels of directors, and seven from rural towns, which usually only have one townsite director each. The seven from rural towns represent a 26% response rate from 27 towns. One of the Brandon respondents did not indicate their opinion on the restrictions on play put in place by the province; the other two answered “Strongly Disagree” and “Agree.” Of the rural participants, three indicated “Disagree,” three “Strongly Disagree,” and one, “Neutral.” The Brandon respondent who answered “Agree” explained their opinion as:

I think the government did what it felt was needed to reduce human contact, especially in groups.

The Brandon respondent that answered “Strongly Disagree” did not offer an explanation of their opinion. The rural directors who answered “Disagree” offered less strongly worded opinions than those that answered “Strongly Disagree” as in the following examples:

I do agree that we had to do something but I believe they were unjust towards non professional sports. Limit it to practices only, don’t shut kids down then turn around and say go ahead NHL. (Rural, “Disagree”)

Scientific evidence strongly suggested youth were not ‘at risk’. The vulnerable people overwhelmingly would have been spectators, like grandparents. With added benefits associated with good physical health, as well as the many mental health benefits, the kids should have played. Following a few policies and protocols would have made this absolutely possible! (Rural, “Strongly Disagree”)

With respect to operational impacts on the hockey associations, respondents cited registration issues, such as lower enrolments, health and safety protocol requirements, continued expenses, lost games and practices, the need for increased volunteers to help with the protocols such as cleaning, and the difficulty in finding volunteers. For example:

Health and safety requirements. Limited numbers of participants. Limited numbers of viewers. Reduced revenue – lower registration numbers” (Brandon)

Increased costs, cancelled seasons, backlash from frustrated parents. Extra work applying for grants. (Brandon)

Increased covid protocols, increased cleaning, and more volunteers to full fill government requirement. (Rural)

Lower number of kids enrolled, less volunteers willing to help. (Rural)

We also asked what specific economic impacts were accrued by restrictions in play. The most common response was lost revenue, coupled with ongoing costs:

Refunding over 65% of fees, loss of sponsors. (Brandon)

Lost over \$10 000 in fees, registrations, and canteen costs. (Rural)

Increase cost due to fees handed back, increase cleaning costs, loss of revenue that would come from door gate and 50/50. (Rural)

We incurred regular costs as we do every year and have agreed to give a credit to fees for next year, so the larger impact will be felt next year.” (Rural)

With respect to social and/or psychological impacts the directors were aware of, they responded with aspects such as stress among families, difficult parents, and dropped participation:

Yes, children have experienced diminished self-esteem and confidence. Parents have been unreasonable to deal with during this pandemic. (Brandon)

Families were afraid to participate fully for fear of transmission or contracting Covid-19. There was a lot of stress just trying to provide a safe environment for everyone, ensuring protocols were being followed, and keeping up with constant changing regulations and restrictions took a heavy mental toll on everyone involved (players, coaches, and parents).” (Rural)

Once masks were implemented for players, participation dropped dramatically. Some parents were very unhappy with the 1 spectator rule and made it tough on us to organize. (Rural)

Reduced player numbers especially when the kids were allowed to return with masks on the ice. Many parents angry about the long shut down. (Rural)

Actions taken to address Provincial Health Orders and restrictions on play were focused primarily on consultation with Manitoba Hockey, communicating with parents, and following the rules and restrictions, which included increased cleaning, signage, sanitation stations, reduced capacities, and completely shutting down in some cases:

Cancelled the season due to restrictions. (Brandon)

We have followed Hockey Manitoba and public health guidelines, evolving as the rules have changed, for on and off ice limits. We shut down completely after an extremely cautious start, until we were allowed 1-on-1 activities, expanding to practice groups of ten to finish the year in April. (Rural)

Monitor compliance with the families (mostly parents) about use of masks, signing in, obeying the 1 spectator rules, ect (sic). So we wouldn't get shut down if public health came to visit. We also had to read, understand and follow all the other facilities rules as they all varied slightly. (Rural)

Measuring spaces in dressing rooms, spectator areas, making sorry and exit only doors, preparing parents and team staff for the changes ahead via email, posting on our Facebook, in person socially distanced meetings, monitoring roster sizes, meetings between rink staff and our association, ect. (sic) (Rural)

Answers to whether these actions were successful were varied, even between Brandon directors:

Not successful at all. The season was cancelled, people were not happy with cancelling the season or their refund cheques. (Brandon)

These actions were working out extremely well until the season was cancelled in November. (Brandon)

We were lucky to have a facility that stayed open to test our protocols. With a busy 8 week rink schedule from the end of February until mid-April, 4 AAA programs, ..., and several other use groups complied, with zero incidents! Ultimately, it's about the kids, and they were excited to be out there! (Rural)

We never had any COVID cases in our organization so in our opinion it was very successful. (Rural)

Finally, we asked the directors whether any of the actions implemented during the COVID-19 pandemic would remain into the future. Again, the answers were varied, with Brandon responses indicating no and some of the rural areas suggesting some protocols might remain:

No it is all a bunch of bullshit. The government is taking over everyone's lives and are using fear to justify their unreasonable actions. (Brandon)

No. (Brandon)

The cleaning atomizer will stay but I feel we are small enough that traffic is never a concern. (Rural)

Long term, probably not. The awareness of everyone's own health, and staying away from the rink if you're not sure, may remain for a while. Hand washing, masks, and distancing will likely remain inherent for the foreseeable future. I believe once the risk has been eliminated, or deemed not as serious, life will return to normal where the local rink will be the winter escape for kids, players, parents, and fans, as it should be! (Rural)

Discussion and Conclusion

The impacts of the COVID-19 pandemic on sport were evidenced in this research. While the more obvious impacts identified related to fitness and mental health, respondents also described how sport brings people together. Thus, it is recommended that this research be used to illustrate the importance of supporting organized sport for the broader well-being of communities, in addition to individual and family well-being.

Like many impacts of societal restrictions as a result of COVID-19, our study revealed that restriction of ice-hockey activities led to frustration, confusion, worry, and concern on the part of youth hockey player parents and directors. We discovered a difficulty in recruiting participants during this study that may have emanated from “survey fatigue” (de Koning et al. 2021) due to the plethora of studies limited to survey methodologies during the pandemic, as well as a general frustration and ennui with the societal situation at the time. However, the response rate was strong enough to provide a snapshot of the impacts of the pandemic restrictions on youth recreational hockey, including a comparative analysis between age and league levels, as well as rural versus urban opinions. We do recognize the thoughts of Singh and Sagar (2021) regarding the generalization of online surveys during the pandemic and recognize that our data may contain a greater number of parents and directors dissatisfied with the restrictions on play; in other words, our survey results may reflect a lack of respondents who agreed with the restrictions.

Nevertheless, we discovered a clear frustration with the restrictions on play among parents and directors during the study. It should be noted that this frustration was prevalent in many leisure activities (Havitz, Pritchard, and Dimanche 2020) and society in general (Kubacka et al. 2021). The ultimate frustration with COVID-19 restrictions was with real and perceived inconsistencies. For example, restrictions seemed to favor large retailers over small, and within the school system, health care, seniors care, other recreation (indoor and outdoor); there were concerns with what was allowed versus what was not (Toney and Ishack 2020). This was reflected in some of the parents in our study who bemoaned the ability of players in other jurisdictions that were allowed to play with less restrictions; the comparison was also made by parents to professional sports, such as the National Hockey League, that were allowed to operate. There was also a perceived frustration that the government did not know what it was doing and was being heavy-handed with respect to the Provincial Health Orders that Hockey Manitoba was following. We are not suggesting judgement as to whether parents’ opinions about the restrictions are merited, but their perceptions are important in understanding impacts, whether justified or not.

The most significant finding in our study was the prevalence of physical and psychological impacts reported in youth hockey players by their parents. Therefore, the benefits of recreational youth sports discussed above (Bruner et al. 2017; Ellis et al. 2008; Fraser-Thomas and Côté 2006) were perceived to be negatively impacted. Parents showed an

incredible concern for these impacts. While increased depression and anxiety are reported in youth in general during the COVID-19 pandemic (Hawes et al. 2021; Viner et al. 2022), we have identified it particularly in recreational youth hockey, a national identity pastime in Canada, and often an important aspect of the players' and parents' lives. Gruber et al. (2020) suggest these types of findings will create a need for new paradigms of mental health, necessitating novel solutions in practice. Youth, particularly young children, can be resilient, but the COVID-19 restrictions, including activities such as youth recreational hockey, have tested this incredibly; further, Li et al. (2020) found physical activity to be inversely correlated with anxiety, potentially compounding the situation examined in this study. Thus, negative societal impacts can lead directly to negative psycho-social and physical impacts. Cusinato et al. (2020) also suggest that increased stress levels of parents can have a negative effect on youth and anxiety. Whether this is so in the case of this study is unknown, but parental stress, frustration and anxiety are visible in the comments presented here. Whether the stress and anxiety observed have long-term effects and its relationship to continued participation in youth recreational sport activities such as hockey needs to be researched.

While we did not investigate the socio-economic status of hockey families in this study, research indicates that increased affluence is correlated with increased access to sports (Tandon et al. 2021) and this may be particularly true of ice hockey in Canada (Amirault 2023; Anand 2023; Labossiere 2020). Coupled with findings that reveal the COVID-19 pandemic had less of an impact on well-being of more affluent families (Jeriček Klanšček and Furman 2023; Måsse et al. 2021; Liu and Chatterjee 2023; Thomson et al. 2021), one may expect our study to find few impacts. However, almost 80% of our respondents indicated that they observed negative physical and emotional impacts on their hockey player children, suggesting that in this case socio-economic status did not preclude impacts to these families.

Directors of the hockey associations in this study seem to have faced significant pressures from frustrated parents. Potentially, because of this, they presented similar opinions and comments as did the parents, demonstrating their frustration with restrictions on play imposed by the Manitoba Provincial Government. Hockey organizers were in a difficult position. While some sports, such as dryland activities like soccer were able to offer some online structured delivery of activities (Sherwin 2020; Kelly et al. 2020), hockey, requiring ice, could not be practiced effectively outside of restricted or cancelled programmed recreational activities.

Any externality, global pandemics included, can cause uncertainty. The surveys of both parents and directors in this research showed a division in perception. These divisions, such as agreement versus disagreement with provincial restrictions on play with respect to league level and age of players, were based on personal views and the scientific information available to them, or the particular scientific information they chose to follow. As a further example, one director noted that scientific evidence indicated that youth were less at risk. This comment does not acknowledge the impacts on parents, coaches, referees, facility employees,

and individuals who were immune compromised. In the future, governments and organizations must provide focused, accurate and timely scientific information to avoid the spread of misinformed opinion.

Similarly, in the future if another pandemic presents itself, the results of this study indicate that greater consistency in applying restrictions on play and subsequent communication with the public would be warranted. Parents displayed a high level of frustration with issues such as the restart of the NHL and CHL, or other jurisdictions (e.g., Saskatchewan) reengaging with youth recreational hockey, while Manitoba did not. Transparent communication with families as to the reasoning behind these discrepancies would likely encourage conversation based on facts rather than uninformed frustration. Moreover, the lack of consistency across jurisdictions, and applying to different groups within the same jurisdiction, fosters confusion and mistrust of official health recommendations, further fueling a propensity to believe misinformation.

Furthermore, our findings emphasize the assertion that organized team sport is an important factor supporting youth mental health and well-being, and promoting healthy social skills, including cooperation, sportsmanship, leadership, and a sense of belonging. Specifically, these are all areas that were noted to have been negatively affected by the lengthy restriction on participation in league play.

As a final note, future research could investigate whether the pause in play in organized sport will have longer term effects organizationally (e.g. people leaving coaching, refereeing, directing, etc.) and in participation (e.g. fewer young people entering organized sport during the two years of restrictions). This is an issue postulated at the beginning of the pandemic by Kelly, Erickson, and Turnnidge (2020). Given the losses faced in amateur sport since this time, it is worth further investigation, including surveys and/or conversations with participants, parents and guardians, and sport officials.

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Informed Consent

The authors obtained informed consent from all participants.

Conflict of Interest

The authors declare that there is no conflict of interest.

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