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"It feels like somebody cut my legs off": Austerity, transportation and the 'web of dispossession' in Saskatchewan, Canada

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ABSTRACT

Mounting global evidence reveals a rise in austerity driven by neoliberalisation. We explored the health impacts of an austerity decision to shut down the Saskatchewan Transportation Company (STC) in Saskatchewan, Canada. We conducted 100 semi-structured interviews and 4 focus group discussions with former bus riders and stakeholders in health and social services followed by a member checking exercise. The STC closure has negatively affected health through a *web of dispossession* where the absence of the bus affects individual former users (through healthcare access, psychosocial and financial impacts), family members (through broken relationships and other burdens), communities (through shrinking commons), and entire systems (such as health services through health worker stress and inefficiencies). Analyses of the health impacts of austerity decisions need to move beyond aggregates of individual users of public services to understand the complex ways in which various communities and systems might be caught up in a *web of dispossession* through austerity.

1. Introduction

Mounting global evidence reveals a turn to austerity as a path to economic recovery or a 'new normal' under the ideological hegemony of neoliberal economic policy making (Hay, 2004). This turn has had deleterious health effects especially in the aftermath of the 2008 global financial crisis (Schrecker and Bambra, 2015). Research on austerity often focuses on health sector or public service cuts and the health effects of such political choices on public service users. Although public transportation is increasingly targeted by governments during crises, there is a paucity of research on how such cuts influence health. In the United Kingdom for example, recent evidence suggests that up to fourteen local governments have completely ended subsidies for public transportation leading to limited healthcare access (Bawden, 2018). In Canada, the emergence of a neoliberal orthodoxy has 'constitutionalised' austerity (McBride, 2016) with many municipal and provincial governments targeting public transportation systems during economic crises.

Saskatchewan was the last Canadian province to end province-wide public transportation. The province's 2017 austerity budget saw the closure of the Saskatchewan Transportation Company (STC), a public transportation service and crown corporation established in 1946 to provide integrated transportation services for one of Canada's most thinly populated provinces. Crown corporations are government agencies or public companies held by the government in trust. In Saskatchewan most of these were established between the 1940s and 1970s as part of a social democratic tradition associated with the roots of Canada's only national left-of-centre political party, the Co-operative Commonwealth Federation (now the New Democratic Party) (Smith, 2018). In this sense crowns are *owned* by the citizens of Saskatchewan. According to the government, the closure would putatively save CAD $85 million over a five year period (or 9% of the CAD$685 million budget deficit it faced in 2017) and would have no negative impacts (Stansfield, 2017), a claim disputed by activists. In its final year of operation, the STC served 253 communities, providing passenger and freight delivery services (Saskatchewan Transportation Company, 2017). At the time of the bus closure the STC also employed about 224 workers and while the government regularly acknowledged that these

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workers would be affected by the closure it ignored "the almost 200,000 former riders" who would potentially be left without travel options (Alhassan et al., 2021, p. 5).

This paper draws on rich local descriptions to reveal how the hegemonic pursuit of austerity creates a web of negative health effects. It moves beyond siloed descriptions of austerity's health impacts to an integrated framework, the *web of dispossession* to highlight disruptive effects of public sector cuts beyond former public service users. The paper aims to contribute to global literature on the austerity-health nexus through a transportation case study.

1.1. Austerity and health

Following the 2008 global financial crisis, many countries have pursued economic recovery through austerity (Basu et al., 2017). Austerity, "drastic but selective public expenditure cuts" (Schrecker and Bambra, 2015, p. 69) is an integral component of neoliberal economic doctrine that encourages "fiscal discipline" often with perverse health effects especially for the most vulnerable (Horton, 2017, p. 110). Austerity typically involves governments cutting public services on grounds of financial unviability or during crises to reduce deficits.

Extant research on austerity and health reveal deleterious health impacts of budget cuts. For example, evidence from International Monetary Fund (IMF) inspired austerity in 21 post-communist countries has shown that countries that pursued austerity saw higher tuberculosis incidence, prevalence and mortality compared to those that did not (Stuckler et al., 2008). Canadian evidence also shows negative health effects of austerity through housing and food insecurity (Ruckert and Labonté, 2014; Tarasuk et al., 2011). While political choices to pursue austerity can increase budgetary pressures on public transportation funding (Veeneman et al., 2015), the specific pathways from austerity to health via transportation remain unclear. We address this gap through the STC case study.

1.2. Transportation and health

Transportation is a critical social and structural determinant of health linked to road traffic accidents (Bhalla et al., 2014), physical (in) activity and on a larger scale climate change (Woodcock et al., 2009). Public transportation (compared to private vehicles) is the safest, climate-friendly form of travel (Beck et al., 2007) yet remains marginalised in policy environments that prioritise car dependence (Mattioli et al., 2020). Although research on transportation and health is often focused on downstream connections between transportation exposures and health outcomes some authors have connected transportation to political and structural factors such as poverty and social exclusion (Markovich and Lucas, 2011). Through 'transportation poverty', a combination of systematic reduction of mobility, decreased access to goods and services, absence of or high cost of travel, Lucas et al. (2016) have demonstrated that absence of public transportation can be a fundamental driver of social and health inequities. People without cars or access to public transport have disproportionately lower rates of healthcare utilisation with the most severe impacts on seniors, low income groups and vulnerable populations (Syed et al., 2013). Earlier research on the health of rural-dwelling seniors in Saskatchewan revealed healthcare access challenges (Jeffery et al., 2011). This study builds on emerging evidence on the politics of the STC closure (Alhassan et al., 2021) and its connections to health equity in the context of austerity policies. Unlike most research on transportation and health often limited to urban settings it explores the transportation-health connection on a provincial scale.

2. Study design and methods

2.1. Methods

We employed a qualitative case study to explore the health impacts of the closure of STC in relation to the larger context of austerity. Ours was an instrumental case study, where one explores a case to understand some broader phenomenon (Stake, 1995). We drew from multiple data sources including 100 in-depth interviews with former bus users and 4 focus group discussions (FGDs) with health and social service providers and other stakeholders between July 2019 and March 2020. FGD naming in the findings section is as follows: IUH; FGD in urban Saskatchewan, IRH (rural Saskatchewan) and INH (northern Saskatchewan). Attached numbers refer to 1st or 2nd FGD in the specific location. Reported elsewhere (Alhassan et al., 2021), the study also involved analysis of over 750 newspaper articles and 47 days of Parliamentary Hansards. Interviews lasted between 30 and 90 min and involved participants from northern, central and southern Saskatchewan. Recruitment occurred through research posters shared on social media and in Saskatchewan hospitals. The 4 FGDs (lasting between 40 and 120 min) involved professionals from health and social service systems affected by the closure of STC from northern, rural and urban Saskatchewan.

Data were transcribed verbatim and imported into NVivo 12 software for a hybrid of both inductive and deductive thematic analysis (Fereday and Muir-Cochrane, 2006). The deductive component involved developing a framework by drawing on the existing literature on possible closure impacts and coding primary data to confirm occurrences of such impacts. The inductive component involved coding for other possible closure impacts as well as the development of an integrative framework to show the interrelatedness of various closure impacts. A synthesised member checking exercise was conducted with 15 individuals recruited from interviews and FGDs to present emerging themes followed by a 1-h discussion with opportunity for comment (Birt et al., 2016).

2.2. Study context

Saskatchewan is a Western Canadian prairie province with a sparsely distributed population of 1.1 million people living in the land area of 651,900 km^2. Public transportation is particularly important in Saskatchewan because almost half of the entire population live in Saskatchewan's two major centers (Saskatoon and Regina) (see Fig. 1). Highly dependent on resource extraction revenue, particularly oil and gas, in 2017 following price drops in that sector, the province's economic growth rate was −1% (Government of Saskatchewan, 2017). Poverty rates in the province are higher than the national average; 14.8% compared to 14.4% for all persons in poverty in Canada and 24.6% compared to 18.5% for child poverty in Canada (Gingrich et al., 2016). Poverty is not officially defined in Canada. Gingrich et al. (2016) classify a household as poor if its after-tax income is less than half the after-tax median for the type of family; a measure that allows inter-provincial and international comparison.

2.3. Methodological considerations and reflexivity

This research project provides evidence that refutes the Saskatchewan provincial government's claims that the closure of STC would be innocuous. As scholar-activists, we undertook this research as an act of solidarity with former bus users, and in that sense exercised a 'moral praxis', aimed at challenging power and advocating for the vulnerable (Morse, 2012). In practice this meant working with a provincial anti-austerity 'Stop the Cuts' coalition to hone research ideas, locate potential FGD participants, and organise and carry out knowledge translation activities.

Fig. 1. Map showing Cities and Towns in Saskatchewan where Interviews were Conducted.
Source: Authors

2.4. Research ethics

The study received ethics approval from the University of Saskatchewan Research Ethics Board (BEH 1219) and the Saskatchewan Health Authority (OA-UofS-1219).

3. Research findings

We developed a framework, a *web of dispossession* to locate research findings (this framework is discussed at the end of the findings section). Guided by the framework we present the main impacts of STC closure on individuals, families, communities and various systems. Table 1 presents descriptive statistics of research participants. Most interview participants were aged 50 and above (75%), female (68%), Caucasian (75%) and located in central Saskatchewan (58%). Most FGD participants were in urban settings (63%), worked in the health system (33%) and were managers of programs within the Saskatchewan Health Authority (33%).

3.1. Individual level impacts (former bus riders)

The first set of STC closure impacts are individualised impacts directly affecting former STC riders. The closure has created healthcare access barriers, mental health impacts, safety-related impacts and economic/financial impacts.

3.1.1. Healthcare access barriers

The closure of STC is an impediment to healthcare access. Participants described missed hospital appointments and apparent decisions *not* to seek treatment due to the closure of STC. Many participants

Table 1
Interview and focus group participants.

Research interview participants		Focus group participants	
Variable	number	variable	number
Age	35	**Profession**	1
21–49	55	Academic	1
50–79	10	Medical Doctor	4
80 and above		Non-Manager	2
		Nurse	5
		Other	1
		Pharmacist	8
		Program Manager	2
		Social Worker	
Gender	68	***Gender***	20
Female	31	Female	4
Male	1	Male	
Transgender Female			
Ancestry	1	**Sector**	5
African	75	Community Based Organisation	6
Caucasian	14	Indigenous Organisation	8
First Nations	6	Health System	5
Métis	1	Activist	
South American	3		
South Asian			
Location		**Location**	
Northern	16	Northern	5
Central	58	Rural	4
Southern	26	Urban	15
Total	**100**	**Total**	**24**

missed routine and recurrent health appointments for treatments such as dialysis, chemotherapy, eye, dental and other appointments. Missed and cancelled appointments have varied in frequency, and in some of the most severe cases participants had been unable to attend hospital appointments for over a year. One participant who had gone to great lengths to attend appointments including making radio station announcements to find rides but with no success noted:

> I had a standing appointment every three months for the Botox shots to relieve the spasticity … When STC was running, I would pack my bag, put it on the back of my wheelchair. I would order a handicapped bus and they would just wheel me onto the bus … Now I can't find a reliable ride to get here every three months to get the Botox. The last appointment I had was in November two years ago. (Female, 67, Swift Current)

In some cases, out of resignation, participants decided not to seek care any more due to the challenges faced in trying to attend appointments.

> [W]ith no bus and then how do you get around when you're there and how do I get back, the back and forth for treatment and stuff? I think I would just say, 'give up the ghost, forget it, I'm not going to go for treatment.' I'm getting old, I'll just die. And I'm already thinking that for myself. If something serious happened and I was forced to go, I'm not going to hitchhike. I'm not going to hitchhike 60 below in the winter to go for treatment, I would just say, fuck it, I'm not going, I'll just stay home and not get treatment. And I think a lot of people feel that way. And that is kind of depressing, but it's a reality. You know, you've had so much taken away and what are they going to do? (Female, 64, Creighton)

3.1.2. Psychosocial and mental health

Participants described psychosocial impacts of the absence of the STC ranging from feelings of shame in constantly asking for help, stress in trying to travel and a sense of loneliness in being unable to connect with others. One participant with epilepsy noted:

> I can remember begging like a little kid to my daughter, 'please take me with you' and they go, 'but then we have to turn around and come back. We can only take you for a few days. Like if the buses were still running, you could stay longer' …. Do you know what that's like for a grandmother to stand there and cry like a baby in front of her grandchildren? It's embarrassing. (Female, 57, Saskatoon)

Participants also described the stress involved in trying to attend appointments or arrange rides. This stress is the price one pays for choosing *not* to 'refuse' to attend treatment. A participant who had just finished treatment for prostate cancer explained:

> [T]here were times I had to postpone, and they made it another date later … There's a lot of times you get up in the middle of the night and so worrisome. You start wondering, instead of sleeping you can't sleep, and your heart is pounding and you're wondering 'gee how am I going to get here to such and such an appointment?' (Male, 83, Kamsack)

Finally, many participants described a deep sense of loneliness culminating in depression due to the closure of STC. Such descriptions were common among people feeling completely dislocated and cut off from family. In the case of some Indigenous participants living in urban centers, the absence of the bus caused loneliness and depression and prevented connection to ancestral land and is in a larger sense a form of colonialism as they are unable to participate in Indigenous ceremonies. One such participant living in Saskatoon but with family in the north explained:

> Oh, it's definitely affecting my mental health. My emotional well-being. I do my best to walk the Red Road and my medicine wheel, the mental, the spiritual, the physical, the emotional, is all affected by this. It really, truly is. So, it's really depressing that I can't see my family. And vice versa … some of them have vehicles but they can't afford to come to the city. (Female, 36, Saskatoon)

Evocative language was used by many participants to describe the sense of loneliness and isolation and how it feels to be cut off from loved ones. The loss of family connection due to STC closure was compared to the "Berlin Wall" and other participants referenced feeling like "prisoners" or like they were "in a fishbowl". On participant summarised it as: "so, the taking away of the service, to me it feels like somebody cut my legs off. You know, I can't get from place to place." (Female, 64, Swift Current).

3.1.3. Personal safety and danger

Many participants expressed safety concerns and a sense of heightened vulnerability due to the closure, particularly during winter. The geography of Saskatchewan and its harsh weather during the winter makes driving hazardous and puts people in danger. Many participants alluded to incidents in which they had come to physical harm and psychological distress as a result. As one participant who was involved in an accident because she was forced to drive recounted:

> [Y]ou become anxious because you don't know what's gonna happen and you are not in control of what might happen, yeah like we went in the ditch once, and it was lucky that somebody came along, and they took him to his appointment. (Female, 72, Denare Beach)

Other participants referenced incidents such as a rock smashing a windshield when they were driving someone to an appointment or driving while medicated.

In other cases, unsafe driving was due not simply to poor weather conditions but because participants (or people they knew) had been forced to drive while medicated. Other participants highlighted that it would be impossible to drive after certain medical treatments such as foot surgeries. In one instance, a participant had had 16 surgeries and indicated that driving after such medical procedures would be impossible. A health professional familiar with such situations explained what it is like to drive while on some medications:

> I know that people did ride [on the bus] in and out from Prince Albert every day and now that is not an option. When you are at third week of radiation, you might as well be driving to Vancouver doing that every day. (FGD IUH1)

A dangerous example of individual level personal safety impacts has been the issue of hitchhiking or in some cases walking several days to travel between cities due to the absence of public transportation. One Indigenous participant who was beaten up while hitchhiking recounted:

> Well, I went North and then these three guys picked me, and they beat me up. Because there's no buses, in Northern Saskatchewan. They just thought I was just a bum … They punched me in the face a couple of times. That's the reality behind this, there's no buses beyond Prince Albert. For people that live up north it is dangerous. Indian [Indigenous] women have to hitchhike. Indian [Indigenous] men have to, First Nation men have to hitchhike. First Nation women have to hitchhike. (Male, 49, Regina)

Some participants who hitchhiked also described instances of unwanted sexual advances while hitchhiking.

3.1.4. Personal financial costs

The final set of individual level impacts were financial costs former bus riders had to personally bear due to the closure of STC. These varied significantly from marginal and substantial increases in travel costs to significant costs such as buying a car, as was the case for 4% of participants. For participants who bought cars the high cost of maintaining such vehicles became a challenge beyond the initial financial investment:

> When STC closed, like, I had to buy a car, but that's not something that I wanted to do or something that I could really afford. And it was quite inconvenient for me because I'd rather just use the bus which was cheaper. (Male, 21, Prince Albert)

Participants described further costs due to spending on food or hotels because they had to sleepover in big centers after hospital appointments. The costs increase psychological stress and disproportionately affect low-income people such as those on the Saskatchewan Assured Income and Disability (SAID) program, an income support program that provides some income (CAD $1,064 monthly for single beneficiaries) for people with significant disabilities in the province. SAID is significantly below the poverty cut off (in 2016 a single person earning below CAD $20,424 annually was classified as poor) (Gingrich et al., 2016, p. 2).

3.2. Family level impacts

Many families have been caught up in a web of negative effects due to the STC closure as well. These include impacts experienced by families whose members step in to ease the struggles of former STC riders. Impacts here were often mental health and stress-related although specific economic impacts of STC closure were also described. One of the main impacts of the closure of STC on families in Saskatchewan has been through broken relationships which cause depression especially for people living far from family. One participant made the connection between broken family relationships and poor mental health as follows:

> [M]y sister's in B.C. [British Columbia] she doesn't have a phone. My uncle in Nipawin doesn't have a phone. My brother who lives on another farm, he has no service out there on his cell phone, so I don't get to talk to him on the phone ever. I know that I need to start doing a lot more self-care. I have a lot of baths, and I started reading a book on joy last night, by the Dalai Lama and Desmond Tutu, so I'm very enthused about that. So, I'm aware of where this is coming from and what I need to do. However, it's [pause] dragging yourself out of depression is a really, really hard, difficult thing to do. I feel like we've been cut off, isolated, and disconnected even more so by the bus closure. (Female, 36 Saskatoon)

Another more specific scenario of broken family relationships emerged particularly in situations of divorce where a child lives with one parent. The STC had a program for transporting minors that allowed for such children to easily travel across cities. Three participants who were separated from a partner with the child in custody of the other partner described being part of families whose relationships have been fractured by STC closure.

In some cases, while a specific family member may bear the cost of driving an older family member, some entire families had to bear more dramatic economic costs including relocation or in some cases renting in two places (in the regular home and in a different city where healthcare was being sought).

> At the family level as well, the closure has created a driving burden where family members are forced to drive others constantly or multiple times for the same trip leading to stress, fatigue and difficult relationships. A complex phenomenon of 'choreographed trips' has been used to support family members. Family members drive former bus riders halfway so that another family member picks up the former bus rider for the rest of the trip.

3.3. Community and social impacts

Some people have been caught up in the web of closure effects through community level impacts. Participants described structural isolation of already isolated communities in rural and northern Saskatchewan. This isolation limits access to services and key 'commons' and reduces people's ability to participate in normal aspects of social life. A former STC bus driver reflecting on life in rural Saskatchewan and how smaller communities have become isolated due to STC closure noted: "it was literally how they got around, it was how they got things, it's how they went to things. I don't know what they do now. I don't. *Their lives must be smaller*." (Male, 59, Saskatoon-emphasis ours).

This notion of life becoming smaller or entire communities becoming more isolated because of the dynamics of rural life was a recurrent theme. A participant in a small community noted how the absence of STC made her life even smaller:

> I'm not a huge consumer anyways, but just seeing what's out there. Like not having a vehicle, I'm very isolated here. I think that if I was able to catch a bus, I would go out of town more often. I probably wouldn't feel as isolated. You know, come winter, it's very depressing and you feel even more isolated. We don't even have a local bus here from Creighton to Flin Flon. If I want to go anywhere, it's taxicab. So, I wouldn't feel as isolated if there were a bus running. (Female, 64, Creighton)

In these descriptions of isolation, even though individuals were those ultimately experiencing isolation, the effect of the closure of STC has been to create isolation on the communal level and the individual experience of isolation was merely an indicator of a larger structural isolation. There was also a perceived shrinking of commons on the community level. Here, basic social and community services which members of society could access through the bus system have been removed from people's reach creating a sense of dispossession. The closure of STC has reduced access and in some cases rights to access services such as education and health. The STC's courier service connected community libraries. A participant reflected on the problem of shrinking commons due to the closure as follows:

> It was a special thing around education and around access to reading and to materials that the provincial library system handles and was delivering through STC, you had this basically a weekly thing, they could go central library to library without having a car or anything.

> Maybe you had to ride a little ways or whatever to your little regional library system and say, I've heard about this book, I want to read it, or I want to have it on tape, or I want to do something; bingo! … It is the destruction of key commons in this province and the commons are those equity of services that without, you simply just make it harsher for those is it 15% is it 20 I don't know but it makes it very harsh, very miserable, and in fact endangering their lives; shortening them for sure, but mainly endanger. (Male, 72, Prince Albert)

Finally, STC closure also limits people's ability to participate in social and cultural life. While the inability to travel on the individual level is often manifested as a reduced social life, participants described a larger sense of dispossession where people living in small areas were unable to attend concerts, go to the museum or go to art galleries. Inability to partake in these activities ultimately has a psychosocial effect on people in small areas.

3.4. Macrosocial impacts

3.4.1. Environment

At the macro level, the STC closure has environmental implications. Several research participants described being forced to buy cars even though they would have preferred not to:

> Well, whenever I look at my car or think about my car, I'm not happy about it. Every day I would like to sell my car and, like, not have it anymore, just not worry about it. I would have more peace of mind if I didn't have to have that burden. I mean, most people won't understand because a car is, seen as a necessary part of life and everything, but I like to try to live my life like, differently. And, then when all of a sudden, I'm forced to conform to something that I didn't want to, it's a little bit frustrating, it's quite demoralising. [Being forced to buy a car] It's like if a vegetarian was forced to eat meat. (Male, 21, Prince Albert)

3.4.2. Health system

The closure of STC also affects people in Saskatchewan through health system impacts. It has created inefficiencies, disruptions of the care process and increased stress on health workers. Several examples of inefficiencies were referenced by focus group participants such as increasing wait times, long wait lists for patients and overcrowding at cancer lodges where patients wait for treatment. In some cases, medications have had to be thrown away and blood gets expired because private couriers do not bring blood or medication to healthcare providers on a regular schedule as was the case with the STC. One healthcare worker noted:

> Now we're having to rely on private courier services. Medications showing up - it's frozen; we can't use it. Or in the summer it's too hot, we can't use it. We're throwing out thousands of dollars of medication. We never know when medication is showing up and sometimes when we are relying on medications to come, it's really hard to tell someone who has cancer that you can't have your treatment today because your medication hasn't showed up on time. Whereas we had an agreement with STC and our bus depot here that when the medication came from Regina and arrived at six o'clock, they just automatically put it in a taxi service to the hospital at 7:30 in the morning. (FGD, IRH)

These inefficiencies increase costs sometimes borne by the government through different departments. Since the healthcare budget is about two-thirds of the total government budget and the government had implemented policies to increase efficiency, the closure of STC in a different sector (transportation) to reduce costs has ended up increasing costs in other sectors such as healthcare. In this sense even the government is caught up in the web of closure effects.

The STC closure has also created an atmosphere of uncertainty within the health system causing delays in clinical decision making and high numbers of patients showing up with emergency situations because of delayed care-seeking. One clinician in a focus group noted:

> So, I'd be really interested to know how much of the health budget has been dedicated to private courier services since this all, because … I mean we can't even send a lab work to Regina on a Saturday. It sits in our lab department until Monday morning. How are you supposed to make a clinical decision on somebody's health care when you can't get your lab results in five days? Like it's just absolutely ridiculous. (FGD IRH)

The closure has also created stresses on workers in health services as they try to mitigate the negative impacts of the absence of reliable public transportation on clients and patients. According to one social worker: "personally, for me as an employee doing my work that's a stressor to try and figure out solutions that may not exist and put that onto my clients." (FGD, IUH1)

The stress faced by health workers and other staff in social services has been exacerbated by the fact that in many cases, organisations in the health system have had to reorganise service delivery with no increased capacity.

3.4.3. Social services and other community organisations

Other organisations have also witnessed a large-scale transfer of costs, which they in turn place on staff (by demanding more time or increasing stress on staff), clients, or in some cases to other institutions such as the federal government. Many participants in focus groups expressed frustrations about the fact that although the austerity decision to close STC was aimed at reducing the province's budget deficit, current alternatives for transporting vulnerable people simply cause workers extra stress, save no money and lead to higher expenditure within social services. A focus group participant noted:

> So, I heard just the other day, Social Services is paying people to take a taxi to Regina and back or paying a taxi service to transport those people to a doctor's appointment within Regina. Again, you know, like [X] said it's not saving any money. It's just transferring it from one budget pot into another. And it's the most vulnerable people [who are the most affected]. (FGD, IRH)

4. Framework for understanding STC closure impacts

Based on available evidence, Fig. 2 was an epistemological framework created prior to data collection, to show potential impacts of the closure of STC. This framework, drew on extant transportation-health frameworks (see James et al., 2014) but explicitly included political aspects of the closure and its equity implications. Most of the anticipated impacts of the STC closure have been confirmed through interview and focus group data as above.

Further analyses of the impacts of STC closure revealed some weaknesses of the initial framework. We created a new framework, a *web of dispossession* (Fig. 3) that supplements Fig. 2 and reveals that closure impacts operate across levels from individual former bus riders to concatenated systemic disruptions.

Our assumption in creating Fig. 2 was that closure impacts would be individualised, linear, direct and siloed. Further analyses and reflection however revealed greater complexity requiring one to think beyond aggregations of individual experiences to facilitate understanding of STC closure impacts. The *web of dispossession* was created to locate findings on the impacts of STC closure. The closure took away a bus from former users however people who did not use the bus regularly such as family members and community members are 'caught up' in a web and affected in ways that are not captured in our initial framework. The section below describes the *web of dispossession* which guided the presentation of findings.

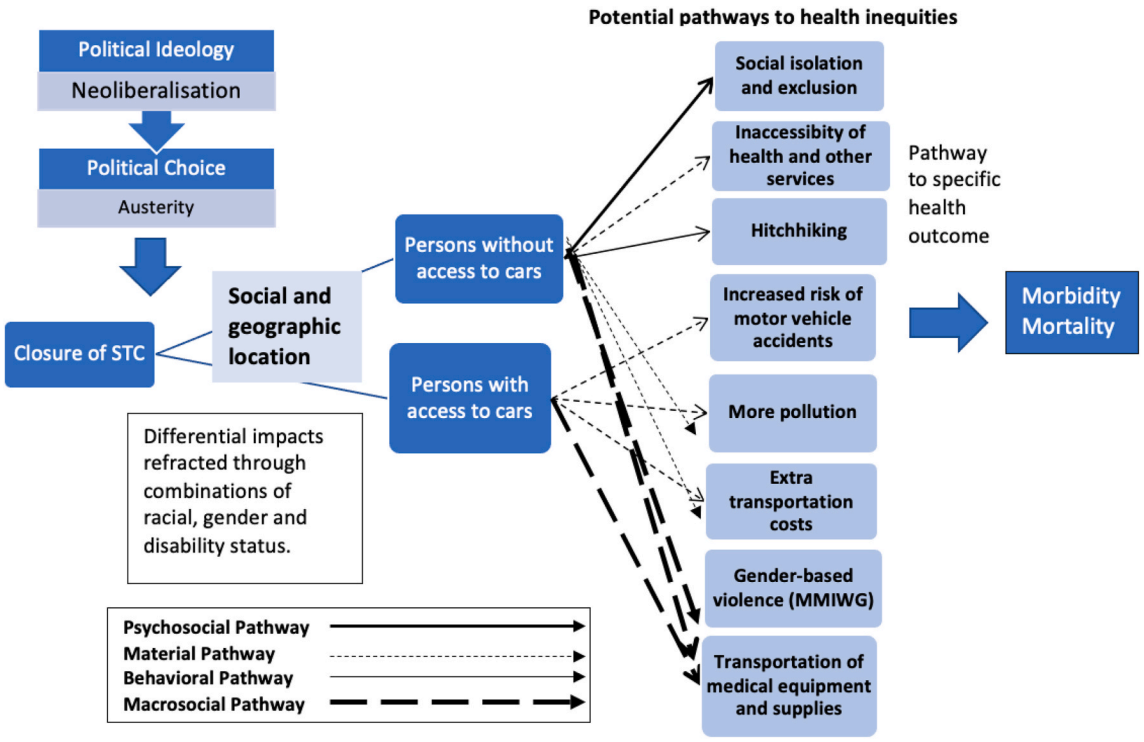

Fig. 2. Evolving framework for investigating STC closure and health impacts.
Source: Authors

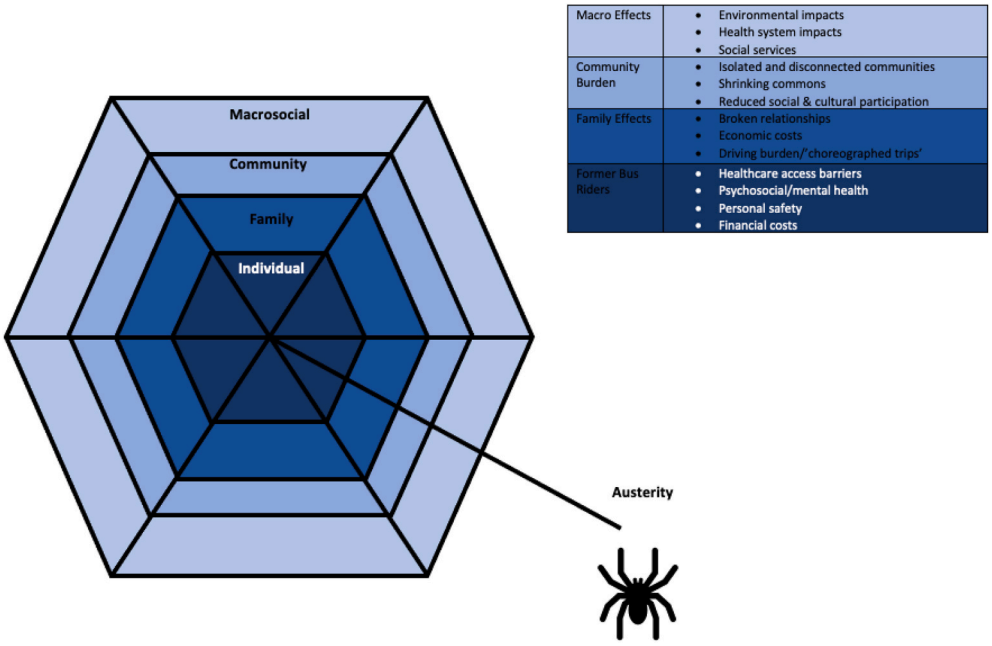

Fig. 3. The web of dispossession.
Source: Authors

4.1. The web of dispossession

Since Dahlgren and Whitehead (1993:20) influential publication on structural influences on individual health and behaviours "conceptualised as rainbow-like layers of influence", a plethora of 'ecological' public health models have been used to describe how multiple layers of structural factors determine health outcomes (Richard et al., 2011). While influenced by this tradition, our *web of dispossession,* akin to the eco-social perspective of Krieger (2001) emphasises "entanglement" and "webness" and is not a causal model. It relies on political economy ideas of 'dispossession' (Harvey, 2004; Sassen, 2015) that best describe emerging patterns of neoliberal austerity that involve the systematic withdrawal of public services while encouraging market dominance. Our findings suggest that austerity functions as a web that entangles communities and dispossesses the vulnerable in ways that are not always apparent. The web of dispossession as it relates to the STC

closure is described below.

The web reveals how impacts of austerity move beyond individual public service users to systemic disruptions. At the center of the web are former bus riders many of whom have been forced to hitchhike or miss hospital appointments. Given that former bus riders are connected to others (often family) who do not wish to allow them to bear the full brunt of the loss of STC, the family members become 'caught in the web' as they try to help the former bus riders access services. Here for example, the family members may drive long distances or feel some of the stress, worry and anxiety experienced by the former bus riders.

At the community level, closure impacts might be felt by people who can no longer access various commons (such as libraries and other public services) that were connected to the bus and, thus, such individuals whether they are former bus riders or not are caught up in the web as well. Additionally, community level service disruptions due to the closure of STC isolate entire communities. Finally, at the macro level, services that were connected to the bus may be disrupted (e.g., hospitals that formerly transported medication and equipment by the bus might experience delays and/or higher costs) and are thus caught up in the web. Health and social service workers are also 'caught up' through stress. In this way, a series of individuals not directly connected to the bus begin to experience closure impacts in a manner that might be obscured if all focus were directed at former bus users.

The idea of a "web" rather than a "ripple" illustrates the fact that closure impacts do not necessarily always originate with the individual (former users of STC) at the center to travel outward and all impacts do not travel to the very distal parts of the web. Take the example of emotional stress, it begins with former bus riders, is transferred to family and community members and may even end up on health workers in the macro system but it does not need to necessarily travel this way. Health workers (at the macro level) may experience stress not transferred by a former bus rider but because the entire health system is facing a disruption due to STC closure. Additionally, a person who does not use the bus but whose medication did not arrive at a hospital (because current arrangements to ship drugs by private courier are dysfunctional) is caught in the web even though this person is not a former bus rider.

The web of dispossession captures the multi-level and complex nature of closure impacts and is meant to supplement Figure 2. Its concatenated nature is meant to broaden thinking about austerity and its health effects, moving beyond individual level impacts, especially those that fall on former bus riders to impacts that are so distal that they may soon be perceived as unrelated to the closure of STC. In terms of nomenclature, the word 'dispossession' beyond its theoretical implications (Harvey, 2004; Sassen, 2015) is used because of the inherent politics of the closure and the contested nature of the government's right to close the company given that it was a crown corporation owned by citizens (Alhassan et al., 2021).

5. Discussion and conclusions

This study has shown impacts of austerity on health using a transportation case study. Like some of the previous austerity literature, we find that the closure of STC has had many negative impacts on the health of individuals and communities in Saskatchewan (and possibly beyond through environmental impacts). Like previous research on austerity's health impacts through health sector cuts (Stuckler and Basu, 2013) we show that transportation is another important social determinant through which government austerity affects population health.

The *web of dispossession* is a useful analytical tool for capturing the complexity of the health impacts of austerity. It demands that interrogations of the impacts of austerity move beyond individual users of public services who are often the focus of negative moral judgements and the rhetoric of "scroungers" (Garthwaite and Bambra, 2017, p.274), to a discourse that shows how the whole of society is negatively affected by austerity decisions. Our examinations of the impacts of austerity show not only individual level impacts but distal impacts of austerity on families, communities, and systems not directly connected to public services. Indeed a response to Krieger (1994) who posed an important social epidemiological question on the web of causation: "has anyone seen the spider?" becomes, "yes the spider is politics (in the present case austerity) and we are all entangled in its web".

Our findings on the individual level impacts of the closure concur with existing literature on transportation and health (McCarthy, 2006). We find, like others, that lack of transportation reduces healthcare access (Syed et al., 2013). Our findings however highlight several intermediate steps that precede reduced access such as the calculus that ultimately leads people to 'refuse to seek treatment' thereby missing appointments. This calculus and the associated psychological stress can easily be overlooked if the metric of missed hospital appointments is the focus for understanding the transportation-healthcare access nexus. At the individual level as well, we found several safety issues previously recorded in the literature such as increased risk of motor vehicle injuries (Beck et al., 2007). There were, however, several disturbing examples of hitchhiking and walking for days, phenomena not widely reported in the transportation and safety literature. Lack of access to safe and reliable public transportation is also associated with mental health impacts such as feelings of depression which have been recorded more recently (Reinhard et al., 2018). Research on transportation and mental health are often in urban settings; we demonstrate rural manifestations of this phenomenon on individuals and families.

Families are also caught up in the *web of dispossession*. The evidence from our study highlights the extant evidence that individuals often feel emotionally impacted when they have to repeatedly ask others for rides (Christie et al., 2017). These feelings of emotional stress do not end with individuals and sometimes affect family members of those who need rides to access healthcare or participate in social activities. Depending on the context, emotional distress may also be felt by other family members who are obligated to bear a heavy driving burden because of the lack of access to reliable public transportation. In this sense, austerity and its effects move beyond individual public service users to their family members.

At the community level, we find various closure impacts including increased social isolation and exclusion as well as decreased access to key commons. Church et al. (2000) have shown how isolation operates and advocate for a broad conceptualisation of transportation-related social exclusion to include factors such as economic, geographic, and physical isolation which reduce access to services and facilities on a community-wide scale. Transportation-related social exclusion commonly affects vulnerable populations and serves to peripheralise the most marginalised members of society (Lucas, 2012). This has important implications for health and health equity. The presence of reliable, affordable and accessible public transportation reduces exclusion and promotes health equity by connecting communities to resources necessary for health and wellbeing.

Transportation-related austerity also affects health through systemic disruptions. The expansive view of the health impacts of austerity through the *web of dispossession*, shows transportation-health connections on a health system level not traditionally explored in the extant literature. In the case of Saskatchewan, the deep connections between the STC and the health system have led to significant and disruptive impacts of austerity on the entire health system. The STC regularly transported vaccines, medical equipment, blood products and other forms of medical freight (Saskatchewan Transportation Company, 2010). The loss of the STC bus system has created inefficiencies, revealing the illogic of austerity not only because of its human costs (Stuckler and Basu, 2013) but clear financial costs attributable to new inefficiencies. Our findings show that transportation might affect people's health, not simply because they cannot attend hospital appointments, but also because the entire health system may be disrupted, leading to delays, inefficiencies, and interruptions of the care process. This again shows that the impacts of austerity routinely move beyond its primary targets.

Transportation-related austerity might also affect health through climate change. The fact that 4% of research participants in the present study reported that they were forced to buy a vehicle is noteworthy. Although the study was not quantitative and cannot extrapolate on the proportion of former STC users in Saskatchewan who have bought private vehicles due to the closure, we are convinced that more people have likely been forced to buy vehicles. This has significant implications for human health in Saskatchewan and elsewhere. Evidence on the interrelationships among transportation, climate change and population health reveal that approaches to transportation policy that prioritise active transportation including the use of public transportation can play a dual role of simultaneously reducing greenhouse gas emissions and improving population health (Woodcock et al., 2009).

This paper set out to answer a question the Saskatchewan government ought to have answered prior to closing STC: the question of impacts of STC closure. Although the Helsinki Statement on health in all policies (HiAP) was released almost a decade ago to foreground the need for health considerations in the implementation of public policy (World Health Organization, 2013), government austerity decisions that clearly have health implications are made with little to no consideration of those impacts. Had Saskatchewan had a HiAP tradition the suffering described in these pages could have potentially been avoided. In Canada, there are ongoing calls for a pan-Canadian HiAP framework to encourage provincial governments to explicitly evaluate health impacts of public policies (Tonelli et al., 2020). While such calls are important it is necessary to assert that austerity is often an ideologically driven political choice as was the case of STC (Alhassan et al., 2021). Hence calls for a HiAP framework are a necessary but insufficient condition for reducing the risk of health-depleting public policies such as the STC closure because evidence itself is political and governments selectively adopt evidence that suit ideological ends.

The decision to shut down STC has negatively affected population health and is disruptive to social and health systems. Like other research on the 'adverse social consequences' of lack of public transportation (Lucas et al., 2016), the *web of dispossession* reveals that STC closure impacts operate on multiple levels often starting from the individual where closure impacts are most visible and moving further up into social and health systems with decreasing visibility. Austerity remains one of the "central engines in society that generate and distribute … risks" (Diderichsen et al., 2001, p. 16) and is therefore a fundamental cause of social and health inequities. In the Canadian context, the recent decision of the Greyhound bus company to cease providing services throughout the country (Evans, 2021) means that, at least over the short term, many more communities are likely to be caught up in the *web of dispossession*. As illustrated by the STC case, the health and social consequences of cuts to public transportation although most visible for those without (access to) cars function as a *web* in which many more people and communities might be 'caught up.'

Author contributions

JAKA: conceived of the study and study design together with **LH**, contributed to data analysis, developed the first manuscript draft, and critically reviewed the final manuscript; **JAKA**: led data analysis developed the first manuscript draft, and critically reviewed the final manuscript; **SA**: contributed to data analysis, developed the first manuscript draft, and critically reviewed the final manuscript, **CN**, contributed to data analysis, developed the first manuscript draft, and critically reviewed the final manuscript **LH**: Oversaw study design/implementation, critically reviewed and commented on all drafts of the manuscript. All authors approved the final draft.

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