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Abstract

Low income negatively impacts health, access to health services, and overall quality of life. Living with low income is complex, strongly correlated with disability, age, gender, race, and mental illness, and can present barriers to participation in employment, self-care, and leisure occupations. Occupational therapists are well-positioned to reduce these socioeconomic, environmental, and personal barriers. Research on student occupational therapists' learning and perceptions in working with individuals living with low income is unexplored. This study aimed to understand student occupational therapists' perceptions and experiences related to low income and their knowledge of their professional roles in working with low income populations. Fourteen Canadian occupational therapy programs were asked to invite final year students to complete an online survey. Resulting data was analyzed for student perceptions of their professional roles, personal experiences, and learning experiences related to working with low income populations. Eighty-eight respondents completed the survey. Ninety-one percent (n=81) agreed with the occupational therapy role as a change agent with marginalized and low income populations. Fifty-seven percent of respondents (n=53) disagreed that they learned enough about low income in their programs. Students reported gaps in their learning about working with low income populations, with six percent (n=5) having learned to screen for low income. Respondent comments resulted in 21 unique codes that built three themes; 'academic experiences', 'perception of role', and 'individual experiences'. Occupational therapy programs need to address gaps in student learning to prepare student occupational therapists to advocate for individuals living with low income and address socioeconomic inequities of occupational engagement.

Keywords

Low income, poverty, student learning, professional roles

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Perceptions of Low Income by Canadian Student Occupational Therapists

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ABSTRACT

Low income negatively impacts health, access to health services, and overall quality of life. Living with low income is complex, strongly correlated with disability, age, gender, race, and mental illness, and can present barriers to participation in employment, self-care, and leisure occupations. Occupational therapists are well-positioned to reduce these socioeconomic, environmental, and personal barriers. Research on student occupational therapists' learning and perceptions in working with individuals living with low income is unexplored. This study aimed to understand student occupational therapists' perceptions and experiences related to low income and their knowledge of their professional roles in working with low income populations. Fourteen Canadian occupational therapy programs were asked to invite final year students to complete an online survey. Resulting data was analyzed for student perceptions of their professional roles, personal experiences, and learning experiences related to working with low income populations. Eighty-eight respondents completed the survey. Ninety-one percent (n=81) agreed with the occupational therapy role as a change agent with marginalized and low income populations. Fifty-seven percent of respondents (n=53) disagreed that they learned enough about low income in their programs. Students reported gaps in their learning about working with low income populations, with six

percent (n=5) having learned to screen for low income. Respondent comments resulted in 21 unique codes that built three themes; 'academic experiences', 'perception of role', and 'individual experiences'. Occupational therapy programs need to address gaps in student learning to prepare student occupational therapists to advocate for individuals living with low income and address socioeconomic inequities of occupational engagement.

INTRODUCTION

What is 'Low Income'?

Low income is a significant issue that impacts a considerable amount of the population in North America. It is estimated that approximately 13% of the population in the United States and Canada are living with low income (Semega, Fontenot, & Kollar, 2017; StatsCan, 2013). Seventeen percent of children (ages 0-17) in Canada live with low income (StatsCan, 2013) and in the United States, 17.6% of children under the age of 18 live with low income (Semega et al., 2017). Definitions of 'low income' generally account for family structure and income such that a single Canadian making less than \$20,160 CAD (StatsCan, 2013) and a single American making less than \$24,456 USD are classified as living with low income (Semega et al., 2017). However, there are many ways to measure and define low income, poverty, and economic marginalization. Absolute measures include low income cut-offs that measure who is "substantially worse off than average" (Felligi, 1997). Relative measures of low income consider one's ability to purchase 'necessities' or specified goods, or by societal standards of living conditions (Felligi, 1997). In the context of this paper, the term 'low income' describes any individuals that fall within absolute, relative, or societal definitions of low income. Where the term 'low income' accounts for many individuals, there is no one experience of low income. Individuals living with low income may experience daily challenges with making ends meet, be unable to afford goods or services important to their quality of life, have difficulty budgeting for unexpected expenses, and have a hard time finding affordable food, transportation, and housing options. These expenses may be even greater for low income individuals who have a disability and must pay for prescription medications, new equipment, and equipment repairs in addition to their other daily expenses. Overall, individuals and communities with low income make up a large and marginalized portion of North America's population.

Impact of Income on Health

From a public health perspective, income has a substantial impact on the health of individuals, families, and communities. As a social determinant of health (SDH), income influences living conditions as well as access to various goods and services including healthcare, education, and leisure-based activities (Public Health Agency of Canada, 2013). Even in Canada, where access to universal healthcare is established, expenses related to drug prescriptions, many occupational therapy services, dentistry, and vision care, for example, may not be covered and can be costly. Individuals living with low income generally have decreased access to healthcare information and services, and have an increased likelihood of dying earlier and suffering more illnesses (Marmot, Friel, Bell, Houweling, & Taylor, 2008). Further, low income individuals may experience

shame, stigma, and social isolation that may impact self-esteem and participation in cultural and social events.

Within the healthcare system, income impacts access to and quality of services. A study of medical students' perceptions and beliefs around low income clients found that patients with a low socioeconomic status (SES) were subject to numerous harmful misperceptions, judgements, and stereotypes when accessing healthcare services (Woo, Ghorayeb, Lee, Sangha, & Richter, 2004). In the homeless population, where there are significantly higher rates of chronic disease and mental illness than in the general population, systemic barriers and stigmas limit health access (Cowan, Hwang, Khandor, & Mason, 2007). Thus, income is a key factor in determining both the general health of populations and the well-being of individuals.

Low Income and Occupation

A fundamental belief in occupational therapy is that people's health, well-being, and quality of life are impacted by their occupational engagement during daily life (Hammell, 2015). A lack of participation in meaningful occupations can have detrimental effect on one's health and well-being (Pollard & Sakellariou, 2017). The World Federation of Occupational Therapists (WFOT) position statement on human rights states that all people have the right to participate in occupations, a right threatened by conditions such as poverty (World Federation of Occupational Therapists, 2006). Occupational therapy research encourages practitioners to address injustices by identifying client strengths, identifying socially-structured inequalities, and advocating for the occupational rights of all people (Hammell, 2015; World Federation of Occupational Therapists, 2006). With a firm understanding of the value and the impact of occupational engagement on health and a clear role in client advocacy, occupational therapists are well-suited to address this issue by providing physical, social, and mental health services to low income populations (Hand, 2017).

As occupational therapists have a broad scope of practice, they are able to work within a variety of settings and support a large spectrum of individuals living with low income. Occupational therapists may work with low income older adults creating opportunities for community participation, helping them to obtain assistive devices through various funding opportunities, assisting with tax filing and accessing benefits and entitlements, and enabling them to perform their activities of daily living (ADLs) safely and easily within their home environment (Mulry, Papetti, De Martinis, & Ravinsky, 2017; Szanton, Leff, Wolff, Roberts, & Gitlin, 2016). Occupational therapists may also work with low income youth to facilitate opportunities for leisure engagement (Bazyk & Bazyk, 2009; Mason & Chuang, 2001). The Occupational Therapy Groups for Healthy Occupations for Positive Emotions (HOPE) is an example of an after-school program that helped low income youth participate in leisure occupations and develop social-emotional skills (Bazyk & Bazyk, 2009). Furthermore, occupational therapists play a considerable role in working with individuals who are homeless and supporting them by teaching skills for everyday living, assisting with housing transitions, providing physical and rehabilitative services, and aiding individuals in finding employment or education (Muñoz, Dix, & Reichenbach, 2006; Roy et al., 2017). Ultimately, occupational therapists may reach out

to governmental organizations and policy-makers to advocate for the elimination of systemic barriers and occupational injustices related to living with low income (Guptill & Perry, 2015; Hammell, 2015; Mazumder, Duebel, Hoselton, & Havelin, 2016). These examples provide a glimpse into the variety of interventions, clinical and practice settings, and actions that occupational therapists undertake when working with low income populations.

What are Students Learning? How do They Perceive Their Professional Roles?

Despite numerous opportunities for occupational therapists to support individuals living with low income, there is little research on the extent to which student occupational therapists learn about supporting these individuals. Further, it is not known how student occupational therapists' prior experiences and perceptions of low income impact the interactions with their clients.

Student occupational therapists gain knowledge and build professional competency through classroom learning, research participation, fieldwork experiences, professional mentorship, and self-directed learning. Classroom learning occurs in many formats, including didactic lectures, group discussions, projects, case-based papers, readings, and peer-led presentations. Over the course of their occupational therapy education at accredited programs, students complete clinical fieldwork experiences at numerous different clinical or non-clinical sites, with different supervising therapists, and with a variety of population groups (Accreditation Council for Occupational Therapy Education, 2018; Association of Canadian Occupational Therapy Regulatory Organizations, 2011). Due to the variety of settings, populations, and practice areas that occupational therapists work in, not all students within a program will have the same, or even similar, fieldwork experiences. Additionally, students may take on independent and self-directed learning in areas of personal interest. Overall, the content and delivery of material that students learn within occupational therapy programs varies program to program and student to student.

Not all student occupational therapists have experience in working with individuals who are living with low income. As the majority of students within higher education programs, such as occupational therapy, come from middle-class backgrounds, the discrepancies between client and practitioner class status can have a significant influence on collaboration and rapport-building due to different perspectives and experiences (Beagan, 2007; Beagan & Chacala, 2012). Class-based cultural differences can impact a practitioner's ability to identify systemic barriers associated with low income (Beagan, 2007; Pitonyak, Mroz, & Fogelberg, 2015). A study conducted on medical practitioners found that practitioners with personal experiences related to low income may be more empathetic towards clients of a lower SES than their higher SES medical peers (Woo et al., 2004). To be optimally successful, clinicians must practice with cultural humility and critical reflexivity (Beagan & Chacala, 2012). It is important that student occupational therapists, as future practitioners, have knowledge and awareness about how their differing class status and SES backgrounds may influence practice experiences and, by extension, their perceptions of their professional roles in working with individuals who are living with low income.

The goal of this paper is to report on the results of a survey conducted with Canadian student occupational therapists about their personal experiences related to income, their learning to work with clients who are living with low income, and their perceptions of the occupational therapist's roles in working with individuals living with low income.

METHODOLOGY

Research Design

To address the research aim, the study was a descriptive survey study that incorporated qualitative (Sandelowski, 2000) and descriptive quantitative data (DePoy & Gitlin, 2011). Data were collected using an online survey with some open-ended questions. When reporting, interpretations of qualitative themes were merged with the statistical analysis of quantitative findings to build an integrated, broader picture of how student occupational therapists learn about low income, including their personal experiences and perceptions of occupational therapy roles in working with low income clients.

Survey Design

As a suitable survey was not available in the published literature, the survey was developed using survey design principles (De Vaus, 2002; Eysenbach, 2004) and was based on a similar survey conducted by the same research group on occupational therapists across Canada (Park, Jayaratne, Cockburn, & Polanyi, 2017). In addition, the survey was reviewed by five recent occupational therapy graduates from Ontario and Eastern Canada and their feedback was incorporated before the survey was distributed to potential participants. To accommodate both English and French speaking participants, the survey was originally developed in English and translated into French by a native French speaker and teacher. The survey was then translated back into English by another native French speaker and teacher. Discrepancies between the wording and intent of the questions were discussed by the research team until a consensus was reached.

The open-access online survey explored students' knowledge of low income related to the occupational therapy role, their courses and classroom learning experiences, their fieldwork learning experiences, and their personal experiences (see Appendix A). There were 25 questions made up of 22 closed-ended (*i.e.*, multiple choice, closed lists, and Likert-scale) and three open-ended questions.

At different points throughout the survey, participants were asked to provide basic demographic information, including their school affiliation, number of fieldwork hours completed, household SES, and current financial situation. The survey used Likert-style response options (*i.e.*, strongly agree, agree, neutral, disagree, or strongly disagree) to assess students' agreement related to overall learning about low income, specific topics of learning related to low income, and individual views on the occupational therapy role in working with low income populations. The three open-ended questions were placed throughout the survey and prompted students to comment on academic, individual, and professional perspectives related to low income.

Participant Recruitment

In July 2017, directors of all 14 Canadian occupational therapy programs were contacted by email with the request to distribute the survey invitation to students in their respective programs, for a non-random convenience sample of final year student occupational therapists. Inclusion criteria for participation were restricted to final year Canadian student occupational therapists. First year students were excluded from participation due to limited exposure to the content of their programs. There were no additional exclusion criteria. Additionally, to monitor the number of participating schools, programs were asked to respond if they had distributed the emails. Up to two reminders were emailed to program directors: the first sent about two weeks after the initial mailing and the second about two weeks later. After approximately one month passed, a third reminder was sent to directors of programs with fewer than 10 responses. The survey remained open for eight weeks and was not advertised further.

Survey Administration

Hosted on a popular survey platform (surveymonkey.com), participants accessed the open, web-based questionnaire directly from an email link. Prior to starting the survey, participants read and agreed to a consent statement outlining the participants' rights and the purpose of the study, as well as permission to use their data and send anonymized data back to their program. With a minimum of 10 participants per school, participant anonymity and confidentiality could be maintained when sharing summarized and anonymized data with specific schools. In cases with fewer than 10 responses from one school, information could become identifiable and was therefore not shared with that school. The completion of the survey was voluntary; there were no mandatory questions and all items had a non-response option. The survey was designed in non-randomized order and presented one item per page over 25 pages. Participants could see the percentage they had completed and were able to review or change prior answers.

Due to constraints of the survey platform, the true number of unique site visitors, the viewing rate, and participation rate were not monitored. The survey did not track multiple entries by the same individual by use of cookies or internet protocol (IP) address checks.

Data Analysis

All participants who provided answers to at least the initial six questions were included in the final analysis, regardless of the total time used to complete the survey. No statistical corrections were performed on the survey items, such that all questions were given the same weight within the analyses. All data collected from the survey were provided anonymous numerical identifiers and stored in SurveyMonkey's secure online database before being downloaded and stored on a password-protected, encrypted computer.

Both quantitative and qualitative analyses were conducted using Microsoft Word and Microsoft Excel to organize and analyze the survey data. Using Microsoft Excel, the data were coded to allow for statistical analysis and bar graphs were created to provide visual representations of the results. Microsoft Word was used for the qualitative analysis to organize different color-codes and themes from the open-ended responses.

A descriptive statistical analysis was used to summarize the responses obtained from the questions (closed lists, multiple choice, and Likert-style) for percentages or counts. In addition, analysis using chi-square tests of independence examined the relationships between different variables in the survey, for example, attitudes towards low income and personal income or experiences in class and fieldwork. As it was not the intent of the study to examine individual schools, no direct comparisons or lone analysis of Canadian occupational therapy programs were completed.

Utilizing Braun and Clarke's (2006) six-step method of essentialist, or realist, thematic analysis, the responses obtained from the open-ended questions were coded and themed as a whole data set. No coding or analysis of individual responses was undertaken; each of the questions were not analyzed separately, rather all responses were combined together. Beginning with repeated and thorough readings of the data as a whole, initial codes were noted from recurring topics or sentiments. Once familiar with the data, the most interesting, basic elements of the data were identified by color coding. All coding was completed manually, rather than using a software program. Twenty one codes were identified. Each of the 21 codes were then given a definition and linked to one or two salient data extracts reflective of that code. With each code and definition on individual pieces of paper, codes were initially organized into five theme-piles, but after discussion were organized into three theme piles by the three researchers. Each theme-pile was reviewed based on the codes it contained to ensure a coherent pattern between the codes and their themes. The organization of codes into themes was iterative and took place over a number of sessions. Each theme was revisited to determine that the theme reflected the 'essence' of the codes, and data extracts, included within it. In some instances, returning to the initial survey question aided understanding of a response within a theme. Finally, the interpretation of the thematic analysis was written up separately to the quantitative work, before being interlaced with the descriptive and statistical results of the survey.

Within the qualitative analysis, the researchers attempted to reflect the realities of the respondents using an essentialist method (Braun & Clarke, 2006). The goal of the analysis was to accurately reflect the entire data set of responses without necessarily providing in-depth or detailed accounts related to any single specific area. As the analysis was driven by a specific interest in the perceptions that student occupational therapists had about low income, a "top-down" or theoretical thematic approach was taken.

Ethics

Ethics approval for this study was obtained from the university institutional research ethics board. One school was not able to participate due to additional ethical clearance which was not obtained within the study timeframe.

RESULTS

Participant Characteristics

Approximately 925 final year students were invited to participate in the survey. The survey had a total of 95 participants. Seven responses were removed from the data due to lack of completeness (less than six questions answered) to make 88 responses. Three of these participants completed only the first portion of the survey; however, it was decided to keep these responses as they included answers to key survey questions about overall learning about low income and their response to Hammell's (2015) statement about the occupational therapy role with low income. Thus, a total of 88 or 85 responses were included in the analysis, corresponding to an approximate 9.5% survey completion. Eighty two completed the survey in English and six completed it in French. The respondents were a non-representative sample of Canadian student occupational therapists. Respondents tended to be female-identifying students, from middle or upper income backgrounds attending English-speaking schools, and who had completed 500 or more hours of fieldwork experiences (see Table 1). Over 90% identified as female and only a small percentage of the respondents identified as having male or 'other' gender identities.

At the start of the survey, students were asked what university they were attending. Ten out of fourteen Canadian universities were represented in the survey. The breakdown of responses are as follows: five schools provided 10 or more responses and the remaining schools provided less than 10 responses. The schools are not explicitly named to maintain participant anonymity. Unequal school-wise response rates created a sample that does not equally represent all Canadian occupational therapy schools.

Table 1

Demographic Characteristics of Respondents

Demographics	n	%
Respondents		
Total responses	95	
Responses removed	7	
Incomplete responses (included for partial analysis)	3	
Total responses Q1-6	88	
Total responses Q7-25	85	
Language of Response		
English	82	93
French	6	7
Fieldwork Completed		
<286 hours (1-7 weeks)	13	15
286- 499 hours (8-14 weeks)	10	12
500-750 hours (15-21 weeks)	16	19
750+ hours (21+ weeks)	46	54

Note: Percentage values intentionally not provided for the respondents.

Survey Results

The researchers reached consensus that there was equal priority between the qualitative and quantitative data to justify presenting the results of the survey and analysis of the open-ended questions together. Therefore, the results from both quantitative and qualitative survey data were organized and discussed within three main qualitative themes: individual experiences with low income, academic learning related to working with low income individuals, and perceptions of the professional role. Quotes provided by respondents are reported without school labels to maintain participant and school anonymity.

Individual experiences with low income. The survey asked students to describe their current and familial financial situations, including class status, enrollment in student aid programs, and personal experiences related to low income. When asked to identify their

household financial situation and class status (see Table 2), most students (73%, n=61) self-identified as belonging to middle or upper-middle class families and a quarter of students (25%, n=21) self-identified as coming from lower-middle or low income families. Students were also asked to select their individual income status and most students (88%, n=74) identified their income status in 2016 as less than \$15,000 CAD after taxes. The most common financial resources utilized by the participants included parents (66%, n=57), government loans (62%, n=54), and credit cards (38%, n=33).

Students were asked how their income had impacted their life in 2016. The students were provided with a list of responses to choose from, for example, 'I can't always afford public transportation' and 'I can't afford some course materials and activities'. They were also asked to provide their own comments related to this question. Responses regarding how their income had impacted their life in 2016 revealed codes that contributed to a theme related to perceptions and experiences of low income at a personal level. Within this theme, the codes related to anxiety or worry, debt and loans, employment concerns, financial support systems, and being unable to afford purchases day-to-day. For example, one student's comment exemplified concerns related to everyday costs; "I am living off loans and lines of credit, and often worry about paying them off once I am done school".

In an additional question, students were also asked to comment on how poverty and low income issues are covered in the occupational therapy curriculum, possible supports for low income occupational therapy students, or comments about occupational therapy practice and poverty generally. In response to this, a student highlighted the importance of the financial supports they received and yet, still commented on the financial challenges experienced within the education program:

I have been fortunate enough to have assistance from my partner and mother, which has prevented me from having many of the worries which I experienced in undergrad (e.g. affording rent, utilities, clothing, transportation). There is no allowances made in the OT program for low income students - it is expected we travel or relocate for placements, even though this can be associated with significant additional costs. More acknowledgment of the difficulties associated with this, and supportive initiative, from faculty would be helpful.

A third, salient comment in response to the question about how poverty and low income issues are covered in the occupational therapy curriculum, possible supports for low income students, or comments about occupational therapy practice and poverty generally, came from a student who self-identified as living with a low income status. A concern was expressed over the lack of dialogue regarding low income issues within the academic program:

Students could benefit from more direct discussion about the lived experience of poverty (not only as a product of health issues but the dynamic relationship). I was upfront with my SES background but I did often struggle with my feelings of 'inferiority'.

Table 2

Reported Family Socio-Economic Background and Current Socio-Economic Statuses of Survey Respondents

Income Characteristic	n	%
Economic Situation		
Low income	7	9
Lower middle income	14	17
Middle income	31	39
Upper middle income	30	36
High income	2	2
I don't want to share	0	0
No response	4	5
Total	88	
Current Income Status		
Under 10,000	58	69
10,000-15,000	16	19
15,000 - 20,000	1	1
20,000-25,000	1	1
25,000-35,000	1	1
Over 35,000	1	1
Do not want to share	5	6
No response	5	6
Total	88	

Learning and experiences at the program-level. The following data reflected students' perspectives on their academic preparation, including fieldwork and classroom-based experiences, related to learning to work with low income clients.

Students were asked whether they had learned enough about low income within their programs. Over half (57%, n=50) of respondents disagreed or strongly disagreed that they had learned enough in their program, less than a quarter (24%, n=21) of students provided neutral responses, and a small number (19%, n=17) reported that they had learned enough about low income in their program.

Student disagreement about the amount of overall learning about low income was similar across schools, whereby the majority of respondents from each school expressed disagreement about having learned enough in their respective programs. A

chi-square test of independence was performed between only the five schools with more than 10 respondents, to maintain anonymity and have adequate sample comparisons. The aim was to examine the relationship between school affiliation and agreement or disagreement towards how much was learned about low income. The relationship between these variables was non-significant, $X^2(16, n=70)=15.70, p=0.47$, such that students from these five schools reported similar levels of agreement and disagreement.

When looking at only the participants who indicated that they had *not* learned enough about low income within their program (57%, $n=50$), this subgroup reported varied perceptions about specific areas of classroom learning related to low income. These participants agreed or strongly agreed that they had learned about housing (60%, $n=30$), about employment services (52%, $n=26$), and about accessing public services (58%, $n=29$).

When asked if occupational therapists should screen client finances, the majority of students (60%, $n=51$) expressed agreement or strong agreement. However, only a handful of respondents (5%, $n=5$) reported having learned how to screen for clients who are living with low income. Conversely, where the majority (82%, $n=69$) of respondents reported learning about government subsidy programs, only a portion of them (36%, $n=39$) had actually helped a client apply for a subsidy during their fieldwork practice and fewer students reported connecting clients with childcare supports (6%, $n=6$) and tax filing supports (11%, $n=10$).

Out of the respondents who reported completing 750 or more hours of fieldwork (54%, $n=46$), a sizeable portion of those students (40%, $n=22$) disagreed or strongly disagreed that they had overall learned enough about low income. A chi-square test of independence was completed to compare the relationship between number of completed fieldwork hours and level of agreement about learning enough about low income. The relationship between fieldwork hours and agreement on low income learning was nearing significance for independence, $X^2(16, n=90)=19.32, p=0.08$. Thus, reports of learning about low income are not dependent on the amount of fieldwork completed, such that individuals who had completed 750 hours or more, may still report disagreement or strong disagreement to learning enough about low income.

Two separate questions in the survey asked students to add any comments that they had about the integration of poverty issues and supports for low income clients into the classroom learning and the integration of supports for low income clients or poverty reduction work into their occupational therapy fieldwork experiences. Comments regarding the integration of low income topics in classroom and fieldwork learning included codes about areas of professional development and gaps in learning that were found across both themes of professional role and academic experiences. Specifically, the codes related to group and individual learning, clinical placements, and areas that were not learned about. The respondents highlighted the application of their learning in their clinical practicums and feeling overwhelmed with the complexity of institutional and social service low income systems.

Many students expressed sentiments related to the lack of classroom emphasis on low income issues and lack of concrete interventions or instruction. For instance: “A lot of it ended up being student-led, which can be great, but I think a targeted workshop-style ‘here are some programs/screening tools you should know about’ would have been helpful.” Another student commented: “Learning more about how to access subsidies, assistive programs, and financial/income benefits would be helpful.”

Another student commented more broadly on the lack of curriculum content related to low income, the importance of clinical placements, and the need for self-directed learning:

I believe that issues of poverty and supports for low income clients can be better addressed throughout all courses within the OT classroom curriculum. A lot of my learning in this area came from my placements or my own outside researching.

Other students commented on the importance of fieldwork and the impact that the type of clinical fieldwork can have on their exposure to low income populations. For instance, one student expressed both gaining knowledge and feeling overwhelmed with the systems related to low income work:

I feel I have gained my knowledge on low income clients through fieldwork. However in my time at the organizations there was limited opportunity to see the full process through. My preceptors were great at educating me on the resources out there, however I felt very overwhelmed with the information that I could not keep it all straight.

Yet another respondent commented on how the context of their fieldwork in the community provided exposure to clients living with low income:

I think I have learned the most about supports for low income clients when I was in my fieldwork placement in the community, as I was able to visit clients' homes and actually work with the reality of their situation.

Finally, another student commented on the challenges translating fieldwork and classroom learning into action:

I have learned a lot more from my fieldwork placements than in the classroom about the integration of supports for low income clients. However, the component of how to go about doing this was not as clearly delineated.

Student perceptions of the occupational therapy role. The following results reflect the students' perceptions related to the occupational therapy role in working with low income populations. Students were asked to rate their agreement about the following statement by Hammell (2015) and the vast majority of respondents (91%, n=81) agreed or strongly agreed that “occupational therapists are ideally situated to assist marginalized communities to identify and develop income generating opportunities, and to advocate for the elimination of systemic barriers that violate the occupational rights of those who are poor” (p.15).

Another of the three key themes emerged from the student responses to questions asking about the integration of poverty issues and supports for low income clients into their classroom learning, and the integration of supports for low income clients or poverty reduction work into their occupational therapy fieldwork experience. The theme addressed perceptions of their professional role in working with individuals living with low income. The codes included in this theme reflected professional perspectives about the impact low income has on occupational engagement, awareness of their role in addressing social determinants of health and SES, and the occupational therapy roles within systems-level operations (e.g., social services, subsidy programs). Additionally, students expressed feelings of discomfort associated with this topic and noticed an overlap between the occupational therapy practice scope and that of professions such as social work.

Related to the integration of low income issues in their classroom work, respondents reinforced their perceived professional role within low income work as something highly interrelated with SDH and advocacy, as this comment shows:

Many of the clients that OTs work with are low income. This may be related to the fact that many people with disabilities are considered low income and or fall within the poverty level in North America. As such, it is crucial for OTs to become comfortable screening for the most rudimentary social determinants of health, such as food, clean water, adequate housing and income security. OTs must advocate for all clients; but especially those who are part of marginalized groups and those who are defined as low income / poor.

Another respondent eloquently expressed feelings regarding perceptions of the occupational therapy role within low income work as tied to occupational justice and SES:

Whether or not a client has financial means thoroughly affects not only their quality of life, but all of the occupations that they can or cannot engage in. So as soon to be Occupational Therapists, it is vital that we understand poverty, it's [sic] effects on the individual and how we can best support our clients in need.

Additionally, students expressed an overlap between the scope of occupational therapy practice and other professions. One student expressed a desire to learn more about the resources available for low income clients:

I would have liked to have learned about the specific local social systems in place for clients facing poverty, but these issues were always referred to the social worker. I think we need to recognize that just as the OT scope of practice sometimes overlaps with PT, and sometimes overlaps with counselling, it so too overlaps with social work, and we need to know what specific programs and resources are available, how to coach a client through these resources, and how to be remunerated for this work.

DISCUSSION

Individual Experiences with Low Income

When examining the personal experiences of the survey participants, there are insights to be gleaned. The majority of respondents in our sample represented student occupational therapists from middle and upper income backgrounds and contained only a small number of students who identified as coming from a low income background. This is similar to another study which found that medical education in Canada has significantly greater representation of middle and upper income SES backgrounds as compared to the general population (Dhalla et al., 2002). Although some student occupational therapists in this study reported experiencing financial difficulties, the majority of these students come from middle or upper income backgrounds and were experiencing challenges with income mainly due to enrolment in full-time school, including fees, tuition costs, and loss of regular employment income. The majority of participants came from higher SES backgrounds and their situational experiences of low income as a student would not be the same as those students who reported coming from low income backgrounds.

The students who self-identified as coming from low income backgrounds within our sample reported experiencing stigma and discrimination within their programs related to extra program-related costs, their appearance, accessibility of social experiences, and affordability of everyday expenses such as rent and groceries. Low income students face many, well-documented barriers and challenges (Beagan, 2007; Watson, 2013). Studies have found that students from lower income backgrounds may experience estrangement from the norms and behaviours of the predominantly middle and upper middle income class cohort (Beagan, 2007). Further, low income students are more likely to be supporting dependents, such as providing monetary support to siblings or parents, or raising children, when compared with their middle-income peers (Corrigan, 2003). Low income students are under-represented within occupational therapy programs (Watson, 2013), where knowledge about what it is like to live with low income is an important clinical perspective. These experiences are not well-studied and present an area for further exploration.

In practice, the life experiences of students may impact their ability to recognize the barriers that low income clients experience as well as build working rapport with those clients (Beagan, 2007). One survey respondent expressed concern about the majority of her classmates coming from middle to upper middle income backgrounds and worried how this may impact her fellow classmates' learning and practice with low income individuals. Graduate programs, specifically occupational therapy programs, often strive for representation of individuals from diverse backgrounds and experiences, yet may not provide students with adequate exposure to social and cultural diversity and cultural awareness training (Sonn-De Minck & Vermeulen, 2018). Students who lack understanding of the complexity of their patients' backgrounds and life experiences, such as low income challenges, may be less able to provide effective therapy (Naidoo & Van Wyk, 2016). The lack of diversity within a program can influence the quality of the educational experiences and the overall diversity in the SES of practicing clinicians

(Watson, 2013). Based on the limited representation of low income backgrounds in our study and the well-documented importance of a clinician's ability to understand low income barriers, it may be beneficial for programs to provide equitable opportunities to and support for lower income students (Castleman & Long, 2016; Haveman & Smeeding, 2006).

Learning and Experiences at the Program-Level

The results from the survey revealed that over half of the respondents felt they had not learned enough about low income, regardless of their school affiliation. In their responses, participants identified a key curriculum gap across Canadian occupational therapy programs whereby low income issues, screens, and interventions were not adequately addressed.

Student occupational therapists have diverse learning experiences related to topics of low income and reported mixed learning experiences in specific areas of low income knowledge. Of the students who said they had not learned enough about low income in their programs, the majority reported that they had learned about how housing, employment, and access to public services (e.g. public transportation and healthcare) may impact the lives and choices of clients living with low income. It appeared that students were learning about how specific factors may impact the lives of those living with low income and yet still did not believe that they had learned enough overall about supporting or serving low income clients. Perhaps poverty, living with low income, and the social implications of economic marginalization need to be more explicitly addressed within occupational therapy programs.

There are numerous possible interpretations to this contradictory finding that students do not feel like they have learned enough overall, but report that they have learned about how various factors can impact the lives of those living with low income. It could be that students are exposed to and are addressing the challenges that individuals living with low income may have in accessing housing, employment, and public services, yet may feel the need for more curriculum content and practical exposure. Bazyk, Glorioso, Gordon, Haines, and Percaciante (2010) discussed the value of service-learning experiences for student occupational therapists in the United States midwest, and found that the students' hands-on learning experiences were key to their understanding about occupational therapy practice in working with low income individuals. Brown, McKinstry, and Gustafsson (2016) were critical of the mandated 1000 hours of clinical education and suggested integration of alternative models of clinical exposure, such as service-learning, that are specifically focused on practicing with marginalized populations. Canadian student occupational therapists may benefit from more curriculum content and practical exposure to low income populations.

Alternatively, students could be reporting that they have had academic exposure to specific low income topics while simultaneously reporting that they have not learned enough because they have less confidence in the application of their knowledge to this complex population group. Studies of graduating student occupational therapists have found that emerging clinicians felt "somewhat ready" for practice (McCombie &

Antanavage, 2017; Naidoo, Van Wyk & Nat, 2014). Accordingly, students tended to rate higher preparedness for basic assessments and interpersonal skills and lower preparedness for complex cases, conditions, and skills related to evidence-based practice (Gray et al., 2012; Naidoo et al., 2014). If student occupational therapists feel less confident about their professional role with low income, it may be less related to the amount of learning and potentially more aligned with their budding professional confidence as emerging clinicians.

During fieldwork, students have the opportunity to translate learning into practice and gain a variety of experiences that may influence the overall level of learning about low income. In the survey, it was found that students' agreement on their learning about low income was not necessarily related to the number of fieldwork hours completed. As such, students with many hours could still report lesser agreement with their amount of learning about low income. This relationship can be explained in a number of ways.

First, it could be hypothesized that the students have varied awareness and exposure to low income depending on the clinical practice areas that they have the opportunity to train in. Where students may perceive that some settings provide better exposure to low income populations, this may not always be true. Students in our survey with a clinical placement in a low income neighborhood or in a shelter reported having more direct emphasis and awareness of the barriers and resources related to low income than other counterparts being trained in other settings. However, approximately 13% of all people in North America are low income (Semega et al., 2017; StatsCan, 2013) with much higher rates for people with long-term disabilities (Wall, 2017). The vast majority of students likely work with low income clients and may not be aware of it or address it, due to lack of adequate screening tools or practice knowledge. Working with low income clients is not exclusive to clinical settings specific to low income populations, such as shelters; low income clients access services in many settings. Depending on individual experiences on clinical placements, students gain vastly different exposure to or impression of occupational therapy practice with low income clients.

Second, the independent relationship between student learning and fieldwork hours may be explained partly by the division of roles within interprofessional teams, such that the occupational therapist on the team leaves issues of income and funding to another team member. Several survey participants mentioned role-blurring with social work as a factor that influenced their perception of their own professional role. Overall, students have a variety of clinical experiences in different settings and in different interprofessional teams which likely provided inconsistent exposure and experience working with low income clients.

In a similar pattern, the relationship between fieldwork experience and application of knowledge was varied. For instance, the majority of our participants reported learning about how to apply for government subsidies, yet a smaller proportion had applied their knowledge in helping clients apply for subsidy in practice. Students also reported applying the knowledge they had learned to connect clients with homecare, transportation, and housing supports, yet had less experiences connecting clients with

childcare or tax filing services. Where approximately 10% of North American families are low income households (Semega et al., 2017; StatsCan, 2013), the population statistics related to parents and caregivers of children support the need for occupational therapist knowledge and skills related to connecting clients to childcare resources. In addition, it is also crucial for students to know the importance of tax filing and connecting clients with tax filing resources. Often, in order for clients to gain access to government financial supports, they must file their tax return for the previous year to have documentation of their income level. Practitioners should be proficient in this important area of practice, especially with low income populations with tenuous housing or lack of government documentation (e.g. social insurance number, driver's license, health card), to ensure the best possible access to services and outcomes for their clients. It is clear that student occupational therapists require knowledge of resources for their low income clients and experience navigating the system with their clients.

Student Perceptions of the Occupational Therapy Role

Students within this study identified discrepancies between their perception of their professional roles and their skills related to screening for low income clients. Although a majority of respondents agreed that screening clients for low income is important, only six percent had learned the skills related to screening. 'Screening' for low income does not have to be a complex or laborious task, such as the simple poverty screening tool created by the Centre for Effective Practice (2015). In practice, an occupational therapist can broach a conversation with a client by asking, for example, if they have troubles making ends meet each month. Low income clients may agree they have these challenges and identify themselves to the practitioner as being low income without formal documentation or calculations of income. Alternatively, there are resources for health care professionals to more formally assess client eligibility for low income financial benefits (Prosper Canada, 2016). Even a client's ability to afford costs related to travelling to appointments should be determined by the therapist early in the practice process. As a relatively simple and quick task, screening clients for low income is an important clinical skill that student occupational therapists see as part of their role and should be learning in their programs.

Student occupational therapists overwhelmingly self-identified as being well-situated to address low income challenges in practice. Respondents endorsed Hammell's (2015) statement regarding the occupational therapy role in assisting marginalized groups to create income generating opportunities and advocate for removal of systemic barriers, despite confirming feelings of not learning enough about low income. It is notable that this survey did not ask respondents specifically about their knowledge or facilitation skills related to assisting clients to generate income (e.g. starting a business). Additionally, our respondents agreed that occupational therapists should be acting as advocates for low income, marginalized individuals as they navigate systemic barriers and challenges (Pollard & Sakellariou, 2017). Although students may believe that it is their role to advocate for and support marginalized groups, they may have difficulty translating academic theory into clinical practice (Naidoo et al., 2014). As such, students may agree that advocacy and income-generating opportunities are important for low income clients, but they may find it challenging to enact change for these clients on a

day-to-day basis. Alternatively, perhaps students see their role in assisting low income clients as per Hammell's (2015) statement, but do not have the skills or confidence to enact this role in practice. Students need opportunities to apply and to critically reflect on knowledge about occupational justice and potential professional tensions that may arise when pursuing occupational justice work (Aldrich, White & Conners, 2016).

Another explanation may be that students see their role as Hammell (2015) states, but in practice, due to institutional constraints, the role may be enacted by other interprofessional team members. This may position students to be less able to practice their skills and apply their learnings. Taken together, students overwhelmingly endorse their professional role in working with low income populations and there can be numerous underpinnings for students' challenges enacting this role on the ground. Occupational therapy programs and professional bodies are called to action to evaluate their curricula to provide students with the skills, training, and practice to enact the role of a change agent for low income clients within a variety of practice settings.

Limitations and Implications for Occupational Therapy Education

The findings, application, and implications of this study must be taken in context of the limitations. While the findings provide evidence that Canadian student occupational therapists do not feel like they learned enough in their program, the sample of students collected in the survey was not representative of student occupational therapists across Canada. Only 10 out of the 14 Canadian schools responded to the survey and only five of those schools who participated provided more than 10 responses. Additionally, there were few responses in French or respondents who identified as having male or 'other' gender identities. Only final year students were invited to complete the survey, with the assumption they would have completed 500 or more hours of fieldwork in addition to having more exposure to program content. However, a portion of respondents reported completing less than 500 hours of fieldwork for reasons unknown to the researchers. As participants were recruited by convenience, there was no way to control for response biases that may have impacted the results of the data. Finally, there are a number of technical limitations based on the survey platform that reduced researcher control and oversight of participant response rate and completion rate, such as the participants' ability to skip any question without answering it and share or re-take the survey from the link provided (Eysenbach, 2004). Future research could collect responses from a larger sample of students to enable quantitative analysis with a more representative sample. Additionally, when designing and implementing this study, there were no pre-existing surveys that measured student knowledge or perceptions of low income, and thus a survey was created *de novo*. Future studies are needed to examine the most effective ways to collect student perceptions on a variety of topics.

CONCLUSION

This study supports the inclusion of education about low income, poverty, and economic marginalization into occupational therapy curricula. The findings from this research have a broader relevance to occupational therapy by contributing to both student education and future research. The results of the demographics of this study call for occupational therapy programs to examine and implement ways to increase representation of the

voices and experiences of low income and marginalized groups into their occupational therapy curricula. In doing so, programs must increase curriculum learning related to low income supports, interventions and barriers, including screening client income status, and increase student opportunities to apply their knowledge within practical settings. Future researchers conducting similar or related studies can utilize and build upon the survey used in this study. Possible future directions implicated by this research include examining the impact of a curriculum with improved low income content on student competency and practice knowledge.

Statement of Positionality

The authors acknowledge their positionality as middle-income occupational therapists recently graduated from a Canadian occupational therapy program (Bartlett and Newfield), and middle and upper-middle income working professionals (Murray, Park, Hameed, and Cockburn).

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Appendix A

Survey Questions - English Perceptions of Poverty by Canadian Second Year Student Occupational Therapists Department of Occupational Science and Occupational Therapy University of Toronto

Part 1 - Demographic Information

Only questions 1 and 2 require answers to confirm you are part of our survey population. All other answers are optional and can be skipped.

1. Are you an occupational therapy student who has completed at least one year in a Canadian occupational therapy program?

Yes No

2. Which Canadian university are you attending?

University of British Columbia
University of Alberta
University of Manitoba
University of Toronto
University of Western Ontario
McMaster University
Queen's University
Université d'Ottawa
Université de Montréal
McGill University
Université Laval
Université Sherbrooke
Université du Québec à Trois-Rivières
Dalhousie University

3. What is your gender / gender identification? (open response)

Part 2 - General OT Attitudes about Poverty

What is poverty? We recognize that there are many ways to describe “poverty”. This survey asks you to focus on income poverty which can be defined in absolute terms of low income for a household. For example, many government programs use low income cut-offs (LICOs), based on after-tax income, to decide who qualifies for certain programs. This is often called the “poverty line”. This kind of definition states that a person is poor if their income is less than a set amount.

4. I have learned enough about poverty in my OT program.

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

5. Should OTs advocate for government policy changes to help reduce poverty in any of the following areas?

HOUSING e.g. affordable housing, shelters, rent regulation, social housing, supports for homeless people

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

EMPLOYMENT SERVICES e.g. job related training, job search supports, retraining funding supports

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

FOOD SECURITY e.g. food bank access, access to healthy affordable food, soup kitchens, community gardens

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

ACCESS TO PUBLIC SERVICES e.g. public transportation, health care, affordable and accessible child care

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

FINANCIAL and SUPPORT e.g. changes to income support systems, higher minimum wages, tax reform

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

6. As an OT student, how much do you agree with this statement?

“Occupational therapists are ideally situated to assist marginalized communities to identify and develop income generating opportunities, and to advocate for the elimination of systemic barriers that violate the occupational rights of those who are poor.” (Hammell, 2015)

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

Part 3 - OT Classroom Courses

Consider only courses taught in classrooms when answering Part 3 questions.

Part 4 questions deal with fieldwork.

7. In my OT classroom courses I have learned about how the following factors affect the lives and choices of clients living with poverty:

HOUSING e.g. affordable housing, shelters, rent regulation, social housing, supports for homeless people

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

EMPLOYMENT SERVICES e.g. job related training, job search supports, retraining funding supports

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

FOOD SECURITY e.g. food bank access, access to healthy affordable food, soup kitchens, community gardens

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

ACCESS TO PUBLIC SERVICES e.g. public transportation, health care, affordable and accessible child care

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

FINANCIAL SECURITY and SUPPORT e.g. changes to income support systems, higher minimum wages, tax reform

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

8. Have you learned about any government subsidy programs for assistive devices?

Yes No Not sure

9. Do any of your OT classroom courses examine poverty as a social determinant of health?

Yes No Not sure

10. How much do you agree with this statement?

As an occupational therapist, assessing a client's financial means is as important as assessing a client's skills and functional abilities.

Strongly agree Agree Neutral Disagree Strongly disagree Not sure

11. In at least one OT class I have learned how to screen for clients who are living in poverty.

Yes No Not sure

12. Please add any comments you have about the integration of poverty issues and supports for low income clients into your classroom learning:

Part 4 - OT Fieldwork Experiences

13. How much OT fieldwork have you completed? The choices are based on a work week having 35 - 40 hours.

1 - 7 weeks (less than 250 hr)

8 - 14 weeks (250 – 500 hr)

15 – 21 weeks (500 – 750 hr)

21+ weeks (over 750 hr)

14. In any of your OT fieldwork did you learn how to connect low income clients with some of the following? Choose all that apply.

- Home care supports
- Employment supports
- Food supports
- Tax filing services
- Transportation supports
- Housing supports
- Childcare supports
- Social workers
- Other, please specify... _____

15. In any of your fieldwork did you learn about treatment modifications or supports for low income clients?

- Yes No Don't remember

16. In any of your fieldwork did you learn how to inform low income clients about financial and income benefits they may be entitled to (e.g. Old Age Security)?

- Yes No Don't remember

17. In any of your fieldwork did you help a low income client apply for a subsidy for an assistive device?

- Yes No Don't remember

18. Overall, I have learned enough about serving low income clients in my OT program, either in the classroom courses or fieldwork.

- Strongly agree Agree Neutral Disagree Strongly disagree Not sure

19. Please add any comments you have about the integration of supports for low income clients or poverty reduction work into your OT fieldwork experience:

Part 5 - OT Students and Low Income Challenges

Please remember this survey is anonymous and confidential and any question can be skipped.

We are interested in determining if OT students are living with low incomes, the effects this has on their learning experiences, and ways to support low income students.

20. Considering the household where you spent most of your time growing up, how would you identify the economic situation?

- Low income
- Lower middle income
- Middle income
- Upper middle income
- High income
- I do not want to share

21. What was your individual after-tax income last year?

- Under \$10,000
- \$10,000 - \$15,000
- \$15,000 - \$20,000
- \$20,000 - \$25,000
- \$25,000 - \$35,000
- Over \$35,000
- I do not want to share

22. In the past year did you receive financial assistance from any of the following sources? Choose all that apply.

- Spouse or partner
- Parent(s)
- Other family member
- Grants based on low income status
- Government support (e.g. disability payments)
- Scholarships based on academic performance
- Employment income
- Government loan (e.g. Canada Student Loan)
- Personal loan from a bank or credit union
- Credit cards
- I do not want to share

23. Are you personally struggling with low income challenges this year?

- Yes
- No
- I do not want to share

24. If you answered "Yes" to #23, how has low income impacted your student life in this year? Check all that apply.

- I have sometimes been hungry due to lack of food.
- I have used food banks or other food supports.
- I make excuses to avoid socializing due to lack of money.
- I can't afford some course materials and activities.
- I try to hide my low income challenges from other students.
- I can't always afford public transportation.
- I can't afford adequate childcare.
- I have worried about paying my rent, utilities or other bills.
- My housing situation makes learning difficult.
- I find it difficult to afford clothes that let me fit in with my peers.
- I worry about how to cover extra expenses for fieldwork.
- Other, please specify... _____

25. Please add any other comments you have about how poverty issues are or should be integrated into the OT curricula at your university, improved supports for low income students or about OT practice and poverty generally:

Thank you very much for participating in this survey. We appreciate your time and effort.