

Role of context in evaluating neighbourhood interventions promoting positive youth development: a narrative systematic review

Josée Lapalme · Sherri Bisset · Louise Potvin

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Abstract

Objectives This narrative systematic review explored (1) how neighbourhood interventions promote positive youth development (PYD) and (2) the role of context for these interventions. We asked: How do neighbourhood interventions become effective in promoting PYD for adolescents aged 12–18 years?

Methods Articles ($n = 19$) were analyzed using a framework integrating standards of health promotion evaluation and elements of the ecological systems perspective.

Results First, results highlight the key characteristics of interventions that promote PYD. An intervention's atmosphere encouraging supportive relationships and an intervention's activities aiming to build skills and that are real and challenging promoted PYD elements including

cognitive competences, confidence, connection, leadership, civic engagement, and feelings of empowerment. Secondly, this review identified facilitators (e.g. partnerships and understanding of the community) and constraints (e.g. funding and conflicts) to an intervention's integration within its context.

Conclusions Results regarding interventions' characteristics promoting PYD confirm findings from past reviews. Our findings indicate that context is an important element of effective interventions. This review encourages future evaluations to analyze the role of context to build a better understanding of its role.

Keywords Neighbourhood · Positive youth development · Interventions · Context · Ecological systems theory · Narrative review

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J. Lapalme (✉)
Population Health Intervention Research Network,
Université de Montréal, 7101, avenue du Parc,
Montreal, QC H3N 1X7, Canada
e-mail: josee.lapalme@dal.ca

S. Bisset
Plateforme d'évaluation en prévention de l'obésité, Centre
de recherche de l'institut universitaire de cardiologie et de
pneumologie du Québec, Université Laval, 2725 Chemin
Sainte-Foy, Local Y-4225, Quebec, QC G1V 4G5, Canada
e-mail: sherri.bisset@criucpq.ulaval.ca

L. Potvin
Département de médecine sociale et préventive, Université
de Montréal, 7101, avenue du Parc, Montreal,
QC H3N 1X7, Canada
e-mail: louise.potvin@umontreal.ca

Introduction

Public health research reveals relationships between neighbourhood characteristics and adolescent well-being, which includes emotional and psychological health (Breitbart 1998; Cicognani et al. 2008; Morrow 2000, 2001). Intervening at the neighbourhood level to promote positive youth development (PYD), which encompasses adolescent well-being, is thus an important public health strategy. Systematic reviews highlight that school, family, and neighbourhood-based interventions successfully promote PYD and reduce problem behaviours (Catalano et al. 2004; Durlak et al. 2007; Lerner and Thompson 2002; Roth and Brooks-Gunn 2003). However, these reviews do not address the relationship between the intervention and the context in which it is implemented. This narrative review utilizes an ecological systems perspective to explore the

following overarching research question: How do neighbourhood interventions become effective in promoting PYD for adolescents aged 12–18 years?

Background

Neighbourhoods can provide opportunities or can impose challenges for residents to achieve optimal health (Bernard et al. 2007; Braverman and Egerter 2008). For instance, resources and services, quality of the physical and built environment, neighbourhood reputation, and social connections have all been shown to impact residents' health (Bernard et al. 2007; Braverman and Egerter 2008). Since youth tend to spend a great deal of time in their neighbourhood, they have been found to be more affected by and profoundly aware of their neighbourhood opportunities and challenges (Breitbart 1998; Morrow 2000). These findings highlight the importance of intervening at the neighbourhood level to improve youth health.

Population health interventions aim to modify the environment or context in order to improve health and reduce health inequities (Hawe and Potvin 2009). Evaluations of these interventions aim to provide a deeper understanding of health issues and of interventions' role in addressing these health issues (Hawe and Potvin 2009). Accordingly, in order to expand our understanding of how public health interventions optimize the health promoting potential of neighbourhoods, it is essential to broaden knowledge on how interventions, via their integration into local settings, become health promoting.

Until recently, interventions targeting youth were typically prevention oriented; they were designed to address specific youth issues such as delinquency, drug and alcohol use, and self-harm (Catalano et al. 2004; Roth and Brooks-Gunn 2003). The literature increasingly reveals interventions that adopt a holistic view of health and of PYD promotion (Catalano et al. 2004; Lerner and Thompson 2002; Roth and Brooks-Gunn 2003). This focus on promotion rather than prevention allows for the promotion of PYD and at the same time, for the prevention of youth-related problematic issues (Roth and Brooks-Gunn 2003).

Interventions promoting PYD more specifically promote the "Five Cs of PYD", including competence, confidence, connection, character, and caring (Lerner et al. 2000). In order to promote these Five Cs, Roth and Brooks-Gunn (2003) suggest that interventions should foster an atmosphere that encourages supportive relationships, empowers youth, communicates expectations for positive behaviour, provides opportunities for recognition, and provides stable services. Interventions should also implement activities that allow participants to build skills,

engage in real and challenging activities, broaden their horizons, and increase developmental supports in other contexts of adolescents' world. Accordingly, to be effective in promoting PYD, interventions need not only develop appropriate internal characteristics (i.e., atmosphere and activities), but additionally require external connections to the context surrounding them (i.e., various neighbourhood organizations and residents). The present review thus aims to identify both the internal and external characteristics of PYD interventions contributing to their effectiveness.

A narrative systematic review

This narrative systematic review is anchored in the ecological systems theory, which recognizes that individuals are located within a broader social context comprised of multiple systems (e.g. family, school, work, and community) (Hawe et al. 2009). Furthermore, the relationships between individuals and the systems surrounding them are recursive in nature (Frohlich et al. 2001). Consequently, individuals' health-related behaviours are influenced by their context and in return, these behaviours shape this same context (Bernard et al. 2007). For instance, a neighbourhood park may create opportunities for socializing and relationship building, which may impact emotional health and in return, these relationships may create a sense of community and build social capital. In accordance, Hawe and Riley (2005) and Hawe et al. (2009) explain the importance of expanding our knowledge of interventions by understanding how they interact with and integrate within their context. In fact, Delormier et al. (2009) and Frohlich et al. (2001) further argue that exploring *how* people use and interact with interventions and their *perception* of them provides insight into the effective mechanisms of interventions.

When reviewing interventions that promote PYD, existing reviews mostly focus on the interventions' internal characteristics, thus neglecting information on how interventions interact with and adapt to their context. Therefore, in order to better understand the relationship between interventions and their context, this narrative systematic review aims to analyze neighbourhood interventions promoting PYD using an evaluation framework that integrates both the key standard elements of health promotion evaluation (Armstrong and Waters 2007) as well as the ecological systems perspective of intervention evaluation (Hawe and Riley 2005; Hawe et al. 2009). This review also adopts an inclusive definition of interventions that encompasses all types of neighbourhood interventions such as programs, initiatives, events, projects, and policies.

Methods

This review was undertaken by a team of three researchers working in collaboration with three health professionals from a public health directorate within a Regional Health Authority in Montreal, Canada. The task of these professionals was to help formulate research questions and to assist in exploring the meaning of the review results in order to increase their relevance. The following questions concerning neighbourhood interventions promoting PYD for adolescents aged 12–18 years were developed with the agreement of these health professionals and researchers: (1) What is the relationship between an intervention's internal characteristics and its PYD outcomes? (2) What is the role of context for these interventions?

An initial search was conducted to find published reviews on interventions promoting youth's emotional and psychological health. The reviews found (Catalano et al. 2004; Durlak et al. 2007; Roth and Brooks-Gunn 2003) informed the key word selection (“Appendix 1”) and the use of PYD as an outcome. The database search was limited to journal articles written in English or French from 2001 to November 2011. In total, 788 articles were retrieved using OVID, which included Embase, Medline, PsycInfo, and Social Work Abstract and another 717 articles through Web of Science. The first degree of article filtration was based on titles. Abstracts from relevant articles based on their title were read as a second degree of filtration. A snowball method was also utilized as the references of some articles lead to others. In total, 172 articles were deemed pertinent for this project and were imported into Endnote, a software tool used for managing references.

The first author read through each article. Those that described interventions targeting a larger area than the neighbourhood-level, such as a national, state, or city-level, were excluded from this review. Nonetheless, articles that described an intervention effort of larger organizations done in one particular community or neighbourhood were considered appropriate for this research project. Moreover, it was also important to distinguish between interventions targeting communities of interests, which are groups of people who share a common interest (e.g. the Vietnamese community or community of people with a disability), and interventions implemented in a specific geographical community (i.e., neighbourhood), which is the focus of this study. The former were excluded from this study.

Knowledge of design and implementation was important to appropriately assess the intervention and understand its impact on PYD outcomes. Therefore, articles that provided little or no description of the intervention were excluded, including evaluations exclusively reporting outcomes as well as those focused on developing measures for further quantitative research. Interventions targeting youth outside

of our review's age range (12–18 years) were also discarded. Lastly, although diversity in methods may signify inconsistencies, this review did not require consistency and welcomed various ways of recording, analyzing, and evaluating interventions. Consequently, a total of 19 articles were included in this review (see “Appendix 2” for a full list of articles).

Data extraction

Each article was read in detail with the guidance of an evaluation checklist. This checklist was designed to incorporate key standards of health promotion intervention evaluation (Armstrong and Waters 2007) as well as the ecological systems perspective to public health interventions (Hawe and Riley 2005; Hawe et al. 2009). Elements of the checklist that represented the key standards in health promotion intervention evaluation included items regarding the nature of the intervention (e.g. design, purpose, goals, target populations, atmosphere, and activities), the major PYD outcomes, and quality and rigor of the intervention (e.g. feasibility, transferability, integrity, and sustainability). Ecological systems perspective elements included the planning of the intervention (e.g. key characteristics of the context and understanding relationships within the context), the adaptation of the intervention to the context (e.g. facilitators and barriers), the resources needed for the intervention (e.g. people, places, relationships, and materials), the level of PYD outcomes (e.g. individual or community levels), and the perceptions from various stakeholders of the intervention.

Results were partly validated by another researcher, who read a random sample of rejected and accepted articles. A table of major results was also written and validated by the other researchers.

Results

The interventions reviewed were carried out in neighbourhoods and communities around the world, notably the United States, Canada, UK, and Spain. Differing methods of evaluation were used including qualitative, quantitative, and mix methods resulting in various types of reported information. As shown in Table 1, this review covers multiple types of neighbourhood interventions including arts-based programs (e.g. a dance program and an expressive arts program), other community programs (e.g. technology-based programs, a service program, and an education program), youth centres, and community projects (e.g. Photovoice project and research projects). The numbers in this table indicate how many articles correspond to that intervention description. Most interventions

Table 1 Nature of interventions

Characteristic of interventions	Description
Types of interventions	Community projects (7)
	Art-based programs (4)
	Other community-based programs (e.g. leadership, technology, and education) (6)
	Youth centres (2)
Duration	Short term (10 weeks to 10 months) (12)
	Long term (on-going) (7)
Target populations	Disadvantaged (e.g. low-income) (10)
	Risk of delinquency (1)
	Lesbian, gay, bi-sexual, transgendered, and questioning (1)
	Allophones and Anglophones (1)
	Ethnicity
	African American (4)
	Romanian (1)
	Caucasian (1)
	Diverse (4)
	Specifically male or female only
Male (1)	
Female (1)	
Theoretical approaches	Youth development (13)
	Community engagement (9)
	Social justice (3)
	Critical social capital (1)
	Ecological model (2)
	Informal education (2)

were short term, lasting between 10 weeks and 10 months. The majority of interventions were implemented in neighbourhoods considered disadvantaged involving youth living in diverse situations of marginalization such as low-income, at risk of delinquency, of specific ethnicities or cultural backgrounds including African American, Caucasian, and Romanian, as well as other minority groups such as Allophones and Anglophones, and lesbian, gay, bi-sexual, transgendered, and questioning (LGBTQ) youth. Although interventions' theoretical approaches were rarely explicitly stated, it was possible to determine the perspective that guided interventions. There were many interventions focused on promoting some aspects of youth development and/or based on youth community engagement. Within the community engagement approach, some interventions adopted a social justice perspective (i.e. advocating for youth rights) and another a critical social capital perspective (i.e. developing collective community change with racial identity and political awareness as resources for change). Lastly, a couple of interventions followed an ecological perspective (i.e. understanding

contexts as comprised of multiple systems) and another couple of interventions followed the notion of informal education (i.e. transferring knowledge with alternative methods).

PYD outcomes

Table 2 summarizes the PYD outcomes that were reportedly increased, decreased, and unchanged by interventions. Outcomes are classified under the Five Cs categories with the exception of three outcomes, leadership skills, civic engagement, and feelings of empowerment, that are categorized under an "others" section. The most significant improvements of PYD outcomes involve cognitive competences, confidence, connection, character, and those under the others category. Significant cognitive competences included problem solving, communication, critical thinking, working in groups, and awareness. Under the confidence category, most interventions were associated with increased self-esteem and self-confidence. The connection category included significantly improved positive relationships with peers and adults, sense of belonging, and contribution to the community. Significant improvements of PYD outcomes in the character category involved self-control and decrease in problem behaviour. Lastly, most interventions discussed achievement of leadership skills, civic engagement, and feelings of empowerment for youth. Few interventions were able to promote caring and compassion outcomes. Evaluations rarely discussed PYD elements that had decreased or not changed.

Table 3 highlights relationships between increased PYD outcomes and the different types of interventions' atmospheres and activities. The most significant characteristic of interventions' atmospheres was one that encouraged supportive relationships as it most notably increased confidence factors including self-confidence and self-identity. There was also a relationship between atmospheres with supportive relationships and atmospheres that empower and the improvement of some cognitive competences such as awareness, art-related skills, and communication. Activities that aimed to build skills and that were considered real and challenging were related to many PYD outcomes, but most importantly improved cognitive competences including problem/conflict resolution, communication, critical thinking, working in groups, awareness, planning and organization, and art-related skills. These types of activities were also significantly linked to increased leadership skills, civic engagement, and feelings of empowerment. Additionally, there was a small increase in self-confidence due to activities that build skills. Finally, activities that aimed to broaden horizons helped promote future aspirations for youth. Other types of

Table 2 Positive youth development outcomes

Positive youth development outcomes	Improvement	Decrease	No change
<i>Cognitive competences</i>			
Problem/conflict resolution	10		
Communication	10		1
Critical thinking	10		
Working in groups	9		
Awareness	8		
Planning/organization	5		
Art-related skills	5		
Research related skills	4		
Technology related skills	3		
Autonomy	3		1
Assertiveness	3		
Perseverance/resiliency	2		1
Decision-making	2	1	
Goal setting	2		
Adaptive learning	1		
Building related skills	1		
<i>Social competences</i>			
Networking	3		
Personal relationship competencies	3		1
<i>Vocational competences</i>			
Career preparation	4		
Career aspirations	2		
<i>Academic competences</i>			
Academic achievement	2		2
<i>Confidence</i>			
Self-esteem	7	1	
Self-confidence	6		
Self-identity	5		
Future aspirations	4		
Sense of accomplishment	4		1
<i>Connection</i>			
Positive relationships with peers	9	1	
Positive relationships with adults	8	2	
Sense of belonging	7	1	2
Contribute to community	7		1
Connection with community	2		1
<i>Character</i>			
Self-control	7		2
Decrease in problem behaviour	6	1	
Sense of responsibility	3		
Developing values	1		
<i>Caring and compassion</i>			
Respect for others	5		
Sympathy/caring	2		1
Identification to others	1		
<i>Others</i>			
Leadership	10		
Civic engagement	9		1
Feelings of empowerment	7		

Table 3 Increased positive youth development outcomes and intervention characteristics

Positive youth development outcomes	Intervention atmosphere				Activities				
	Supportive relationships	Empower	Communicate expectations	Recognition	Stable services	Build skills	Real and challenging	Broaden horizons	Support in other contexts
<i>Cognitive competences</i>									
Problem/conflict resolution	2	1				5	4		
Communication	2	3	1	1		8	7		2
Critical thinking	1	1	1			6	6		
Working in groups		1				6	7		
Awareness	3	3	2			7	7		2
Planning/organization	1	1				3	4		
Art-related skills	3		2	1		5	4		
Research related skills	1	1				2	2		
Technology related skills	1	1				3	3		1
Autonomy	2	1	1			2	1		
Assertiveness		1				1	1		
Perseverance/Resiliency						1	1		
Decision-making		1				1	1		
Goal setting						2	2		
Adaptive learning	1					1	1		
Building related skills			1			1	1		
<i>Social competences</i>									
Networking						1	1		1
Personal relationship competencies	1	1					1		
<i>Vocational competences</i>									
Career preparation	1					3	3	3	
Career aspirations						2	2		
<i>Academic competences</i>									
Academic achievement						1	1		
<i>Confidence</i>									
Self-esteem	2	1				2-1	2-1		1
Self-confidence	3	1	2	1		4	3		1
Self-identity	4		1			1			
Future aspirations	1					3	3	6	1
Sense of accomplishment		1		1		3	3		
<i>Connection</i>									
Positive relationships with peers	5	2		1		1	3		
Positive relationships with adults	4					2	1		1
Sense of belonging	2	1		1	1	1	2		
Contribute to community						3	2		

Table 3 continued

Positive youth development outcomes	Intervention atmosphere			Activities					
	Supportive relationships	Empower	Communicate expectations	Recognition	Stable services	Build skills	Real and challenging	Broaden horizons	Support in other contexts
Connection with community						2	2		
Character									
Self-control	2	1				2	1		
Decrease in problem behaviour	3	1				2	2		
Sense of responsibility						1	1		
Developing values						1	1		
Caring and compassion									
Respect for others	3		1			2	2		
Sympathy/caring	1								
Identification to others	1								
Leadership									
Others									
Leadership	1	1	1	1		5	5		
Civic engagement	2	1	1	3		6	6		
Feelings of empowerment	1	1		1		3	4		

activities were also important but did not present any significant relationships to PYD outcomes.

Although these two tables summarize the most important findings related to interventions and PYD outcomes, some nuances could not be illustrated. In some cases, instead of PYD elements developing from specific intervention characteristics (i.e. atmospheres and activities), they developed from the general participation in the intervention. For instance, Borden and Serido (2009) and Gaudet and Bouchard (2004) found that general participation in youth centres decreased delinquent behaviour in youth. Another nuance involved the interconnectedness of PYD outcomes; the development of one could sometimes lead to the development of another. This is the case with the development of leadership skills related to the prior improvement of self-esteem and attainment of positive relationships (Teasley et al. 2007).

These tables do not represent the possible links between types, duration, target populations, and theoretical approach of interventions (Table 1) and their efficacy at promoting PYD. Interventions in all categories promoted some PYD elements, but the general programs and projects were those that appear to be the most effective at promoting many types of PYD, especially competencies and confidence. In terms of duration, both short- and long-term interventions demonstrate effectiveness of promoting PYD elements. Relating to target populations, the majority of interventions, targeting some type of disadvantaged youth, diverse ethnicities, African American youth, or a combination of these, showed more effectiveness in promoting PYD (i.e. competences, confidence, connection, and civic engagement) than interventions targeting different populations. Lastly, interventions with theoretical approaches relating to youth development and/or community engagement demonstrated to be effective at promoting PYD elements such as competences, confidence, and character, more so than interventions following a different approach. In sum, types, target populations and theoretical approaches seem to be more important factors to interventions' effectiveness than duration, which seems to have smaller significance in determining PYD promotion effectiveness.

Role of context

Evaluations reported various levels of interventions' interactions with and integration within their respective contexts, which are summarized in Table 4. Findings indicate that there were facilitators to help interventions integrate within their context and constraints that hinder this integration process.

As seen in Table 4, one of the facilitators is a prior understanding of the neighbourhood, which was acquired by needs assessments with community members, other forms of contact with the community, and by personal

Table 4 Characteristics of interventions' integration into context and its impacts

Characteristics of context integration	Impacts
<i>Facilitators</i>	
Prior understanding of the community	Recruitment Maintained participation
Partnerships	Involvement of community members Recruitment Provided additional services Provided support to the intervention (e.g. resources) Longevity of the intervention Improved community and youth relations Increased partners' skills Helped with funding
Intervention's involvement in the community	Involvement of community members Recruitment A part of youth culture in the neighbourhood Partnerships Enabled youth to participate in the community
Community support	Longevity of the intervention
Flexibility	Maintained participation
Accessible location	Maintained participation
<i>Constraints</i>	
Obtaining and securing funding	Discontinuation of the intervention or of a service
Lack of social capital and social cohesion	Discontinuation of the intervention
Lack of parental involvement	Discontinuation of the intervention
Conflict with community members	Threatened to take away space
Lack of understanding of community	Attrition (lack of interest)

experiences (e.g. living in the neighbourhood). This prior understanding was important for an intervention as it allowed organizers to understand and design the intervention to suit the needs and interests of youth, which helped them to recruit, maintain participation, and establish relevant partnerships with community agencies. Conversely, interventions with limited prior understanding of the neighbourhood were faced with problems involving attrition and the exclusion of certain groups of youth. For example, the Centre de jeunes de la Basse-Ville d'Ottawa (CJBV) did not consider the importance of cultural sensitivity in their community, which could have helped them represent the needs and interests of the adolescent girls in

the neighbourhood who were bound by cultural implications and parental authority (Gaudet and Bouchard 2004). The intervention could not reach their specific reality and therefore, they were unable to benefit from this intervention.

Partnerships between the interventions and various community agencies and/or community members were another facilitator of interventions' integration in their context. For many interventions, partnerships were often found to demonstrate community support, help with recruitment, provide extra services for youth and supplementary resources for the intervention, increase involved community members skills, as well as enable youth to participate in the community. Essentially, partnerships, through all of these elements, contributed to the longevity of interventions. Another facilitator was the involvement of interventions' members in their community, which helped community members recognize these interventions, involve community members in the intervention, create partnerships, and further understand the community. Community support was also considered a facilitator as it often lead to the establishment of partnerships and/or some form of community involvement. Lastly, flexibility of interventions enabled them to easily adapt to their context's needs and their target population, and an accessible location allowed interventions to better reach youth.

Some evaluations noted constraints that made it difficult for interventions to integrate within their context. Obtaining and securing funding was a commonly faced challenge. Yet, involved community members often helped secure funding, highlighting the importance of their engagement. For one arts-based intervention Art-First, vandalism by certain community members on their final mural project may have demonstrated lack of support from certain members (Larson and Walker 2006). In the case of the Glenview neighbourhood initiative, the lack of social capital in the neighbourhood as well as a lack of parental and youth involvement made it difficult for the intervention to properly integrate as there was little interest and support from certain community members (Autry and Anderson 2007) and there may have been limited knowledge of needs and interests of youth. Finally, another constraint involved conflicts with community members, which mainly happened in situations where the intervention was disrupting the activities of other community members (Beaulac et al. 2010). These conflicts often lead to threats of discontinuing a resource such as space. If and/or how conflicts were resolved was not addressed.

Although not illustrated in Table 4, interventions' theoretical approaches may be linked to interventions' context integration. Interventions based on a youth development approach seemed more integrated in their environment through the development of partnerships, a prior understanding of and involvement within their neighbourhood. This is also true for interventions that used an approach that would

prioritize youth's involvement within their community or advocate for social justice. Also, two interventions stated using an ecological theory, which allowed for a thorough understanding of the neighbourhood and factors contributing to neighbourhood issues. There were few interventions with a prevention-focused approach (i.e. focused on a specific issue) and these seemed to be the ones to show more difficulty in fully integrating within their context due to the constraints identified in Table 4.

Discussion

This narrative systematic review utilized an ecological systems perspective to explore the relationships between neighbourhood interventions' internal characteristics and their PYD outcomes as well as the role of context for these interventions.

In relation to PYD outcomes, results of this review confirm the findings from past reviews; neighbourhood interventions can promote PYD, notably competencies, confidence, connection, and character. Furthermore, this review highlights the importance of creating an atmosphere that encourages supportive relationships and activities that aim to build skills and that are real and challenging. These findings are consistent with those of Roth and Brooks-Gunn (2003), however, they found higher significance of empowering atmospheres and less importance of real and challenging activities. Yet, interventions should not dismiss the other types of atmospheres and activities listed in Table 3 as a larger review may have demonstrated their contribution to PYD. The findings of this review also indicate the need to revisit the Five Cs of PYD in order to include important PYD outcomes such as leadership, civic engagement, and feelings of empowerment.

General programs and projects that target some type of disadvantaged and/or diverse youth and that are based on notions of youth development and community engagement have shown to be associated many different PYD elements, but more specifically various competencies and elements of confidence. These interventions may be the only space that provide youth with these opportunities in an environment that is safe, welcoming, and understanding of their disadvantaged situation. Thus, opportunities to develop these important PYD elements may create future possibilities that youth may have, a priori, perceived as unattainable.

With regard to the role of context, this review highlights important benefits related to interventions' understanding of and integration within their context including the longevity of the intervention. However, evaluations need to allocate a greater attention to the possible relationships between interventions and their context, as this would provide a deeper understanding of these dynamics and guide future

interventions in their context integration. Nonetheless, this review highlighted, in the results section, some important context integration facilitators and constraints that should be considered by interventions and evaluation.

It is difficult to establish a clear link between the nature of an intervention (i.e. type, duration, target population, and theoretical approach) and its integration within its context and also its effectiveness at promoting PYD. Based on the results of this review, we can speculate that youth development and community engagement approaches create conditions allowing interventions to integrate within the context, particularly by establishing partnerships in order to provide youth with community support and opportunities for community engagement experiences. The individual competencies developed through these types of interventions often lead to the development of community engagement competencies, but without the opportunities to experience community involvement first hand, there are no opportunities to fully develop these community engagement competencies. An ecological approach also seems to be an effective approach because it provides a more thorough understanding of all involved factors. However, prevention focused approaches seem to be too focused on the problem itself and often do not seek to understand the entire picture and all possible factors involved.

Frohlich et al. (2001) discuss the recursive relationship between individuals and their environment, however, few studies explore this recursivity in the relationship between interventions and context. For instance, this review found that neighbourhoods characterized by little or no social capital constrained the success of the intervention. However, it could be possible that these neighbourhoods could benefit from interventions that involve community members in the design and implementation of the intervention. Community involvement would bring community members together to work for the benefit of their community, thus developing a sense of community including an increase in social capital (Autry and Anderson 2007; Driskell 2002). Consequently, social capital that is built from interventions could help maintain them. However, intervention evaluations did not discuss the recursivity between context and interventions, making it difficult to explore this phenomenon in this review. Thus, in order to better understand this recursive relationship, intervention evaluations should deem it an important element of their evaluation.

Youth involvement

Few interventions considered youth's voices and those that did, did so either in the organizational community collaboration group, through needs assessments, or in one case, youth were completely responsible for a Community Technology Centre (CTC). Very few interventions engaged youth, and

they were mostly absent in planning and implementation. This finding is consistent with the growing body of youth engagement literature, which indicates a disregard of youth in community decision-making processes despite evidence pointing to the importance of youth involvement in the planning of their environments (Driskell 2002; Frank 2006; Knowles-Yanez 2005; Santo et al. 2010; Simpson 1997). Overall, this literature suggests that since youth are affected by changes in their neighbourhood, especially interventions targeting them, it is their right as residents and stakeholders to be actively engaged in decision-making processes that affect them (Driskell 2002; Frank 2006; Knowles-Yanez 2005; Simpson 1997). However, the major challenges that prevent youth participation are primarily linked with adults' undermining attitudes towards youth participation (Driskell 2002). According to Driskell (2002), adults' misperceptions lead them to believe that youth lack necessary knowledge, experience, and skills to participate in decision-making, that engaging youth is time consuming, that youth are too naïve and immature, and that adults know what is best for youth.

It seems that interventions that did not involve youth may have had more successful outcomes if they had considered the contribution of youth. In order to benefit from youth participation, the literature on youth engagement clearly indicates the need for a change in adult misperceptions (Driskell 2002). Adult intervention organizers need to become aware of the many benefits of youth involvement for youth, the intervention, and the community. First, through youth involvement, youth can learn important civic engagement and leadership skills that they can utilize for positive contribution to their community now and as active adults (Driskell 2002; Knowles-Yanez 2005). Therefore, healthy and active youth should be considered a good investment for our collective future (Driskell 2002). Furthermore, youth involvement also allows for a thorough understanding of this population's needs and interests, which would result in better decisions and successful interventions that respond to the needs and interests of youth (Driskell 2002; Knowles-Yanez 2005). Collaboration between adults and youth can improve this relationship and undo negative misperceptions that both parties may hold towards one another (Driskell 2002).

Conclusion

One of the most important lessons from this review is the importance of interventions' understanding of and integration within their context, which we suggest is an essential part of intervention evaluations. Using an integrated evaluation approach of standard guidelines of health promotion evaluation and key elements of the ecosystems approach to population health interventions suggested by Hawe and Riley (2005) and Hawe et al. (2009), was critical

in extracting data related to PYD as well as to the relationship between interventions and their context. We also found it beneficial to work with evaluations using various methods, as it allowed us to capture an in depth understanding of interventions, including perceptions from youth and other stakeholders. Based on this review's findings, future intervention evaluations should consider exploring outcomes that decreased or not changed and why. Most evaluations focus on the improved outcomes, which provides valuable information, but knowledge of decreased or not changed outcomes could highlight possible avenues for interventions to improve these outcomes.

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Appendix 1: Search strategy

Key words

- #1. neighbo?r* OR communit* OR (physical OR built adj2 (environment OR environments) OR after-school OR urban OR extracurricular OR sprawl OR 'land use'
 - #2. intervention* OR program* OR policy OR policies OR prevention OR promotion OR initiative* OR event* OR solution* OR collaboration* OR effort* OR strateg*
 - #3. positive development OR growth OR well-being OR wellness OR self-esteem OR belonging OR self-determination OR interpersonal OR 'social competenc* OR bonding OR aspiration* OR engagement OR (social) adj2 (cohesion OR capital) OR identit* OR morality OR self-efficacy
 - #4. youth OR adolescen* OR teen* OR boy* OR girl*
 - #5. Filter of unrelated studies
NOT clinical NOT treatment NOT therap* NOT depression NOT anxiety NOT substance NOT drug* NOT alcohol NOT gambling NOT sexual* NOT obesity NOT smok* NOT tobacco NOT food NOT fruit* NOT vegetable* NOT nutrition* NOT diet* NOT suicid* NOT disorder* NOT illness* NOT cancer* NOT housing NOT disabilit* NOT HIV NOT AIDS NOT violen* NOT crim* NOT stroke* NOT disease* NOT injur* NOT hepatitis NOT diabet*
- End search #1 AND #2 AND #3 AND #4 AND #5

DATABASES:

OVID: Medline, Embase, PsycInfo, Social Work Abstract
Web of Science

Appendix 2: List of included articles

Arches J, Fleming J (2006) Young people and social action: youth participation in the United Kingdom and United States. *New Directions for Youth Development* 111: 81-90.

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