

Connectedness within Social Contexts: The Relation to Adolescent Health

Le sentiment d'appartenance au sein des contextes
sociaux : le lien avec la santé de l'adolescent



by MELANIE YUGO, BSC
*Analyst, Canadian Population Health Initiative
Canadian Institute for Health Information
Ottawa, ON*

MÉLANIE JOSÉE DAVIDSON, BA
*Senior Analyst, Canadian Population Health Initiative
Canadian Institute for Health Information
Ottawa, ON*

Abstract

International studies have shown that the more developmental assets adolescents possess, the greater their likelihood of engaging in health-enhancing practices and the lesser their likelihood of engaging in practices that put health at risk. Logistic regressions were conducted on data from the 2000–2001 National Longitudinal Survey of Children and Youth (NLSCY) for 12- to 15-year-old Canadian youth to examine which of five assets accounts for the most variance in positive health outcomes and participation in risky health behaviours. Connectedness within social contexts, particularly to family and school, was associated with several self-reported positive health

outcomes and behaviours (excellent or very good health, high self-worth, and less alcohol, tobacco and marijuana use). Connectedness among peers was associated with better self-assessed health and higher self-worth but also with more use of alcohol, tobacco and marijuana. A comprehensive approach to healthy youth development that emphasizes and increases positive relationships in these contexts may facilitate the transition of Canadian youth into healthy adulthood.

Résumé

Des études internationales ont montré que plus l'adolescent a de ressources développementales, plus il aura tendance à adopter de saines habitudes de santé et moins il sera enclin à adopter des habitudes qui mettent sa santé en péril. Des régressions logistiques ont été effectuées à partir des données de l'Enquête longitudinale nationale sur les enfants et les jeunes de 2000-2001 chez de jeunes Canadiens âgés de 12 à 15 ans afin de déterminer laquelle de cinq ressources est responsable des plus importants écarts dans les résultats positifs en matière de santé et l'adoption de comportements dangereux pour la santé. Le sentiment d'appartenance au sein des contextes sociaux – en particulier les contextes familial et scolaire – a été associé à plusieurs résultats et comportements positifs autodéclarés en fait de santé (excellente ou très bonne santé, haute estime de soi et consommation réduite d'alcool, de tabac et de marijuana). Le sentiment d'appartenance avec les pairs a été associé à un meilleur état de santé autodéclaré et à une meilleure estime de soi, mais également à une consommation accrue d'alcool, de tabac et de marijuana. Dans ces contextes, une approche globale à l'égard du développement de la santé chez les jeunes, qui met l'accent sur les relations positives et augmente celles-ci, peut aider les jeunes Canadiens à devenir des adultes en santé.

ADOLESCENT HEALTH AND WELL-BEING HAS BEEN LINKED TO A BROAD range of health determinants, including characteristics of the social environment (CIHI 2005). Positive relationships, opportunities, competencies, values and self-perceptions, or developmental “assets,” can facilitate a youth’s transition into healthy adulthood (Scales and Leffert 2004). International studies have shown that the more of these assets adolescents possess, the greater their likelihood of engaging in health-enhancing practices and the lesser their likelihood of engaging in health-deteriorating practices (Kirby 2002; Kobus 2003; Murphey et al. 2004; Oman et al. 2004a; Scales et al. 2003; Vesely et al. 2004). Analyses of data from the National Longitudinal Survey of Children and Youth (NLSCY) by the Canadian Institute for Health Information (CIHI) showed that the more assets, or positive ties, that

Canadian youth reported having with their families, schools, peers and communities, the more likely they were to report better health and higher self-worth and the less likely they were to report participating in risky health behaviours such as using alcohol, tobacco and marijuana (CIHI 2005). For example, youth who reported having a combined total of four or five assets were less likely to report using alcohol, tobacco and marijuana than youth with three or fewer assets.

In this study, CIHI conducted additional analyses of 2000–2001 NLSCY data to examine further which of these assets accounts for the most variance in positive health outcomes and participation in risky health behaviours as reported by youth.

Methods

Data source

Statistics Canada's NLSCY is a longitudinal study that follows a sample of Canadian children from birth to early adulthood. The first cohort of approximately 25,000 Canadian children aged 0 to 11 years was recruited in the fall of 1994 (children and youth living on Indian reserves or Crown lands, in institutions or in the territories were excluded). The cohort has been surveyed every two years since, with information provided by parents, teachers, principals and children above 10 years of age.¹

Population and data analysis

Data for youth aged 12 to 15 years old in 2001 ($n=3,725$ and representing 1,625,819 youth of the same age in Canada) were examined. All analyses were done through the Statistics Canada Remote Data Access program, using NLSCY Cycle 4 cross-sectional weights. Variables from the NLSCY used to represent the five assets – parental nurturance, parental monitoring, school engagement, peer connectedness and community engagement – were first dichotomized into high and medium to low levels. The odds ratios (with 95% confidence intervals) associated with high levels of each of the assets in relation to five self-reported health outcomes and behaviours (excellent or very good health, high self-worth, alcohol, tobacco and marijuana use) were then calculated using the Bootvar 3.0 program in SAS, logistic regression models and the bootstrap method for variance estimation. The variables, analyses, outcomes and methodology are based upon those developed, used and initially presented in the CIHI report *Improving the Health of Young Canadians* (CIHI 2005). Some variables in the aforementioned report, however, were not of direct relevance to this study, and consequently they were not included in this study's analyses.

TABLE 1. Summary of odds ratios and confidence intervals (CI, 95%) associated with the five assets, by health outcome and behaviour

HEALTH OUTCOME OR BEHAVIOUR	DEVELOPMENTAL ASSET (MEDIUM-LOW LEVEL=0; HIGH LEVEL=1)	ODDS RATIO	LOWER CI	UPPER CI
Excellent or Very Good Self-Rated Health (No=0; Yes=1)	High Levels of Parental Nurture	1.87	1.38	2.52
	High Levels of School Engagement	1.90	1.38	2.60
	High Levels of Peer Connectedness	1.64	1.18	2.28
	High Levels of Community Engagement	0.96	0.70	1.33
	High Levels of Parental Monitoring	1.09	0.81	1.47
High Self-Worth (No=0; Yes=1)	High Levels of Parental Nurture	3.36	2.33	4.83
	High Levels of School Engagement	1.60	1.13	2.27
	High Levels of Peer Connectedness	2.23	1.56	3.20
	High Levels of Community Engagement	1.15	0.78	1.69
	High Levels of Parental Monitoring	0.72	0.52	1.00 ^a
Alcohol Use (No=0; Yes=1)	High Levels of Parental Nurture	0.45	0.34	0.60
	High Levels of School Engagement	0.41	0.30	0.55
	High Levels of Peer Connectedness	1.67	1.18	2.37
	High Levels of Community Engagement	1.04	0.78	1.40
	High Levels of Parental Monitoring	0.90	0.68	1.18
Tobacco Use (No=0; Yes=1)	High Levels of Parental Nurture	0.48	0.35	0.68
	High Levels of School Engagement	0.37	0.26	0.52
	High Levels of Peer Connectedness	1.50	1.02	2.22
	High Levels of Community Engagement	0.93	0.68	1.29
	High Levels of Parental Monitoring	0.95	0.69	1.32
Marijuana Use (No=0; Yes=1)	High Levels of Parental Nurture	0.50	0.36	0.69
	High Levels of School Engagement	0.37	0.26	0.52
	High Levels of Peer Connectedness	1.66	1.12	2.46
	High Levels of Community Engagement	0.74	0.54	1.02
	High Levels of Parental Monitoring	0.84	0.61	1.15

Source: CPHI analysis of NLSCY (Cycle 4, 2000-01), Statistics Canada.

^a Odds ratio equal to 1.00 due to rounding, $p=0.049$.

Odds Ratios and associated confidence intervals were calculated using multiple logistic regressions.

Results

Table 1 summarizes the odds ratios and confidence intervals associated with each of the assets in relation to the five health outcomes and behaviours examined.

Parental nurturance and school engagement

Under the deployed bootstrapping methodology, high levels of two of the five assets – parental nurturance and school engagement – were associated with positive health outcomes and less reported participation in risky health behaviours.

- Compared to youth with medium to low levels of these assets, youth with high levels of parental nurturance or school engagement had increased odds of reporting excellent or very good health and high self-worth.
- Youth with high levels of parental nurturance or high levels of school engagement were also less likely than youth with medium to low levels of the asset to report using alcohol, tobacco and marijuana.

Peer connectedness

High levels of peer connectedness were also associated with positive health outcomes (excellent or very good health status and high self-worth). However, youth with high levels of peer connectedness were more likely than youth with medium to low levels to report using alcohol, tobacco and marijuana.

Community engagement and parental monitoring

The community engagement asset did not explain a significant amount of the variance associated with the positive health outcomes or youths' participation in risky health behaviours. Similar results were found for the parental monitoring asset, with one exception: youth with high levels of parental monitoring were less likely to report high self-worth than youth with medium to low levels of parental monitoring.

Discussion

The associations between parental nurturance, school engagement and the different health measures in this study were consistent with those from the 1994–1995 US National Longitudinal Study of Adolescent Health, in which approximately 12,000 youth in grades 7 through 12 participated (Resnick et al. 1997). In the US study, parent–family connectedness and perceived school connectedness were found to be protective against emotional distress, suicidality, violence and age of sexual initiation, as

well as cigarette, alcohol and marijuana use (Resnick et al. 1997).

Compared to those who reported medium to low levels, youth who reported high levels of parental nurturance were more likely to report high self-worth. Youth who reported high levels of parental monitoring, however, were less likely to report high self-worth. Previous research shows that among high school students, regardless of ethnicity, socio-economic status or family structure, a nurturing parenting style is associated with less psychological distress and higher self-esteem, while an authoritarian parenting style is associated with greater psychological distress and lower self-esteem (Avenevoli et al. 1999).

High levels of peer connectedness were associated with positive health outcomes and higher participation in risky health behaviours as reported by youth. Similarly, data from the Canadian component of an international study of youth health found

that youth who reported high levels of social integration felt less depressed and helpless and had high self-esteem (King 1999).

However, of youth in the international study who said most of their friends smoked, took drugs or consumed alcohol in excess,

... youth who reported high levels of parental nurturance were more likely to report high self-worth.

85%, 88% and 58%, respectively, reported they had engaged in the same behaviour (King 1999). Studies increasingly show that interactions with peers who exhibit positive behaviours are linked to better health outcomes (McLaren 2002). For example, youth with positive peer models are more likely to abstain from using tobacco, drugs or alcohol (Kobus 2003; Oman et al. 2004b).²

Markers of socio-economic status, such as income and education, were not included in these analyses. Analyses of these variables in the CIHI report *Improving the Health of Young Canadians* and the literature in general suggest that the relationship between socio-economic status, assets and health is complex. The CIHI report found that, with the exception of parental nurturance, “the distribution of assets was relatively consistent across the different income and education levels” (CIHI 2005). The proportion of youth who reported high levels of parental nurturance is higher in the highest income level than in any of the other income levels, and is higher in households with college or university graduation compared to households with some college or university. Further analyses showed that “higher or lower levels of household income and education do not appear to be related to increased odds that youth aged 12 to 15 years will report high levels of health status and self-worth” (CIHI 2005).

Similarly, household income and education levels “do not appear to increase the odds that youth will report using tobacco, alcohol or marijuana” (CIHI 2005). These findings, however, are not meant to discount the relationship between income and health; as noted above, income plays a varied yet complex role in determining health behaviours and outcomes.

The results of this study show that some assets have more predictive value, statistically, of health measures or behaviours than other assets. Multiple assets interact in multiple environments and are associated with specific health outcomes and behaviours (Scales and Leffert 2004; CIHI 2005). Based on previous research, programs and policies that may be most beneficial to youth health are those that increase the number and quality of positive family, school, peer and community connections. Research shows that characteristics of successful initiatives include approaches that

- are comprehensive and address common factors associated with multiple behaviours;
- support positive youth development rather than focusing on avoidance of risky behaviours;
- engage youth in meaningful activities (CIHI 2005; Centre of Excellence for Youth Engagement 2003; Flay 2002; Public Health Agency of Canada 2004; Catalano et al. 2004; Collaborative Community Health Research Centre 2002; Minnesota Department of Health 2001).

Limitations

As with any cross-sectional study, conclusions cannot be made regarding the cause/effect relationship between positive assets and health outcomes and behaviours. Further, measures used in this survey are self-reported by youth. Socially acceptable answers may have been given in response to some questions.

Conclusion

Connectedness within social contexts, particularly connectedness to family, school and peers, is associated with several health measures among Canadian youth. A comprehensive approach to healthy youth development that emphasizes and increases positive relationships in these contexts may facilitate the transition of Canadian youth into a healthy adulthood. Parents, peers, schools, communities, volunteer organizations, program developers, levels of government and youth themselves all have a role to play in healthy youth development.

Correspondence may be directed to: Melanie Yugo, Canadian Institute for Health Information, 495 Richmond Road, Suite 600, Ottawa, ON K2A 4H6; tel.: 613-241-7860; e-mail: myugo@cihi.ca.

NOTES

1. More information on the NLSCY can be found at <http://www.statcan.ca/english/sdds/4450.htm>.
2. The peer connectedness variable in our study does not assess whether peers exert a positive or negative influence on the youth respondent.

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