INVESTIGATING CIVIC PARTICIPATION DEVELOPMENTAL TRAJECTORIES AMONG CANADIAN YOUTHS TRANSITIONING INTO ADULTHOOD

Vézina, M. P. & Poulin, F. (2019). Investigating civic participation developmental trajectories among Canadian youths transitioning into adulthood. *Applied Developmental Science, 23*(1), 59-73. https://doi.org/10.1080/10888691.2017.1301816

ABSTRACT

Current knowledge of intraindividual longitudinal patterns of civic participation (CP) and their predictors remains limited. As life cycle trends are showing a decline in civic/political involvement during early adulthood years, increased understanding of these aspects could enhance efforts to promote greater and/or sustained CP trajectories among youth transitioning into adulthood. The current study aimed to identify youths CP developmental trajectories from age 18 to 22 and examine their predictors in late adolescence. The four following CP trajectories were identified among 327 Canadian youths (61% Female; 90% Caucasian; 100% French-speaking) through semi-parametric modeling: *Low with slight decline* (56.9%), *Moderate sustained* (25.1%), *High with steep decline* (12.5%) and *High sustained* (5.5%). Youths displaying higher academic performance, civic attitudes, altruistic orientation, prosocial/community-oriented and academic/vocational activity involvement were more likely to be assigned to higher at baseline and/or sustained CP trajectories. Implementing youths CP promotional programs targeting these attributes may hold promise for addressing issues sustaining CP in youths transitioning into adulthood.

Key words: civic participation, developmental trajectories, transition into adulthood, positive youth development.

3.1 Introduction

Youth civic contributions are core features of human development, sustainable democracy, social justice and flourishing communities across national settings (Lerner, 2004) and are known to promote youth's social, cognitive and emotional development (for a comprehensive review, see Pancer, 2015). Yet, despite major enhancements in civic engagement research over the past twenty years (Sherrod, Torney-Purta & Flanagan, 2010), civic development is still not recognized as the critical domain of human development that it is and, as explicitly stated by Sherrod (2015), "[...] it is by no means clear how people grow into active, concerned citizens capable of sustaining democracy. Nor is it clear what societies need to do to make this happen." Therefore, the complex and quite recently undertaken task to retrace CP developmental pathways from childhood to adulthood and to unveil the precursors of greater and sustained engagement owe to be furthermore investigated by current researchers concerned with human development.

For decades, several researchers have considered CP to be an age-salient task pertaining to early adulthood (Erikson, 1968; Havighurst, 1972; Obradovic & Masten, 2007). There is indeed many reasons to believe that the transition into adulthood is a particularly crucial stage for civic development since it is a time during which youths typically (1) display more tolerance, explore political ideas and perspectives and are exposed to various social networks likely to challenge their pre-existing worldviews (Alwin, Cohen & Newcomb, 1991), (2) experience transitions into roles providing societal continuity such as voting, starting families or finding employment (Buchman & Kriesi, 2011) and given that (3) involvement in community affairs and civic issues during these years set the stage for civic attitudes and behaviors in midlife (Flanagan, 2004; Jennings & Stoker, 2004). Unfortunately, recent works concerned with life cycle trends in civic engagement are reporting a general decline in CP from late adolescence to early adulthood (Jennings & Stoker, 2004; Finlay, Flanagan & Wray-Lake, 2011) as well as typically more episodic and unstable patterns of involvement compared to

adolescence and midlife (Flanagan & Levine, 2010; Finlay, Wray-Lake & Flanagan, 2010). Nonetheless, some youths do succeed in keeping high CP levels across early adulthood years (Finlay et al., 2010; Finlay et al., 2011; Johnson, Agans, Weiner & Lerner, 2014). These youths may benefit from internal or contextual resources promoting stable involvement patterns. Understanding the nature of these resources may enable practitioners and policy makers to foster higher and sustained CP trajectories when youths transition into adulthood (Johnson et al., 2014).

To date, integrated civic identity is thought to be rooted in adolescence (Lerner, 2004; Obradovic & Masten, 2007) and CP display is best understood within relational developmental systems (RDS) metatheory (Lerner, Wang, Champine, Warren & Erickson, 2014). Models derived from RDS frameworks emphasize that human development encompasses mutually-influential relations between the developing individuals and their complex multilevel contexts. These mutually-influential relations are termed adaptive developmental regulations as they benefit both individuals and their ecologies. Among RDS-based models, the Positive Youth Development approach (PYD; Lerner, 2004) has become the prominent framework for understanding youths civic development within the past decade. PYD is a second-order latent construct which builds on five first-order latent constructs termed the "five Cs" (i.e., connection, caring, character, confidence, competence), developmental attributes which depict successful and healthy youths and ultimately lead to a " 6th C ": youth contributions (e.g., CP).

The key hypothesis of the PYD approach is that when the individual strengths are aligned with the positive contextual attributes found in families, schools and communities, youth development is enhanced and youth are more likely to get involved in the civic and political realms (Lerner, 2004). This hypothesis is supported by a great number of empirical works showing that several individual and contextual attributes relating to the « Five Cs » constructs are indeed associated with greater CP in late

adolescence and early adulthood. Individual attributes include academic competence (Obradovic & Masten, 2007; Syvertsen, Wray-Lake & Flanagan, 2011), lower depressive symptomatology (Rietschlin, 1998), higher self-esteem (Pancer, Pratt, Hunsberger & Alisat, 2007), social competence (Obradovic & Masten, 2007), civic attitudes (Johnson et al., 2014; Marzana, Marta & Pozi, 2013) and altruistic orientation (Lemmon & Wayne, 2015; Omoto, Snyder & Hackett, 2010). Contextual attributes include positive parent-child communication patterns (Smetana & Metzger, 2005; van Goethem, van Hoof, van Aken, de Castro, & Raajmakers, 2014) and organized activity involvement (Fredricks & Eccles, 2006; McIntosh & Munoz, 2009; Obradovic & Masten, 2007; Viau & Poulin, 2015). These findings are also consistent with Roisman, Masten, Coastworth & Tellegen's Developmental tasks theory (2004) which states that due to the heterotypic course of development, competence in salient domains of one developmental period (e.g., academic, social, moral and health competence in adolescence) are believed to build to foundation for subsequent successes even in different or newly emerging salient domains (e.g., CP in early adulthood).

It is however worth noting that research findings targeting youth CP predictors in adolescence (including the aforementioned studies) rely either on cross-sectional or short-term variable-centered longitudinal designs (e.g., multiple regression, latent growth curve modeling). While these designs are informative and do contribute a great deal to knowledge enhancement across social sciences domains, they are unsuitable when conducting research deriving from RDS metatheory which essentially relies on the idea that development is non-linear and characterized by autopoietic (self-constructing) and hence, idiographic change (Overton, 2015). Given that cross-sectional data only allows for the testing of single time-frame correlations between variables without specifying effect direction, that short-term longitudinal research records very proximal change that doesn't capture continuity/discontinuity in developmental pathways and that variable-centered analyses assesses links between

variables while assuming ergodicity of human development (i.e., stationarity and homogeneity), therefore only allowing for the capture of one single normative pattern among the population. Thus, when conducting research derived from RDS metatheory aiming to gather valid information on youth civic development, researchers' foci should be on devising or using statistical tools capturing interindividual differences in CP trajectories (i.e., in the course of intraindividual change), that is person-centered analyses.

To date, only two longitudinal studies targeting young adults' CP intraindividual trends have been conducted (Finlay et al., 2011; Johnson et al., 2014). Using data from AmeriCorps participants and a comparison group, Finlay et al. (2011) have examined civic engagement profiles and transitions through latent profile (LPA) and latent transition analyses (LTA) across 2 waves spanning 8 years. Participants were aged 19 to 29 at Wave 1 when three latent statuses were identified: (1) inactive (39%), (2) voting-involved (32%) and (3) highly committed (19%). Eight years later, the voting-involved status was the most prevalent (70%) followed by the highly committed (19%) and the inactive status (11%) was the least prevalent. Their results therefore revealed that individuals were less civically active as young adults but that they were more likely to settle into voting and volunteering when they reached the end of the third and began the fourth decade of life. Furthermore, latent transitions analyses indicated that probabilities of remaining in the same latent status over time were high for the voting-involved status (93%), moderate for the highly committed status (50%) and rather weak for the inactive status (24%). Johnson et al. (2014) also investigated whether and how many profiles of civic engagement could be identified and how profile composition was changing across two waves (mean age 22 at Wave 1 and 23 at Wave 2) through LPA and LTA. Their sample was comprised of college or former college students. A four profile solution was identified at both waves: (1) *Organizers* profile (26.6% at Wave 1; 26.5% at W2), (2) *Low initiative profile* (50.3% at W1; 48.2% at W2), (3)

Highly involved profile (8.8% at W1; 10.5% at W2) and (4) *Moderately involved* profile (14.3% at W1; 14.7% at W2). LTA showed that although the proportion of the sample assigned to each profile was similar across waves, many individuals were classified into different profiles at each wave (although youth classified in the *low initiative profile* displayed more consistency), which also support the idea that CP longitudinal patterns are likely unstable when youth transition into adulthood.

Although both studies are methodologically innovative and theoretically informative, it is worth noting that intraindividual change was only investigated across two waves and that the analytic strategy allowed for the examination of transitions among qualitatively distinctive patterns of participation but could not record involvement continuity/discontinuity nor intraindividual change in the intensity of CP over time. Also, as youths involved in Johnson et al. (2014) study were either college or former college students, the authors weren't able to examine differences in profiles and profile transitions among young people not enrolled in higher education - which might constrain the generalizability of their findings. Furthermore, while the aforementioned research teams have respectively shown interest for civic engagement longitudinal patterns' educational covariates (Johnson et al., 2014) and life-cycle predictors (Finlay et al., 2011) during young adulthood, earlier (adolescent) predictors of differential CP trajectories haven't been investigated yet. Finally, both studies are using American samples. In fact, very little research outside European countries and United States has specifically targeted youth civic development. Given that political context, social and cultural norms towards civic engagement, opportunities for youth to get involved in civic organizations and the very content of civic initiatives varies greatly across sociocultural groups and societies (Youniss & Levine, 2009), CP pathways and predictors might not be the same outside the United States - which makes them worth investigating. Therefore, future research should focus on capturing heterogeneity of CP developmental trajectories among educationally and culturally diverse sets of youths

transitioning into adulthood across several data points through statistical tools sensitive to intraindividual change in CP frequency and to identify their early predictors in order to more effectively promote greater and/or sustained CP trajectories when youths transition into adulthood.

Accordingly, the current study aims to (1) identify CP developmental trajectories among Canadian youths transitioning into adulthood (assessed annually from ages 18 to 22), and (2) examine individual (academic performance, psychological adjustment, social competence, civic attitudes, altruistic orientation) as well as contextual (parent-child communication and organized activity involvement) predictors of CP trajectory-group membership in late adolescence (ages 16-17). Based on previous empirical and theoretical works, we expect that (Hypothesis 1) several CP trajectories characterized by distinctive CP baseline levels and patterns of continuity/discontinuity will be identified, namely, one declining CP trajectory (consistent with previous works on life cycle trends in civic engagement) and a least prevalent sustained CP trajectory (as suggested by the previously presented results gathered by both Finlay's and Johnson's respective research teams). We also expect that (Hypothesis 2) participants displaying higher academic performance, psychological adjustment, social competence, civic attitudes, altruistic orientation, parent-child communication and organized activity involvement will be assigned to higher and sustained CP trajectories - or at least to higher CP baseline levels when youths transition into adulthood.

3.2 Methodology

3.2.1 Sample

Data were drawn from a longitudinal study initiated in 2001 with 390 students (58% female) recruited in eight French-speaking schools in a large school board located in Quebec (Canada) and enrolled in Grade 6 (mean age = 12.38 years old, SD = 0.42) at

the time. Participants were mainly Caucasian (90%), French-speaking (100%) and most came from intact families (68%). Annual family income before taxation was predominantly equivalent or higher than CAN$50,000. The current study encompassed two phases: (1) late adolescence (Grades 10 and 11; ages 16 and 17) and (2) early adulthood (ages 18 to 22). Retention rates fluctuated from 72% to 83% over time as some participants were in and out of the longitudinal study.

CP was measured annually from age 18 to age 22 inclusively and the predictor variables were measured at ages 16-17. Only youths who took part in at least two of the five annual data collections between ages 18 to 22 were included in the analyses aiming to identify CP trajectories (n = 327; 61% female). Among our original sample, 52 youths (13%) did not participate in any CP data point collections, 18 youths (4.5%) only participated in one data point collection, 17 youths (4.3%) participated in two data point collection, 20 youths (5%) participated in three data point collection, 50 youths (12.5%) participated in four data point collection and the remaining 242 youths (60.7%) participated in all five data point collections. Furthermore, among these youths, only those for whom data were also available at ages 16-17 were selected for the examination of the predictor variables on CP trajectories (n = 305; 61% female). Mean comparisons revealed that the sub-sample did not differ from the remaining participants (N = 85) with regards to baseline sociodemographic indicators (parents' education, annual family income before taxation, family structure, gender and ethnicity).

3.2.2 Procedure

Predictor variables were measured at ages 16 and 17 by means of self-reported questionnaires filled in the classroom under the supervision of research assistants except organized activity involvement which was assessed through structured

telephone interviews conducted by trained research assistants. CP assessment was carried annually from ages 18 to 22 through self-reported questionnaires. Most questionnaires were administered at home but about 5% had to be mailed out. Willing participants were annually offered a $20 gift certificate for their time and participation. This research project was previously assented by the internal review board at the authors' university.

3.2.3 Measures

3.2.3.1 Civic participation in early adulthood (ages 18-22)

CP from September to May was measured annually in May with eight items adapted from CIRCLE *Civic and political health of the nation* survey (Keeter, Zukin, Andolina & Jenkins, 2002) asking participants how often they had (1) spent time participating in community service or volunteering activities, (2) personally walked, ran or bicycled for a charitable cause, (3) discussed social or political issues with friends or family, (4) signed an e-mail or a written petition about a political or social issue, (5) taken part in a protest, march or demonstration, (6) stood up for their opinion while discussing social or political issues, (7) not bought something because or conditions under which the product had been made or because they disliked the conduct of the company producing it, and (8) bought a certain product or service because they liked the social or political values of the company producing or providing it. Responses were coded on a 5-point Likert scale and ranged from 1 = *never* to 5 = *always or nearly always*. The sum of these items was computed to create a global indicator of CP at each wave of data collection. Cronbach alphas fluctuated from .82 to .85 over time and higher scores accounted for greater CP.

3.2.3.2 Predictor variables in late adolescence (ages 16-17)

Academic performance. Youth grades in French and Mathematics (percentages) were provided by the schools and the mean of both percentages were computed as an indicator of academic performance. Bivariate correlations between French and Mathematics scores were .71 and .68 at ages 16 and 17 respectively.

Psychological adjustment. Two indicators were included in this composite index: (a) global self-worth and (b) depressive symptoms (recoded). Depressive symptoms have been used as a global psychological adjustment indicator in other studies before (Smokowski, Mann, Reynolds & Fraser, 2004; Wilkinson, 2010) and they typically tend to increase in late adolescence (Thapar, Collishaw, Pine & Thapar, 2012; Adkins, Wang, Dupre, Van den Oord & Elder, 2009). In the current study, global self-worth and depressive symptoms (recoded) were combined since both measures were significantly correlated (bivariate correlations between global self-worth and depressive symptoms were .54 and .61 at ages16 and 17 respectively). Similar measurement was used in Denault and Poulin (2009). Self-worth was measured using the Self-Perception Profile for Adolescents (SPPA; Harter, 1988). The subscale *global self-worth* is made of five items (e.g., "Some kids are often unhappy with themselves BUT other kids are pretty pleased with themselves"). The mean scores were computed on the original recoded Guttman scale ranging from 1 to 4. Cronbach alphas were .90 and .88 at ages16 and 17 respectively. Depressive symptoms were assessed using the Children Depression Inventory (CDI ; Kovacs, 1981). This inventory is comprised of 27 items and the time frame is *over the past 2 weeks*. Each item consists of three choices coded from 0 to 2. Higher scores are indicator of greater symptom severity. In the current study, the item tapping suicidal ideation was removed from the questionnaire resulting in 26 items and a score range of 0-52. The sum of scores was used and the final score obtained for depressive symptoms was recoded. Cronbach alphas were .77 and .78 at ages16 and 17 respectively. The composite index for *psychological*

adjustment was formed by standardizing and averaging both indicators. Higher scores reflected higher psychological adjustment.

Social competence. Social competence was measured using the Self-Perception Profile for Adolescents (SPPA; Harter, 1988). The subscale *social competence* is made of five items (e.g., "Some teenagers don't have the social skills to make friends BUT other teenagers do have the social skills to make friends"). The mean scores were computed on the original recoded Guttman scale ranging from 1 to 4 and Cronbach alphas were .84 and .85 at ages 16 and 17 respectively. Higher scores stood up for higher social competence.

Civic attitudes. The importance granted by participants to civic duty toward society was assessed with six items (e.g., "Doing something to improve my community") from Flanagan, Jonsson, Botcheva, Csapo, Bowes, Macek et al. (1999). Responses were coded on a 5-point Likert scale and ranged from 1 = *not at all important* to 5 = *very important*. The sum of all items was computed and Cronbach alphas were .81 and .85 at ages 16 and 17 respectively. Higher scores were representative of stronger civic attitudes.

Altruistic orientation. Altruistic orientation was measured with six items (e.g., "In the future, I would be willing to work fewer hours and earn a lower income if it created jobs for unemployed people") from Greenberger and Bond's Psychosocial Maturity Inventory (1977). Responses were coded on a 5-point Likert scale and ranged from 1 = *strongly disagree* to 5 = *strongly agree*. The sum of all items was computed and Cronbach alphas were .86 and .89 at ages 16 and 17 respectively. Higher scores depicted a stronger altruistic orientation.

Parent-child communication. Two indicators were comprised in this composite index:(a) youth self-disclosure and (b) parental solicitation both drawn from Kerr and Stattin (2000). Youth self-disclosure was made of five items (e.g., "How often do you usually want to tell your parents about school (how each subject is going; your relationships with teachers)?") Responses were coded on a 5-point Likert scale and ranged from 1 = *never or almost never* to 5 = *always or nearly always*. The mean score was computed and Cronbach alphas were .82 and .83 at ages 16 and 17 respectively. Parental solicitation was also made of five items (e.g., "During the past month, how often have your parents initiated a conversation with you about your free time?") and the responses were coded on the same 5-point Likert scale described above. The mean score was computed and Cronbach alphas were .81 and .83. Bivariate correlations between youth self-disclosure and parental solicitation were .64 and .67 at ages 16 and 17 respectively. The composite index for *parent-child communication* was formed by standardizing and averaging both indicators. Higher scores depicted higher frequency of parent-child communication.

Intensity of involvement in sports, prosocial/community-oriented and academic/vocational organized activities. Organized activity involvement was measured over the full school year (from September to June) by the means of a free recall procedure. Youth first had to list all the organized activities (both school- and community-based) they were involved in from September to December (before winter break). Afterwards, they had to identify all the organized activities they were involved in from January to June (after winter break). Telephone interviews were also tapping frequency of involvement, number of hours of involvement and number of months of involvement during the school year for each activity reported. In order to be considered as *organized activities,* the listed activities had to meet the following criteria: (a) regular frequency of involvement, (b) attendance of an adult activity leader, and (c) rule-guided engagement. Activity involvement was classified into three subtypes quite similar to

Fredericks & Eccles' (2006) categories: (1) sports, (2) prosocial/community-oriented activities and (3) academic/vocational activities. The sports subtype has to do with any school and non-school team and individual sport (i.e., soccer, hockey, fighting sports, badminton) as in several previous studies (Bartko & Eccles, 2003; Larson, Hansen, & Moneta, 2006; Linver, Roth, & Brooks-Gunn, 2009). The prosocial/community-oriented activities subtype includes activities aimed at connecting youth to community adults and institutions (Larson et al., 2006) and/or voluntary actions intended to help or benefit another individual, group or social cause (Eisenberg & Mussen, 1989) such as volunteering, community service, faith-based activities, scouts or 4-H programs involvement as in previous studies (Eccles, Barber, Stone & Hunt, 2003; Fredricks & Eccles, 2006; Hansen & Larson, 2007). Lastly, academic/vocational activities subtype relates to school-based activities that have an educational and/or vocational focus such as student committees, science clubs, youth enterprises or chess club as in previous studies (Eccles et al., 2003; Larson et al., 2006; McNeal, 1995).

In the current study, we considered *intensity of involvement* in each of the three activity subtypes separately. Intensity of involvement was operationalized as the total number of hours spent in organized activities relating to each distinctive subtype over a full school year. Following Denault and Poulin's procedure (2009), sports, prosocial/community-oriented and academic/vocational activity involvement intensity scores were respectively computed by (1) multiplying the number of hours of involvement per week by the number of weeks of involvement within a school year for each reported activity pertaining to a given subtype and (2) by summing up the number of hours of involvement in every activity pertaining to the same given subtype. Higher scores reflected greater intensity of involvement.

Given that all predictor variables were both measured at ages 16 and 17, mean scores were computed in order to obtain more reliable indicators of the late adolescence

period. Pearson's product-moment correlations between data collection points were in the high range (r = .52-.76), which allowed the use of mean scores.

3.2.4 Data analytic strategy

Descriptive statistics were calculated using Pearson's product-moment correlations for CP at different ages and for the associations between predictor variables at ages 16-17. CP developmental trajectories were estimated performing a group-based semi-parametric method (SAS PROC TRAJ; Jones, Nagin & Roeder, 2001). This method allows (a) identification of distinctive subgroups among the study population, (b) estimation of the proportion of the sample following each trajectory and (c) assignation of participants to the trajectory-group to which they are the most likely to belong to. The group-based modeling approach assumes and tests the hypothesis that the population is composed of a mixture of distinct groups defined by their developmental trajectories (Nagin, 1999). This hypothesis cannot be tested using variable-centered longitudinal data analytic strategies such as hierarchical and latent curve modeling strategies since these methods are designed to describe how pattern of growth vary continuously throughout the population rather than identifying distinct clusters of trajectories among the population. PROC TRAJ uses the maximum likelihood method to estimate parameters, including group sizes and shapes of trajectories. Subjects with missing data are included in the analysis, but only available data for each subject are used. Given that CP data were based on psychometric scales with censoring at the scale minimum and the maximum, trajectory estimation was carried through the censored normal option in the SAS procedure for model estimation (Nagin, 1999). Determination of the optimal number of groups and trajectory shapes was guided by the Bayesian Information Criterion (BIC), the Akaike Information Criterion (AIC) as

well as practical usefulness considerations. It is worth noting that in SAS, the closer to zero the BIC and the AIC, the better the fit of the model.

Investigation of the links between predictor variables and CP trajectory-groups was carried out on IBM SPSS Statistics 21 through a set of multinomial logistic regressions. At first, univariate multinomial logistic regressions considering the selective effect of each predictor variable on CP trajectory-group membership were performed. Afterwards, significant predictor variables were included in a final multivariate regression model in order to examine their relative contributions. Gender was included as a covariate in the final model given that several studies are reporting different patterns of CP in boys and girls (Gallant, Smale & Arai, 2010; Malin *et al.,* 2015). Missing data points on all predictor variables and covariates considered (17.13% at age 16; 12.84% at age 17) were estimated performing multiple imputations (MI), which is the increasingly recommended procedure in epidemiological and longitudinal studies (Asendorpf, van de Shoot, Denissen & Hutterman, 2014; Sterne, White & Carlin, 2009).

3.3 Results

3.3.1 Descriptive results

As shown by mean values in Table 1, there was a general trend for CP to decrease with increasing age. Furthermore, this table reveals that correlations for CP over time were in the moderate-high range (r = .47 to .78). Mean values (and standard deviations) of predictor variables are listed as follows: academic performance = 67.87(9.63), psychological adjustment = 3.29(0.59), social competence = 3.28(0.53), civic attitudes = 18.42(4.76), altruistic orientation = 19.48(4.42), parent-child communication = 3.05(0.86), sports involvement = 54.49(72.64), prosocial/community-oriented activity

involvement = 31.04(70.18) and academic/vocational activity involvement = 4.84(22.13).

3.3.2 Civic participation trajectories

Semi-parametric group-based modeling analyses were performed to determine the optimal number of groups and trajectory shapes. Two-, three-, four-, five- and six-group models were tested with a censored normal model. However, the six-group model did not converge. BIC and AIC values for each converging model are presented in Table 2. Both indices clearly indicated that the four- and five-group models best fitted the data. More precisely, BIC and AIC values were slightly better for the five-group model. However, this model lacked practical usefulness since it encompassed qualitatively analogous trajectories. The four-group model was therefore chosen because most parsimonious. Shape estimates and standard errors of CP trajectories are provided in Table 3. The final model encompassed two linear trajectories and two intercept trajectories.

The *low with slight decline* participation group (linear form) was comprised of participants displaying low baseline levels of CP and decreasing slightly over time (56.9%). The *moderate sustained* participation group (intercept form) was made of participants exhibiting a steady and mild pattern of CP over time (25.1%). The *high with steep decline* participation group (linear form) consisted of participants showing a pretty steep decline from high baseline levels to rather low levels of CP over time (12.5%). Finally, the *high sustained* participation group (intercept form) included participants demonstrating relentlessly higher levels of CP over time compared to the other groups (5.5%). The average probabilities of group membership were considered as an indicator of the accuracy of the participants' classification into each trajectory-

group. With average probabilities of group membership ranging from .80 to .91, the established criteria of .70 stated by Nagin (1999) was reached. The final model of CP trajectories yielded by the analyses is depicted in Figure 1.

3.3.3 Predictors of trajectory-group membership

Predictor variables mean scores and standard deviations for each trajectory-group are displayed in Table 4. Univariate multinomial logistic regressions examining the unique effect of each predictor variable on CP trajectory-group membership were initially performed. Academic performance $X^2(3, N=305) = 9.42$, $p < .05$, civic attitudes $X^2(3, N=305) = 43.23$, $p < .001$, altruistic orientation $X^2(3, N=305) = 35.30$, $p < .001$, parent-child communication $X^2(3, N=305) = 17.12$, $p < .001$, prosocial/community-oriented activity involvement $X^2(3, N=305) = 11.35$, $p < .01$ and academic/vocational activity involvement $X^2(3, N=305) = 8.35$, $p < .05$ scores significantly differed between trajectory-groups while psychological adjustment $X^2(3, N=305) = 1.15$, N.S, social competence $X^2(3, N=305) = 1.81$, N.S and sports involvement $X^2(3, N=305) = 7.09$, N.S scores did not.

Significant predictor variables were then tested simultaneously in a multivariate regression model in order to appreciate their relative contribution. Gender was also added as a covariate in this final model. In the final model, academic performance, civic attitudes, altruistic orientation, prosocial/community-oriented activity involvement and academic/vocational activity involvement remained significant predictors of trajectory-group membership probabilities (see detailed results in Table 5).

Specifically, (1) youths displaying higher academic performance were more likely to be assigned to the *moderate sustained* trajectory-group than to both the *low with slight decline* [β=.05(.02), p<.05] and the *high with steep decline* [β=.05(.02), p<.05] trajectory-groups; (2) youths displaying stronger civic attitudes were more likely to be assigned to the *high sustained* [β=.28(.08), p<.001], *high with steep decline* [β=.22(.06), p<.001] and *moderate sustained* [β=.19(.05), p<.05] trajectory-groups than the *low with slight decline* trajectory-group; (3) similarly, youths displaying higher altruistic orientation were more likely to be assigned to the *high sustained* [β=.22(.09), p<.05], *high with steep decline* [β=.18(.07), p<.01] and *moderate sustained* [β=.19(.05), p<.01] trajectory-groups than to the *low with slight decline* [β=.19(.05), p<.001] trajectory-group; (4) youths displaying greater prosocial/community-oriented activity involvement were more likely to be assigned to the *high with steep decline* trajectory-group than to both the *moderate sustained* [β=.006(.003), p<.05] and the *low with slight decline* [β=.008(.002), p<.05] trajectory-groups and (5) finally, youths displaying higher academic/vocational activity involvement were more likely to be assigned to the *high sustained* trajectory-group than to the *high with steep decline* [β=.01(.006), p<.05], the *moderate sustained* [β=0.34(.01), p<.05] and the *low with slight decline* [β=.03(.01), p<.05] trajectory-groups.

3.4 Discussion

The current study aimed to (1) identify CP trajectories among Canadian youths transitioning into adulthood (from age 18 to 22) and to (2) examine individual and contextual predictors of CP trajectory-group membership in late adolescence (ages 16-17). Consistent with the PYD model (Lerner et al., 2004) as well as previous findings (Finlay et al., 2011; Johnson et al., 2014), it was expected that differing CP trajectories would emerge among our sample (Hypothesis 1) and that youths granted with positive contextual and individual attributes in late adolescence would be more likely to display higher and/or sustained CP trajectories when transitioning into adulthood (Hypothesis 2). In line with Hypothesis 1, four distinctive CP trajectories were identified through

semi-parametric group-based modeling analyses: *low with slight decline* participation (56.9%), *moderate sustained* participation (25.1%), *high with steep decline* participation (12.5%) and *high sustained* participation (5.5%). These findings are both supportive of the RDS perspective stating that human developmental processes are non-ergodic (Lerner et al., 2014) and consistent with Finlay et al. (2011) and Johnson et al.'s (2014) results pointing out the heterogeneous nature of civic development during the transition into adulthood. Not all youth display the same baseline levels of CP at age 18 nor exhibit identical patterns of participation with increasing age. Consistent with previous works on life cycle trends in civic engagement, CP patterns were declining for most youths among our sample (69.4%) although the decline was slight for the majority of them (56.9% of the sample being assigned to the *low with slight decline* trajectory-group). Nonetheless, as previously shown in recent empirical works and consistent with our expectations, an appreciable number of youths (30.6%) did maintain consistent CP patterns over time.

In line with Hypothesis 2, with PYD (Lerner, 2004) and developmental task (Roisman et al., 2004) theories as well as with previous empirical findings (Fredricks & Eccles, 2006; Johnson et al., 2014; Lemmon & Wayne, 2015; Marzana et al., 2013; McIntosh & Munoz, 2009; Obradovic & Masten, 2007; Omoto et al., 2010; Syvertsen, Wray-Lake & Flanagan, 2011; Viau & Poulin, 2015), participants exhibiting higher academic performance, civic attitudes, altruistic orientation, prosocial/community-oriented activity involvement and academic/vocational activity involvement in late adolescence were more likely to be assigned to higher and/or sustained CP trajectories during the transition into adulthood. Specifically, (1) youth displaying both lower CP baseline levels and decline in CP over time (*low with slight decline* trajectory-group) exhibited lower civic attitudes, altruistic orientation, academic performance and academic/vocational activity involvement than youths assigned to higher and/or sustained trajectory-groups, (2) youths displaying higher CP baseline at age 18 (both

high with steep decline and *high sustained* trajectory-groups) exhibited lower academic performance compared to youths assigned to the *moderate sustained* trajectory-group as well as lower academic/vocational activity involvement than youths assigned to the *higher sustained* PC trajectory group and (3) among youths assigned to sustained CP trajectory-groups (both *moderate sustained* and *high sustained*), youths assigned to the *high sustained* trajectory-group exhibited higher involvement in academic/vocational activity than youths assigned to the *moderate sustained* trajectory-group. These results are supportive of the PYD approach (Lerner, 2004) in revealing that strong character (civic attitudes), higher caring (altruistic orientation), academic competence (academic performance and academic/vocational activity involvement) and positive connections (within the context of prosocial/community-oriented and academic/vocational activity involvement) are indeed predictive of higher baseline levels and/or sustained society contributions (CP) during the transition into adulthood. They are also consistent with Roisman et al.'s (2004) developmental task theory given that youths exhibiting greater competence in the academic, social and moral domains (considered as adolescent-salient developmental tasks) in late adolescence were more likely to display higher CP baseline levels or sustained CP levels when transitioning into adulthood.

However, not all results were in line with previous findings nor consistent with our second hypothesis. First off, while youths assigned to the *high sustained* CP trajectory-group displayed higher academic/vocational activity involvement than youths assigned to other trajectory-groups, they exhibited lower academic performance in late adolescence than youths assigned to the *moderate sustained* CP trajectory-group (see Table 4). This last result differed from Obradovic and Masten's (2007) findings according to which youth academic competence was predictive of greater civic engagement. Further research pointed out similar results in Voight and Torney-Purta (2013). Among their sample, youths displaying attitudinal forms of civic engagement reported higher academic performance than youths who were both attitudinally and

behaviorally engaged. These findings remind us that, although correlated, involvement in the school community through academic/vocational activities and academic commitment to school performance are conceptualized as distinctive dimensions of school engagement (Appleton, Christenson & Furlong, 2008) and may, therefore, promote different outcomes. Youths engaged in academic/vocational clubs such as student committee, science clubs or youth enterprises may be more focused on collective enhancement and gain more opportunities for developing civic skills within these clubs while youths exhibiting higher academic performance may be more likely to focus on individual knowledge enhancement and acquire higher cognitive learning strategies instead. If so, one may be tempted to add-on Roisman and Masten's (2004) perspective on successful developmental processes by specifying that above previous age-salient developmental tasks achievement (such as academic, social, health and moral competence in adolescence) being predictive of subsequent age-salient developmental task achievement (such as CP in early adulthood), the more intertwined previous and subsequent the developmental tasks targeted (e.g., prosocial and/or academic organized activity involvement, civic/altruistic attitudes formation in adolescence and CP in early adulthood), the more successful achievement of the previous developmental task is likely to exert an influence on the subsequent developmental task.

Among other unanticipated results and in contrast with previous findings (Fredricks & Eccles, 2006; McIntosh & Munoz, 2009; Obradovic & Masten, 2007; Viau & Poulin, 2015), it was revealed that higher engagement in prosocial/community-oriented activity involvement during late adolescence was not a predictor of *high sustained* CP trajectory assignment although prosocial/community-oriented activity involvement means were high for the *high sustained* CP trajectory-group which may have to do with a lack of statistical power as the *high sustained* CP trajectory-group was very small.

It was only found that youths displaying higher prosocial/community-oriented activity involvement in late adolescence were more likely to be assigned to the *high with steep decline* CP trajectory compared to the *moderate sustained* CP trajectory-group.

Among plausible hypotheses, considering that parents' influence remain substantial during the adolescent years (Steinberg, 2001) and that many youths are partly socialized into civic life within the family context (Cicognani et al., 2012; McIntosh, Hart & Youniss, 2007; Pancer et al., 2007; Quaranta & Dotti Sani, 2016), youths displaying higher involvement in prosocial/community-oriented activities during late adolescence may have been implicitly or explicitly encouraged or even pressured by parents/family to engage in such activities during high-school. When these youths transitioned into adulthood, the normative decrease in parental control and monitoring (Keijsers & Poulin, 2013; Masche, 2010) following emerging adulthood's individuation and autonomization processes (Cooper, Grotevant & Condon, 1983; Erikson, 1950; Koepke & Denissen, 2012) may have resulted in a decline in CP for those who did not develop intrinsic motivation toward civic involvement. It may also be that some of these youths displaying early (adolescent) involvement in prosocial/community-oriented activities experienced unsuccessful prosocial/community-based initiatives due to lack of resources, lack of support from leaders or responsible figures, poor planning from organizations, etc. which could in turn have resulted in increased cynicism as well as in decline in institutional trust and in desire to get further involved over time (Jennings & Stoker, 2004). Nonetheless, as previously mentioned, both of these hypotheses are highly speculative and should be empirically tested.

Other unexpected results relate to the finding that psychological adjustment, social competence, sports involvement and parent-child communication in late adolescence were not predictive of youths' CP trajectory-group membership when transitioning into

adulthood. Specifically, psychological adjustment, social competence and sports involvement were ruled out when performing univariate multinomial logistic regressions while parent-child communication was dismissed with the testing of the final multivariate regression model. These findings differ from previous studies' results identifying social competence (Obradovic & Masten, 2007) and parent-child communication (Smetana & Metzger, 2005; van Goethem, van Hoof, van Aken, de Castro & Raajmakers, 2014) as predictors of greater civic participation. Among our sample, mean scores for both psychological adjustment and social competence did not fluctuate that much from one trajectory-group to another as indicated in Table 4. Regarding psychological adjustment at first, our results are suggesting that focus on self enhancement and health (purposely resulting in greater psychological adjustment and health competence) and focus on collective health and enhancement (purposely resulting in greater civic contributions) are not so obviously related. Second, although both previous models (Roisman et al., 2004; Lerner, 2004) contend that higher social competence promotes greater prospective civic contributions in early adulthood years, our results suggest that it might not be the case for all youths. For some youths who are not that socially competent in the first place, CP could be the means to get involved with others and to develop greater relational skills. However, one must not be to prompt in interpreting these findings as there is very little variability in our global sample regarding psychological adjustment and social competence. There may also be measurement issues as our measures differed from those used previous studies establishing an association between psychological adjustment, social competence and CP (Larson et al., 2006; Obradovic & Masten, 2007; Rietschlin, 1998).

Our data also revealed that unlike youths' prosocial/community-oriented and academic/vocational activity involvement in late adolescence, youths' sports involvement was not predictive of different trajectory-group membership. Similar results were obtained in previous studies (Viau & Poulin, 2015; Fredricks & Eccles,

2006) and it has been suggested that sports offer fewer opportunities for civic development than prosocial/community-oriented and academic/vocational activities in that their focus is mainly on performance (whether individual or at a group level) rather than on leadership, prosocial and relational experiences (Fredricks & Eccles, 2006). Finally, although parent-child communication differed from one trajectory-group to another in univariate preliminary analyses, the relative contribution of this sole family predictor was dismissed when running the final multivariate model. While, this last finding appears to suggest that parent-child communication in late adolescence may not be such a strong predictor of youths' prospective CP patterns, it is worth noting that the sole dimension of parent-child communication that was considered in the current study is the *frequency* of communication - which may not be the most relevant dimension. As such, future studies should examine how other dimensions of parent-child communication such as warmth, reciprocity, openness, content and overall quality may impact young adult's civic development (Chaffee, McLeod & Wackman, 1973; Smetana & Metzger, 2005; van Goethem et al., 2014).

3.4.1 Limitations and future research directions

Future research should attempt to replicate these results with a larger sample size. Furthermore, given that our sample is quite homogeneous with most participants being European American and French-speaking, the findings may not be generalizable to more diverse groups of youths transitioning into adulthood. Testing whether the same CP trajectories hold across socioeconomic status, ethnicity, geographic areas, political context, social and cultural norms towards civic engagement, opportunities for youth to get involved in civic organizations and the very content of civic initiatives, are important next steps to building civic developmental theory that is inclusive across groups. Another important drawback in the current study is the inability to

comprehensively measure CP itself. The items taping CP were more politically focused vs community service oriented and several key civic behaviors such as donating money, being involved in socio-cultural committees or even voting were not measured in our study. Thus, the global CP indicator used in the current study may not represent the full spectrum of ways young adults engage in civic affairs. Therefore, the high prevalence of consistently unengaged youth in our sample (56.9%) should be interpreted with caution as CP could be underestimated overall.

It is also worth noting that several well known early predictors of emerging adults' CP such as parents' own CP (Cicognani, Zani, Fournier, Gavray, & Born, 2012), connection and shared activities with parents (Duke, Skay, Pettingell & Borowsky, 2009), peers' own CP (van Goethem et al., 2014), peer values (Jahromi, Crocetti, & Buchanan, 2012), peer prosocial orientation (Zaff, Malanchuk & Eccles, 2008), democratic school climate (Lenzi, Vieno, Perkins, Santinello, Elgar, Morgan & Mazzardis, 2012) and educational aspirations (Syvertsen et al., 2011) were not examined in the current study. Additional analyses encompassing a wider range of family, school and community-level variables could better target the processes taking place in adolescence that contribute in shaping emerging adults' civic trajectories. Furthermore, the impacts of educational, work and social contexts in which our participants evolved from age 18 to age 22 on CP as well as the effect of potential changes in civic attitudes and altruistic values over time were not considered in the current study. Prospective works should also examine whether concurrent changes in these areas impact young adults' civic trajectories to a greater extent than early (adolescent) attributes as previous studies have shown that young adults' educational/work transitions as well as changes in political values do influence youths' concurrent and prospective civic involvement patterns (Finlay et al., 2011; Finlay, Wray-Lake, Warren & Maggs, 2015; Johnson et al., 2014).

Also, we were unable to include socioeconomic status as a covariate in our model given the amount of missing data (about 40%) and the lack of sensitivity of our indicators but future studies should take its relative contribution into consideration since several findings show that socioeconomic status is a strong predictor of CP in late adolescence and early adulthood (Atkins & Hart, 2003; Lenzi et al., 2012). Finally, now that frequency of CP has been examined in isolation, other dimensions such as breadth and intensity (leadership roles vs more passive forms of involvement; Johnson et al., 2014) should be investigated individually through semi-parametric developmental trajectory analyses (Jones et al., 2001) or simultaneously through joint trajectory analyses (Nagin & Tremblay, 2001). A combination of latent profile and latent transition analyses as in Finlay et al. (2011) and Johnson et al. (2014) could also be performed using more data points.

3.4.2 Contribution and practical implications

Despite its limitations, our study offers substantial insights to civic developmental theory, programs and public policies. Examining civic involvement from a person-oriented perspective allowed us to both appreciate and describe the differential CP longitudinal patterns exhibited by Canadian youth and to identify individual and contextual predictors of higher and/or sustained CP trajectories - which is an important step given (1) the dearth of developmental research on CP outside Europe and United States, (2) the alleged decline in CP during the transition into adulthood (Jennings & Stoker, 2004; Finlay et al., 2011), (3) the extensive benefits of CP in early adulthood on both individual and society (see Pancer, 2015), namely in nurturing further involvement in midlife and providing societal continuity (Buchman & Kriesi, 2011; Flanagan, 2004; Jennings & Stoker, 2004). Furthermore, increased knowledge of adolescent youth and context attributes that foster higher and sustained CP trajectories

(i.e., long-term contribution patterns) when transitioning into adulthood holds meaningful implications for civic engagement promotion and programming. Designing early promotion tools and interventions may contribute a great deal to CP enhancement among young adults' upcoming cohorts given that integrated civic and moral identity is prototypically rooted in adolescence (Lerner, 2004; Obradovic & Masten, 2007). Early interventions set in high-school may also enable practitioners to reach more youths.

Specifically, our findings support previous recommendations for (1) increasing adolescent opportunities to get involved in prosocial/community-oriented and (especially) academic/vocational activities, (2) promoting academic commitment in high-school although the emphasis should be mainly on involvement in academic/vocational activities and bonding with the school community rather than on academic performance and (3) further developing and disseminating diversified initiatives aimed at fostering civic and altruistic attitudes formation such as home-based approaches targeting civic development (Andolina, Jenkins, Zukin & Keeter, 2003; Stolle & Cruz, 2005), peer group socialization (Stolle & Hooghe, 2004; Zaff et al., 2008) and curricular and co-curricular programs (Bringle, Studer, Wilson, Clayton & Steinberg, 2011; Celio, Durlak & Dymnicki, 2011).

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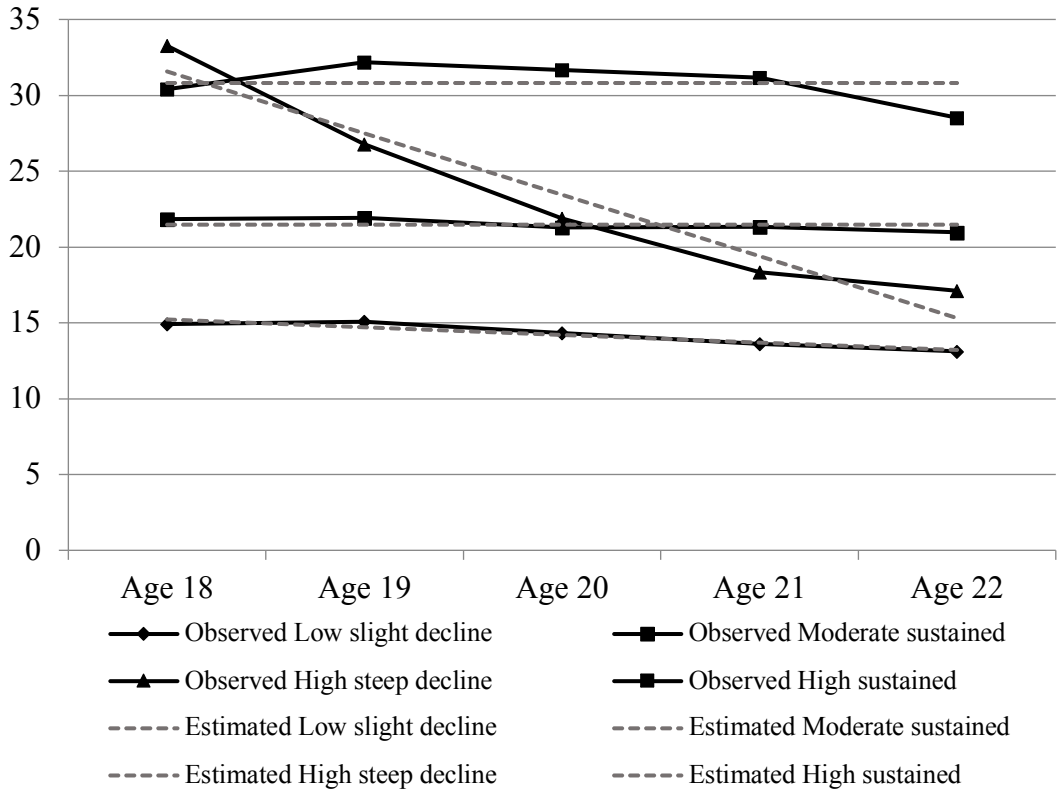

Figure 3.1 FIGURE 1. Observed and estimated parameters for civic participation trajectories

Tableau 3.1 TABLE 1. Descriptives and pearson's product-moment correlations for civic participation

Civic Participation	Age 18	Age 19	Age 20	Age 21	*N*	*M*	*SD*
Age 18	-				305	19.98	8.28
Age 19	.57	-			319	19.35	7.27
Age 20	.54	.54	-		300	18.19	6.78
Age 21	.49	.54	.66	-	303	17.29	6.34
Age 22	.47	.61	.63	.78	295	16.63	5.81

Tableau 3.2 TABLE 2. Choosing a trajectory model based on the BIC and the AIC

Number of groups	BIC (n = 327)	AIC
2	-4778.02	-4766.65
3	-4724.31	-4707.26
4	-4697.58	-4674.84
5	-4695.22	-4671.79

Tableau 3.3 TABLE 3. Parameter estimates and standard errors of civic participation trajectories

Parameters	Trajectories			
	Low slight decline	Moderate sustained	High Steep decline	High sustained
Intercept	20.780[c]	21.467[c]	76.308[c]	30.814[c]
	(1.519)	(0.482)	(4.781)	(0.779)
Linear change	-5.051[c]	---	-40.669[c]	---
	(1.160)		(3.710)	
Quadratic change	---	---	---	---

Note. [c] $p < .001$.

Tableau 3.4 TABLE 4. Predictor variables mean scores for each civic participation trajectory-group

Predictor variables	Low slight decline *M* (SD)	Moderate sustained *M* (SD)	High steep decline *M* (SD)	High sustained *M* (SD)
Academic performance	66.47 (9.67)	71.07 (8.58)	68.21 (8.42)	66.97 (13.97)
Psychological adjustment	3.27 (.58)	3.37 (.57)	3.27 (.62)	3.33 (.69)
Social competence	3.30 (.52)	3.21 (.56)	3.32 (.50)	3.27 (.50)
Civic attitudes	2.60 (.93)	3.15 (.81)	3.47 (.91)	3.51 (.75)
Altruistic orientation	2.99 (.75)	3.44 (.68)	3.59 (.82)	3.63 (.61)
Parent-child communication	2.67 (.80)	3.05 (.92)	3.15 (.86)	3.05 (.96)
Sports involvement	50.41 (43.45)	43.16 (50.44)	69.11 (73.82)	35.94 (36.78)
Prosocial/community-oriented activity involvement	25.46 (72.11)	29.38 (56.23)	64.06 (78.60)	52.71 (68.75)
Academic/vocational activity involvement	5.53 (26.67)	2.00 (10.44)	3.43 (10.46)	22.99 (28.30)

Tableau 3.5 TABLE 5. Multinomial logistic regression predicting civic participation trajectory membership probabilities

	Group Comparisons					
	Low slight decline vs			*Moderate sustained vs*		*High steep decline vs*
	Moderate sustained	*High steep decline*	*High sustained*	*High steep decline*	*High sustained*	*High sustained*
Predictor variables	OR (CI)	OR (CI)	OR (CI)	OR (CI)	OR (CI)	OR (CI)
Gender	.676 (.358-1.278)	1.213 (.495-2.972)	.322 (.094-1.103)	1.794 (.717-4.488)	.477 (.138-1.647)	.266 (.070-1.014)
Academic performance	**1.047**[a] (1.010-1.085)	1.000 (.957-1.046)	.980 (.928-1.055)	**.955**[a] (.913-1.000)	.945 (.889-1.006)	.990 (.926-1.057)
Civic attitudes	**1.203**[c] (1.102-1.314)	**1.244**[c] (1.112-1.392)	**1.317**[c] (1.121-1.548	1.034 (.924-1.158)	1.095 (.936-1.280)	1.059 (.893-1.255)
Altruistic orientation	**1.108**[a] (1.006-1.220)	**1.193**[b] (1.048-1.358)	**1.242**[a] (1.042-1.481)	1.076 (.945-1.226)	1.121 (.938-1.340)	1.042 (.860-1.262)
Parent-child communication	1.439 (.983-2.108)	1.493 (.926-2.407)	1.320 (.629-2.771)	1.037 (.638-1.685)	.917 (.424-1.982)	.884 (.413-1.893)
Prosocial/community-oriented activity involvement	.999 (.994-1.004)	**1.006**[a] (1.001-1.010)	1.003 (.995-1.010)	**1.006**[a] (1.001-1.012)	1.003 (.995-1.012)	.997 (.990-1.005)
Academic/vocational activity involvement	.975 (.949-1.002)	.980 (.956-1.006)	**1.018**[a] (.995-1.032)	1.005 (.973-1.039)	**1.034**[a] (1.005-1.064)	**1.029**[a] (1.001-1.057)

Note. OR = odds ratio; CI = confidence intervals
~ [a] $p < .05$; [b] $p < .01$; [c] $p < .001$