



Benefits and Challenges of Overparenting within an Emerging Youth Sport: Parental Spending, Volunteering, and Competitive Longevity in Competition Climbing

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Abstract

Across contexts, an emerging concern for professionals charged with facilitating youth programs relates to the increased influence of overparenting on the activities and services they provide. However, few studies have examined the influence of overparenting in adolescent samples and out-of-school time contexts such as sports, nor have they examined potential benefits of overparenting. The present study examined the potential benefits and consequences associated with overparenting relating to developmental outcomes, parental volunteering, spending, and youth athlete years of participation within an emerging Olympic sport, competition climbing. Through a structural equation model, the influence of overparenting on sport spending, years of volunteering for climbing, observed socioemotional development, and child's years of participation was examined in a sample of 329 parents of youth competition climbers. Counter to the proposed study hypotheses, overparenting had no effect on parental sport spending, years of child participation in competition climbing, observed socioemotional development, or years of parental volunteering. The findings were consistent with some previous research examining excessive and overinvolved parenting, albeit in a younger non-academically focused sample, where overparenting was not as influential as hypothesized. However, this study provides additional context for our understanding of overparenting during earlier phases of development than emerging adulthood.

Keywords Overparenting · Helicopter parenting · Competition climbing · Youth sport · Indoor climbing

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1 Introduction

Across contexts, an emerging concern for recreation and leisure professionals charged with facilitating youth programs relates to the increased influence of overparenting (i.e., helicopter parenting) on the activities and services they provide (Garst and Gagnon 2015; Wallace et al. 2015). While evidence of the potential impacts of overparenting for emerging adults within university settings is rapidly developing (Padilla-Walker and Nelson 2012; Moilanen and Manuel 2019), it is likely overparenting and the consequences therein manifest at earlier phases in a child's life (LeMoyné and Buchanan 2011; Locke et al. 2016). Indeed, the relatively scant research examining overparenting within these earlier stages of development suggests the influences of overparenting occur in early elementary school, middle school, and high school aged groups, both within and out of academic settings (Hong et al. 2015; Gagnon and Garst 2019a).

Similarly, with increasingly necessary expectations for youth to succeed at “elite” levels both within and out of school to gain entry into college, there is evidence of escalating parental pressure on youth to perform at a high level (Dunn et al. 2016; Knight et al. 2016; Mirehie et al. 2019), potentially cultivating an environment conducive to overparenting behaviors (Hong et al. 2015). The negative consequences of overparenting are somewhat evident within academic contexts serving youth (Locke et al. 2016), but are less well known in out-of-school-time (OST) contexts such as sports and summer camps (Gagnon and Garst 2019a; Garst et al. 2019).

Put differently, there is a somewhat established link between escalating levels of overparenting, negative outcomes for overparented children, and increasing levels of pressure for youth serving programs and organizations. Despite these possible links, relatively little research has been conducted on the potential (albeit unintended) benefits of overparenting for these organizations (e.g., greater rates of sport specific spending, sustained commitment to child sport, higher rates of parental involvement/volunteering for sport). Indeed, if it the case that overparenting results in greater levels of sustained parental investment of time and financial resources for a sport, it may reflect an “upside” of overparenting among the other established negative consequences of overparenting. As such, the present study examines both the potential benefits and consequences associated with overparenting relating to parental observed youth socioemotional development, parental volunteering and spending for their child's sport, as well as years of participation among youth within an emerging Olympic youth sport, indoor competition climbing.

2 Overparenting

While a consistent measure of overparenting remains elusive across the broader sphere of research in this area (Segrin et al. 2012; Schiffrin et al. 2019), there seems to be definitional agreement on the overparenting construct. Frequently used interchangeably with “helicopter parenting” and “bulldozer parenting” in the extant literature, *overparenting* represents a group of typically appropriate parental behaviors taken to an excessive degree, often to the detriment of the child's socioemotional development (Schiffrin et al. 2014; Hong et al. 2015; Burke et al. 2018). More precisely, normative parental behaviors such as problem-solving, decision making, monitoring, risk

avoidance, and support are generally associated with positive outcomes for a child, when provisioned at developmentally appropriate levels by parents. These outcomes include increased resilience to adverse life events, greater levels of independence, and higher rates of self-confidence (Bean et al. 2003; Lamb and Lewis 2015).

Conversely, the absence of these same parental behaviors can increase rates of maladaptive child outcomes and behaviors including poor emotional adjustment, aggression, and anxiety (Milevsky et al. 2007; McDermott-Panetta et al. 2014). However, when these same behaviors shift to the excessiveness reflected in overparenting, they can increase rates of child depression, anxiety, and academic entitlement (Cui et al. 2019c; Fletcher et al. 2020). Further, overparenting behaviors are also associated with poorer rates of academic performance, perceived autonomy, independence, self-efficacy, self-esteem, communication quality, and goal setting behaviors within emerging adult and adolescent cohorts (Padilla-Walker and Nelson 2012; Hong et al. 2015; Jung et al. 2019; Liu et al. 2019). In effect, normative parenting illustrates the “goldilocks zone” of desired parental behaviors, where there is neither too little or too much of a particular parent behavior, while overparenting reflects “porridge that is too hot”, where excessive parental behaviors potentially stifle a child’s socioemotional development (Bezdek et al. 2010; Segrin et al. 2012; Jung et al. 2019).

2.1 Overparenting and Socioemotional Skills

Framed with the lens of self-determination theory, the excessive behaviors reflected in overparenting could stifle the development of the necessary socioemotional skills for youth to achieve both short- and long-term developmental milestones (Ryan and Deci 2000; Deci and Ryan 2008; Schiffrin et al. 2014). For instance, overparenting is associated with parents solving problems on behalf of their child, rather than the parent(s) allowing the child to solve and/or overcome the problem themselves (Segrin et al. 2015; Jung et al. 2019). The low levels of autonomy supportive behaviors associated with overparenting can undermine a child’s development and success across an array of domains when independence is necessary for the child to function and/or when the parent is unable to intervene (Deci and Ryan 2008; Kunz and Grych 2013; Chen et al. 2015). Taken together with the escalating academic and extracurricular pressures on children to demonstrate near perfection in order to attend increasingly selective universities, these settings represent contexts seemingly ripe for overparenting (Quach et al. 2015; Lee et al. 2020). Moreover, with increasingly necessary levels of specialization at progressively early phases of development, youth sport may reflect a context where overparenting behaviors manifest and influence the outcomes associated with youth participation (Merkel 2013; Garst et al. 2019).

3 Overparenting and Youth Sport

Research examining overparenting within youth sport contexts does not appear explicitly within the extant literature; however, there are several studies exploring behaviors commonly associated with overparenting, including disproportionately high levels of parental monitoring, control, problem-solving, support, encouragement, and limit setting (Wiersma and Sherman 2005; Wiersma and Fifer 2008; Holt et al. 2009; Wheeler

and Green 2014; Harwood and Knight 2015; Knight et al. 2017), behaviors that when at excessive levels resemble overparenting (Padilla-Walker and Nelson 2012; Segrin et al. 2012). Indeed, in response to the overt problems posed by the behaviors of some sport parents, codes of conduct and intensive sport official/coach training have been established to mitigate or prevent excessive parental interference and corresponding adverse outcomes within youth sports (Wiersma and Sherman 2005).

Despite the increasing normativity of these trainings and corresponding cultural shift away from permitting maladaptive parent behaviors within youth sport, rates of excessive and overprotective parental behaviors continue to rise. For instance, in an exploration of parent involvement in college athletes, Parietti et al. (2017) demonstrated how academic advisors of college athletes observed increasing levels of overinvolved parent behaviors (i.e., helicopter parenting, bulldozer parenting). The authors revealed that parents were excessively involved in day to day educational and sport activities of their children, which potentially stifled their development as emerging adults and created additional stress for the staff and coaches working with these athletes. Similarly, in an exploration of parenting behaviors in youth sport, Harwood and Knight (2009) indicated parents often were overly critical, felt coaches were underqualified to manage their child, and were quick to point to perceptions that both coaches and referees were unprofessional, despite the elite level of competition their child was engaged in. Harwood and Knight further illustrated that regardless of the known rules and norms preventing interference with coaching and officials at competitions, parents frequently described how they felt it necessary to intervene on their child's behalf even for relatively small problems (e.g., missed fouls, lack of playing time). These parental behaviors may reflect the excessive problem-solving element within overparenting research, where parents anticipate and/or solve problems on behalf of their child to avoid real or perceived harm from a person or context, stifling the situations where a child can develop resilience and coping mechanisms to manage stressful situations where their parent is unable to intervene (Padilla-Walker and Nelson 2012; Segrin et al. 2013; Hong et al. 2015; Kouros et al. 2017; Gagnon et al. 2020).

3.1 Potential Benefits of Overparenting

While the negative consequences of overparenting or overparenting-like behaviors across contexts are becoming increasingly well understood, there may also be some unrealized benefits of overparenting (Earle and LaBrie 2016). For example, within the context of escalating youth sport specialization among progressively younger athletes, parents tend to report greater levels of financial expenditures and involvement to sustain their child's participation and competitive success (Wiersma and Fifer 2008; DiSanti and Erickson 2019). Furthermore, as noted by both Dorsch et al. (2009) and Green and Chalip (1997), parents also tend to become more financially, socially, and emotionally committed as their involvement increases within a child's sport. Put differently, when parents demonstrate the excessive, yet well-intended behaviors often reflected in overparenting, these same behaviors may lead to greater levels of financial investment in the form of specialized coaching, equipment, and travel to avoid their child from being at a disadvantage (Gould et al. 2006). Indeed, while not explicitly linked in the extant literature, the well-intended but excessive behaviors reflected in

overparenting may be a factor contributing to the ever-growing elite youth sport industry, where parents feel pressured to *invest* in their child to ensure their later in life success, whether it be an athletic scholarship or another box checked on their child's college application (Bowers and Green 2013; DiSanti and Erickson 2019). In other words, for those with financial interests in youth sport, parents who overparent may offer a potential business opportunity.

3.2 Consequences of Overparenting in Youth Sport

Perhaps unsurprisingly, increased parental investment of time and resources often leads to additional pressure on children to perform and succeed competitively, thereby demonstrating a return on their parent's investment (Wolfenden and Holt 2005; Thrower et al. 2016; Wendling et al. 2018). In an exploration of parental involvement within competitive youth sport, Holt, Tamminen, Black, Sehn, and Wall (2008) suggested the resulting excessive and controlling parenting behaviors were associated with greater rates of negative outcomes for youth athletes. For example, Wolfenden and Holt (2005) illustrated parental over-involvement was detrimental to a child's performance within a sport, both in terms of competitive success and their personal enjoyment of the sport. Further, when parents of youth athletes support and encourage their child at normative levels, youth tend to report greater levels of motivation, competence, and participate in sport for longer periods of time (Ullrich-French and Smith 2006, 2009). However, when these same well-intended parental behaviors shift to excessive levels, these behaviors are frequently associated with negative outcomes for youth athletes (Holt et al. 2009). Gould et al. (2006) demonstrated how a significant minority of parents may harm youth athlete development through overbearing and excessive behaviors aimed at athletes, officials, and coaches. Parallel exploration conducted by Dunn et al. (2016) indicates greater rates of perceived parental pressure are negatively related to rates of child enjoyment of sport. A similar pattern of negative outcomes is illustrated within overparenting research, where escalating levels of overparenting are associated with reductions in autonomy, self-efficacy, social acceptance, and increases in psychological entitlement among emerging adults (Cui et al. 2019a; Rousseau and Scharf 2015).

3.3 Parents as Youth Sport Volunteers

Beyond the financial investment associated with youth sport, there also may be associations between parental investment of time as a volunteer for their child's sport, parental behaviors, and favorable youth outcomes. Importantly, across youth sport contexts, the vast majority of volunteers are parents of youth athletes. For example, in a study of youth sport coaches, Busser and Carruthers (2010) noted among entry level sport coaches, nearly 90% were parents of youth athletes on the teams they were coaching, reflecting similar numbers as those demonstrated among officials and volunteers in other roles in research by both Kim et al. (2010a, b) and Kim (2018). This formal involvement of parents within sport as a coach, judge, or manager has been linked to increasing positive developmental outcomes for youth athletes (Leberman and LaVoi 2011; Graham et al. 2016). Put differently, when parents are engaged at appropriate levels as volunteers, children tend to benefit both socioemotionally and

competitively (Wuerth et al. 2004; Sapieja et al. 2011). Conversely, when these same parental behaviors transition to excessive levels, they may mirror the consequences of overparenting. For instance, Dorsch et al. (2009) suggested one factor motivating parental volunteering for a child's sport is to engage in increasing levels of limit-setting, a behavior often associated with overparenting (Padilla-Walker and Nelson 2012; Kwon et al. 2017).

4 Competition Climbing as Youth Sport

While *mainstream* sports (e.g., soccer, baseball, tennis, basketball) have received considerable research attention regarding optimal parental behaviors and youth outcomes (Holt et al. 2009; Knight et al. 2017), less attention has been paid to *alternative* or *lifestyle sports* (e.g., surfing, skate boarding) (Wheaton 2010; Garst et al. 2019). Given the sharp uptick in youth participation in alternative sports and corresponding declines in many mainstream sports, there is relatively little research exploring how parents influence these alternative experiences (Kellet and Russell 2009; Gilchrist and Wheaton 2017; Garst et al. 2019). One alternative sport, competition climbing, has rapidly expanded in both youth participation numbers and achieved formal recognition as a medaled Olympic sport (Climbing Business Journal 2018; Garst et al. 2019).

Competition climbing mirrors many mainstream youth sports with escalating levels of specialization, heavy reliance on parental volunteers, international competition (e.g., local → regional → divisional → national → international), professionalization of coaching and facilities, and an increasing necessity of year-round competitive participation to ensure success, which may only increase with the *medaled* status in the upcoming Tokyo Olympic games (Myer et al. 2015; DiSanti and Erickson 2019). Competition climbing consists of three primary sub sports: (1) bouldering, (2) sport climbing, and (3) speed climbing (See also USA Climbing 2019). In *bouldering*, the un-roped climber starts on the ground on a course typically between three and five meters in height. The course (i.e., route) is generally designed by a route setter and consists of manufactured holds orientated in directions to force the climber towards a series of movements. Routes are designed with escalating levels of difficulty (e.g., steepness, orientation of holds). Within a bouldering competition setting, climbers compete with each other by climbing the same routes separately over a fixed time period and are judged on how much of a route was completed, the number of attempts to complete the route(s), how quickly a route was completed. In some instances where a route was not completed, climbers are judged on who made it the furthest up the wall.

In *sport climbing*, the climber is roped and also climbs a course designed by route setters, generally ranging between 9 and 21 m. As the sport climber proceeds up the wall, they clip their rope into anchor systems (i.e., quickdraws) to protect themselves from a fall in concert with a partner on the ground who is also connected to the rope system (i.e., belayer); the belayer will secure the climber in the instance of a fall and will lower them when they complete the climb. Similar to bouldering, climbers compete with each other by climbing the same routes separately and are judged on how much of a route was completed, how quickly a route was completed, and in some instances where a route was not completed, who made it the furthest up the wall. The

third sport, *speed climbing*, typically consists of a 10 or 15 m route that is universally designed across facilities; more specifically, the route, holds, wall grade/steepness, and climbing lanes are the same dimensions, similar to that of a basketball hoop (e.g., 10 ft., 3.048 m across most courts) being the same across facilities. Speed climbers are typically roped through an *auto belay* consisting of a mechanical system due to the speed of climbs. Speed climbers are judged on the time it took to complete a route versus their peers. The growth of competition climbing as a whole and across these sub sports has led to intensifying parental expectations and behaviors, necessitating trainings and management plans for parents of youth climbers to include those targeting the prevention of parental misconduct, mirroring those of more developed mainstream sports (Garst et al. 2016; USA Climbing 2019).

While evidence of the potential harm from overparenting continues to mount within emerging adult cohorts within university-based settings, there remains relatively little investigation within OST settings in earlier phases of a child's development. As such, the present study examines the potential benefits and consequences associated with overparenting relating to youth development, parental volunteering, spending, and years of participation within an emerging Olympic sport, indoor competition climbing. Specifically, the present study is guided by two groups of hypotheses (see also Fig. 1 for illustration of study hypotheses). First, the primary hypotheses are overparenting will have a positive direct effect on (H1A) parental youth sport spending, (H1B) parental volunteer status, (H1C) child years of participation in competition climbing, and will have a negative effect on (H1D) parental observed socioemotional growth (i.e., parental perceptions of developmental outcomes) of their children. Second, it is hypothesized that increasing rates of (H2A) parental youth sport spending, (H2B) child years of participation in competition climbing, and (H2C) parental volunteer status would have a positive direct effect on parental observed socioemotional growth.

5 Method

As part of a larger study examining the sport of indoor climbing, data were collected over a 45-day period in Winter 2016. Specifically, in partnership with

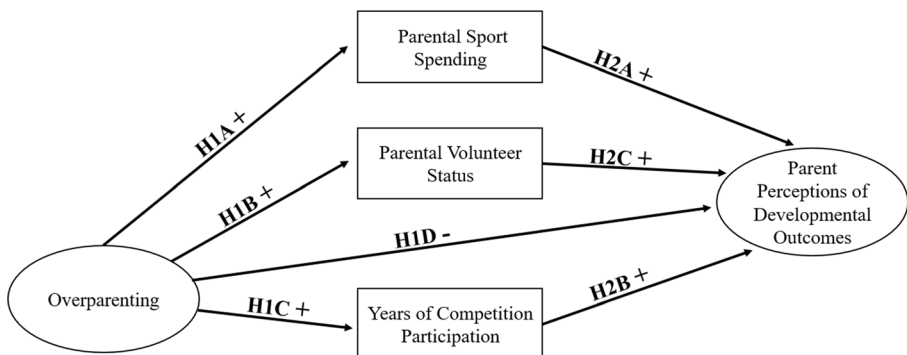


Fig. 1 Hypothesized structural model of the influences of overparenting on years of competition participation, parental volunteer status, parental spending, and developmental outcomes

USA Climbing, the national governing body for competition climbing in the United States, a web-based Qualtrics questionnaire was administered to understand motivations and behaviors of competition climbers and related stakeholders. The questionnaire was administered through a link provided through USA Climbing's Facebook page and member email list through three announcements over the 45-day time-period, through both the email list and Facebook page. To incentivize participation in the study, respondents were offered a drawing entry to win one of three climbing equipment packages valued at \$175.00 (USD) each. The combination of incentive and repeated announcements resulted in 6710 unique viewings of the email or Facebook post. Of those who viewed the questionnaire, 1463 opened the questionnaire link and 1171 completed more than 50% of the questions relating to their role within the climbing community, resulting in a 17.45% response rate to the overall questionnaire.

Respondents were asked to identify their primary role within the climbing community (e.g., competition climber, coach, judge, route setter, parent of youth competition climber age 8–17). Those respondents who identified as parents of competition climbers were then redirected to a specific set of questions designed to better understand their unique role within the climbing community. This process led to 344 respondents identifying as parents of youth competition climbers. After screening the data for outliers (described in more detail below), the final study sample was 329.

5.1 Participants

Parental respondents were primarily female (63.1%, $n = 207$) (Male, $n = 121$) and White (84.8%, $n = 278$), with the remaining sample identifying as Hispanic origin (4.6%, $n = 15$), Asian origin (4.6%, $n = 15$), multiple race (4.3%, $n = 14$), Pacific Islander (.9%, $n = 3$), East Asian (Indian or Arabic) (.6%, $n = 2$), or Native American (.3%, $n = 1$). The majority of respondents reported a bachelor's degree or higher (83.3%, $n = 274$) and high levels of household income, with an average of \$151,029.96 (USD) per year ($SD = \$83,769.10$). Parents reported an average of \$1181.95 ($SD = \225.59) spent annually on expenses related to climbing (i.e., a combination of competition fees, equipment, coaching, travel, lodging, and gym memberships). The partner organization shared concerns regarding youth athlete anonymity relating to potentially identifiable data. Specifically, some subgroups consisted of only one or two youth climbers, where their identity could be easily unmasked using this information. As such, data regarding child gender, age, and race were not available to the research team.

5.2 Measures

5.2.1 Child Years of Participation in Competition Climbing

To assess child's competitive longevity within competition climbing, parents were asked to report on the total number of years their child had participated in competition climbing. Parents reported an average of 3.29 years ($SD = 2.24$), with a range of one to 10 years.

5.2.2 Parental Volunteer Status

To assess parental volunteer status, parents were asked if they volunteered for competition climbing events (e.g., judge, coach, event management). Of the total sample, 203 (61.9%) indicated they volunteered for competition climbing, with the remainder ($n = 125$, 38.1%) indicating they did not volunteer for competition climbing. Parents who did volunteer reported an average of 2.83 years of volunteering ($SD = 2.21$), with a range of one to 10 years. For analyses utilizing the parental volunteer status variable, the no/yes response was dummy coded to shift the variable from a categorical format to a continuous format (0 = No; 1 = Yes).

5.2.3 Overparenting

Overparenting was assessed adapted from the measure of Gagnon and Garst (2019a) due to evidence of its suitability to OST settings and past psychometric validation through confirmatory factor analyses. Within the present study, the final overparenting factor exhibited an acceptable level of internal consistency ($\alpha = .83$) and was comprised of five-items (e.g., *If something doesn't work out for my child, I do what I can to fix it*) measured on a 1 (Strongly Disagree) to 7 (Strongly Agree) Likert style scale, with higher scores indicating higher levels of overparenting behaviors. Given the subscales demonstrated lack of predictive difference between paternal and maternal reports of overparenting (e.g., Gagnon and Garst 2019b), these reports were not measured separately in the present study.

5.2.4 Parental Perceptions of Developmental Outcomes

To assess socioemotional growth associated with their child's participation in the sport of competition climbing, an adapted version of the parental perceptions of developmental outcomes (PPDO) scale was utilized due to evidence of its suitability to OST settings and past psychometric validation through confirmatory factor analyses (Gagnon and Garst 2019c). The three factors within the present study exhibited acceptable levels of internal consistency: (1) responsibility (my child...*follows directions*; 3-items; $\alpha = .82$), (2) exploration (my child...*seeks challenges beyond their comfort zone*; 4-items; $\alpha = .86$), and (3) attitude (my child...*has a good mental attitude*; 4-items; $\alpha = .93$). Parents were asked to report observed growth in their child on a 1 (None) to 5 (Vast Improvement) Likert style scale across the three domains. The factors comprising the PPDO typically present with high levels of between-factor correlations, indicating evidence of a second-order factor structure (i.e., a common cause). Indeed, Gagnon and Garst (2019c) recommend modeling the PPDO as a second-order factor *reflecting* these first-order factors. As such, in the present study PPDO was modeled as a second-order factor, which demonstrated an acceptable level of internal consistency ($\alpha = .97$).

5.2.5 Parental Youth Sport Spending

To assess spending associated with their child's participation in competition climbing, parents reported their spending utilizing categories recommended by USA Climbing:

(1) climbing competition fees, (2) climbing equipment, (3) climbing coaching, (4) climbing gym memberships, (5) travel to climbing competitions, and (6) lodging for climbing competitions ranging from \$0, \$1–\$50, \$51–\$100, \$101–\$150, \$151–\$200, and \$200 and up. Responses to the six items were then converted to scale points (e.g., \$51–\$100 = 2...\$151–\$200 = 4) and summed to create a total sport spending variable for hypotheses testing.

5.3 Data Preparation and Analyses

Prior to analyses, the data were screened for multivariate outliers utilizing a combination of Mahalanobis distance and the chi-square distribution function ($p < .001$) in SPSS 27. This analysis identified 15 respondents as multivariate non-normal, which were removed from additional examination. Next, utilizing the Hawkins test in the MissMech package (version 1.0.2; Jamshidian and Jalal 2010), the data were screened for multivariate normality and homoscedasticity in RStudio (R version 4.0.0), which indicated the data were non-normal in their distribution ($p < .001$). To account for this non-normality, robust maximum likelihood (MLR) estimation techniques were utilized to further examine the data, tests of model fit, and for later hypotheses testing (i.e., Satorra-Bentler chi-square, $S/B\chi^2$; Huber-White standard errors) (Satorra and Bentler 1988; Bentler 2006). The data were then screened for systematic causes of missingness (i.e., Missing Completely at Random; MCAR) employing a robust non-parametric version of Little's (1988) test of MCAR in the MissMech R package (Jamshidian and Jalal 2010). The non-significant results of this analysis indicated the missing data were MCAR ($p = .187$); as such a full information maximum likelihood (FIML) technique was applied to proceeding analyses to simulate missing values (Enders 2010).

5.3.1 Model Testing Criteria

To test the study hypotheses, a structural equation model (SEM) was employed, preceded by a confirmatory factor analyses (CFA) to validate the psychometric properties of the latent measures (i.e., overparenting and the PPDO). Specifically, the Lavaan package (version 0.6–6) was implemented to test the SEM and CFA model fit (Rosseel 2012). Robust versions of the comparative fit indices (CFI) and Tucker Lewis Indices (N-NFI) were utilized, where levels closer to one (e.g., TLI $> .90$) indicate the proposed model is an improvement over the baseline model (Bandalos 2018). Similarly, the robust version of the root mean squared error of approximation (RMSEA) and its 90% confidence interval was employed to determine how close the proposed models were to a perfect fitting model, where levels closer to zero suggest good model fit (e.g., RMSEA $< .070$) (Kline 2016; Xia and Yang 2018). Importantly, the assessments of goodness of model fit were not solely defined by purely data driven and/or arbitrary cutoff criteria (e.g., CFI = .899 is unacceptable versus CFI = .901 is acceptable), rather they were also informed by prior studies utilizing the selected measures (See also see also Marsh et al. 2004; Brown 2015).

Beyond assessing model fit for both the SEM and CFA, an additional combination of criteria were utilized to determine the psychometric properties of the scales.

Specifically, factor loadings (λ) for each item within the scale(s) were assessed to determine the strength of relation between the item and latent factor, where loadings closer to one (e.g., $\lambda > .50$) suggest the item is sufficiently associated with selected factor (Brown 2015; Kline 2016). Additionally, the average variance extracted (AVE) statistic was utilized to assess unexplained variance, where levels above .50 indicate the factor is accounting for more variance than error (Fornell and Larcker 1981). Finally, the internal consistency of the latent factors within the measurement model was examined utilizing Cronbach's Alpha (α), where levels closer to one suggest stronger associations between items within their respective factors (Bandalos 2018). As with the preceding model fit indices, the assessment of the scale measurement properties were not based on purely data driven and/or arbitrary cutoff criteria, rather they were appraised in the setting of the present study contextualized on past study findings and/or recommendations utilizing similar measures.

5.3.2 Confirmatory Factor Analyses

Prior to hypotheses testing, the psychometric properties of the scales were examined for suitability for hypothesis testing through a CFA and supporting statistics. The results of the CFA suggested one-item from the overparenting factor (*I make important decisions for my child*) was harming overall model fit as evidenced by its poor factor loading ($\lambda = .403$). Inspection of the covariance matrices and modification indices to determine potential alternatives to revise the measurement model did not yield data- or theory-driven locations for the item to be respecified to (Bentler 2006; Byrne 2006). As such, the poor performing item was removed from the model. After removal of this item, the CFA indicated acceptable model fit: $S/B\chi^2(100) = 241.904$, $p < .001$, $TLI = .940$, $CFI = .950$, $RMSEA = .066$ (90%, CI .056 to .076). As demonstrated in Table 1, the subscales exhibited acceptable Cronbach's alpha levels ($\alpha = .82$ to .97) and AVE levels (AVE = .50 to .91). The scale also demonstrated preliminary evidence of discriminant validity, where the correlation between the second order PPDO factor and the overparenting factor was not excessively high ($r = .012$, $SE = .063$, $p = .850$).

6 Results

Given the acceptable measurement properties of the scale, the study hypotheses were tested through a structural equation model (SEM), which also indicated appropriate model fit: $S/B\chi^2(145) = 354.756$, $p < .001$, $TLI = .921$, $CFI = .933$, $RMSEA = .066$ (90%, CI .058 to .075). As illustrated in Fig. 2, we did not support H1A through H1D, where level of overparenting had no significant effect on parental youth sport spending (H1A; $\beta = -.065$, $SE = .249$, $p = .313$), parental volunteer status (H1B; $\beta = -.072$, $SE = .030$, $p = .241$), years of child participating in competition climbing (H1C; $\beta = -.088$, $SE = .137$, $p = .151$), or PPDO level (H1D; $\beta = .053$, $SE = .065$, $p = .370$). Similarly, we did not support H2C, where parental volunteer status had no effect on PPDO level (H2C; $\beta = -.068$, $SE = .123$, $p = .206$). However, as hypothesized, both parental youth sport spending (H2A; $\beta = .257$, $SE = .020$, $p < .001$) and years of child participation in

Table 1 Descriptive and confirmatory statistics

Factor/Item	<i>M</i> (SD)	λ	α	AVE
Overparenting			.83	.50
<i>I intervene in settling disputes with my child's classmates or friends.</i>	2.87 1.31	.67		
<i>I intervene in settling disputes with my child's teacher, coach, or youth program leader.</i>	3.45 1.46	.70		
<i>If something doesn't work out for my child, I do what I can to fix it.</i>	3.80 1.46	.76		
<i>When something goes wrong in my child's life, I jump in to take care of it.</i>	3.09 1.42	.82		
<i>When my child is engaged in an important task or project, I do some of it for them.</i>	2.60 1.34	.56		
PPDO**			.97	.91
<i>Responsibility</i>	– –	.98		
<i>Exploration</i>	– –	.99		
<i>Attitude</i>	– –	.89		
Responsibility*			.82	.60
<i>...takes care of his / her own things.</i>	3.04 1.08	.72		
<i>...shares work responsibilities.</i>	2.80 1.05	.81		
<i>...follows directions.</i>	3.28 1.04	.79		
Exploration*			.86	.61
<i>...participates in new learning experiences.</i>	3.33 0.97	.80		
<i>...is curious about new topics.</i>	3.17 1.01	.79		
<i>...seeks challenges beyond his / her comfort zone.</i>	3.71 0.97	.69		
<i>...tries to find answers to questions.</i>	3.14 1.05	.83		
Attitude*			.93	.77
<i>...has a good mental attitude.</i>	3.55 1.00	.82		
<i>...has a generally "positive" view on life.</i>	3.38 1.05	.90		
<i>...is more hopeful about the future.</i>	3.19 1.11	.89		
<i>...shows a positive attitude when around others.</i>	3.40 1.03	.90		

◊Means (*M*) are based upon observed values; λ : standardized coefficient (factor loading); AVE: Average Variance Extracted; α : Cronbach's alpha; **Parental Perceptions of Developmental Outcomes (PPDO) is a 2nd order factor comprised of three 1st order factors, treated as items (indicated by *)

competition climbing (H2B; $\beta = .339$, $SE = .030$, $p < .001$) had a positive direct influence on PPDO.

6.1 Exploratory Results

Given the dummy coded format of the parental volunteer status variable (i.e., 0 = non-volunteer, 1 = volunteer) two additional exploratory analyses were conducted utilizing parent number of years as a volunteer in its place. Paralleling the nonsignificant results of H1B, overparenting did not have a significant effect on number of years as a parental volunteer ($\beta = -.070$, $SE = .121$, $p = .272$). An additional post-hoc analysis examining the effect of parent number of years as a volunteer on PPDO level was conducted, similar to H2C, which also yielded a non-significant result ($\beta = -.037$, $SE = .207$, $p = .354$).

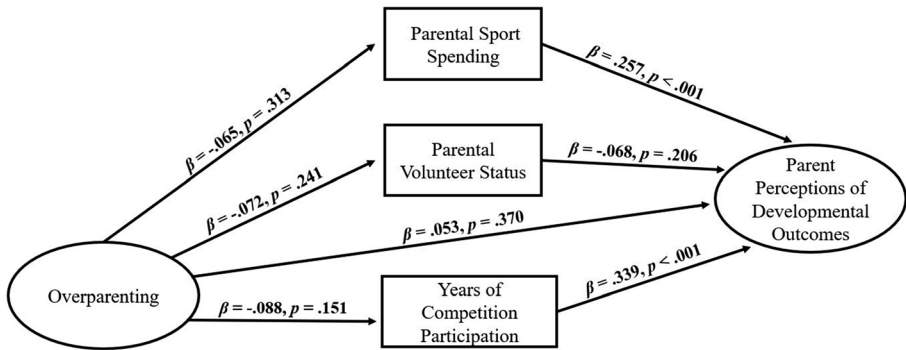


Fig. 2 Structural Model of Results. β indicates standardized regression coefficient; Circular shapes in figure represent latent factors; Squared shapes in figure represent observed items; Parental Volunteer Status is Dummy Coded, where zero indicates parent is not a volunteer for competition climbing and one indicates parent is a volunteer for competition climbing; Parent Perceptions of Developmental Outcomes is a second order factor reflecting three first order factors (not pictured): attitude, responsibility, and exploration; Individual items and error terms excluded for parsimony of presentation

7 Discussion

The present study examined the potential benefits and consequences associated with overparenting relating to socioemotional development, parental volunteering, spending, and youth athlete years of competition participation within an emerging Olympic sport, competition climbing. There was a lack of support for the primary hypotheses, where overparenting did not have any significant relation with parental youth sport spending (H1A), parental volunteer status (H1B), child years of competition participation (H1C), or PPDO (H1D). Despite evidence of increasingly excessive parental involvement and spending within youth sport (Disanti and Erickson 2019; Knight et al. 2017; LaPrade et al. 2016), overparenting did not have a measurable relation with parental sport spending in the present study. This lack of relation parallels some other research in this area, which has also demonstrated no direct relation between family financial investment in sport and perceived parental pressure to participate in sport, rates of child enjoyment of sport, or rates of child commitment to sport (Dunn et al. 2016). While there appeared to be sufficient variance within the spending variable to lead to differing effects as hypothesized, it also may be that in order to participate in competition climbing, there is simply a minimum amount of financial capital required for an athlete to participate (i.e., floor effects). Moreover, there may be other unmeasured resources which overparents expend at greater levels (e.g., vacation days). Indeed, what qualifies as spending within youth sport remains a difficult variable to effectively capture (Dunn et al. 2016; Fredricks and Eccles 2005).

An alternative explanation for the lack of relation between overparenting and sport spending is demonstrated by Dorsch et al. (2009). In their study, Dorsch et al. illustrated as parents increased their multifaceted sport investment/involvement, parents also became less emotionally reactive to adverse events facing their child during competition (e.g., missed/incorrect calls by a referee). The relation between lower rates of adverse parental behaviors and increasing levels of child participation suggests overparent-like behaviors may manifest at greater rates for parents who have not been socialized into a particular sport. This *deescalation* of excessive parental behaviors over

time may also explain the lack of relation between overparenting and child years of competition participation. Taken further, the lack of relation between parental volunteer status and overparenting may have a more practical explanation; parents do not begin volunteering for their child's sport until they have some experience with the sport, and the acculturation that occurs alongside this experience reduces the manifestation of overparenting behaviors.

If overparent like behaviors tend to emerge at the earlier phases of a child's athletic career, parental volunteer status should have had a positive relation with overparenting scores within the present study. It is also likely the lack of relation demonstrated in the present study is reflective of the coarseness of the volunteer measure (e.g., yes or no), which does not capture the potential depth and breadth of volunteering (Kim et al. 2010a, b). However, given the similar null effect indicated by the post-hoc analyses utilizing number of years in place of the dummy coded approach, the measurement issue may not be the reason for a lack of relation between overparenting and parental volunteering. Rather, beyond the relatively narrow confines of the present study, these non-significant findings do not necessarily suggest overparenting is or is not associated with volunteering for child sport. The lack of relation may illustrate a future investigative path, to determine if/how overparenting influences rates and frequencies of parental volunteering, but also how overparenting may influence parental advocacy for a child's individual and broader sport experience as suggested by Garst et al. (2019). Indeed, given the multiple volunteer roles available to parents of youth athletes, it may be the case that overparents tend to volunteer in specific roles, thus future researchers should consider not only duration of volunteering, but also the intensity, prestige, and range of volunteering parents may engage in.

Overparenting also did not have a statistically significant predictive effect on PPDO level. While some research has linked overparenting behaviors to negative developmental outcomes (Hong et al. 2015; Jung et al. 2019; LeMoyné and Buchanan 2011), others have also demonstrated low to non-significant associations between overparenting and outcomes such as school engagement, depression, and delinquency (Padilla-Walker et al. 2019). Within the present study, parents reported on their own parenting behaviors and their observations of developmental outcomes of their child. Some research suggests children may be more accurate reporters of parental behaviors as they are less influenced by social desirability to communicate acceptable parenting behaviors (e.g. social desirability; see also Gaylord et al. 2003). As such, an important future direction may be to include both the reports of children and their parents to determine if there are meaningful differences in reports of overparenting in these dyads/triads (e.g. Cui, Darling et al. 2019b). Alternatively, it is also possible within the context of competition climbing, overparenting neither harms or facilitates the development of the skills reflected in the PPDO. This lack of effect may be due in part to the organizational policies and culture of USA Climbing, stifling excessive and maladaptive parental behaviors and/or the structure of the sport itself, where parents are not as heavily involved in the development of their youth-athlete as compared to more mainstream sports (Garst et al. 2019).

Similar to the lack of relation between overparenting and perceived developmental outcomes (i.e., PPDO), parental volunteer status did not have an effect on PPDO scores. Conversely, parental spending did have a positive direct effect on PPDO scores. In effect, this finding may suggest, within the confines of the present study and sample,

parental investment as a volunteer is less valuable than parental investment of financial resources for the achievement of socioemotional outcomes. As noted earlier, the parental volunteering measure was coarse, did not capture the specific role(s) the parent engaged in as a volunteer, the fulfillment they derived from this involvement, nor parental motivations to volunteer.

Despite the lack of relation illustrated in the present study, prior research tends to suggest that greater levels of parental volunteering and involvement are associated with positive outcomes for both the youth athlete and parent (Leberman and LaVoi 2011; Graham et al. 2016). For instance, Dorsch et al. (2009) illustrated that parents tended to benefit beyond the outcomes realized by their child, describing their own positive social, psychological, and physical development associated with the escalating and continued levels of their child's participation in a particular sport. Thus, a more in-depth measure of parent involvement as a volunteer may yield differing results in future investigations. Additionally, alternative analytic strategies (e.g., investigations of non-linear, quadratic, and curvilinear relations) may yield a more comprehensive understanding of what benefits parental volunteers may realize from their experiences, and what benefits their children may gain from their parents continued involvement in their sport.

As hypothesized, years of child competition participation did have a positive relation with PPDO scores. Put differently, as youth athletes increased in total years of participation, parents also reported escalating levels of socioemotional growth (i.e., positive increases in communication, responsibility, self-regulation, and attitude). This finding is congruent with other research exploring the potential developmental and socioemotional benefits realized by youth athletes from their longer-term participation in sport (Knight and Holt 2014; Thrower et al. 2016; Wheeler and Green 2014). Despite the parallels between the present study findings and past research, the positive relation between years of participation and PPDO level, does not provide context for how these outcomes actually manifest for differing subgroups (e.g., those of differing gender, age, race). Many athlete level characteristics (e.g., age of athlete entry, athlete gender, athlete race, multi vs. solo sport participation, level of specialization, coach quality, parent athlete status, socioeconomic status) were unavailable in the present study due to concerns with youth athlete anonymity. However, deeper exploration into how these potential factors may result in the best possible combination of outcomes (Coakley 2011; Evans and Gagnon 2019; Weiss and Weiss 2007) remains important given the increased growth of competition climbing and the broader field of alternative sports (Wheaton 2010).

7.1 Applications to Practice

Beyond research implications, the present study findings also suggest a few practical applications. The lack of relation between overparenting and sport spending may indicate for those charged with the direct administration and facilitation of youth sport programs, the tolerance of overparenting behaviors may have little financial upside. Further, the lack of relation between overparenting and parental volunteer status (and number of years spent as a volunteer as indicated in the post-hoc analyses) also may mitigate OST administrator concerns related to policing overparenting behaviors and parents being turned off from volunteering, as there appears to be no relation between

the two. Additionally, as overparenting did not have any positive impact on the levels of youth competitive longevity or PPDO levels, these findings have provided an important *take home* message for coaches to strengthen the policy of restricting overparenting-like behaviors among parents within the competitive sport environment. Youth sport programs administrators and coaches should acknowledge the restriction of overparenting behaviors among parents would create an ideal state of maintaining their managerial aspects (i.e., parental youth sport spending, parental volunteering status), and to remain focused on the benefits realized by youth athletes (i.e., competitive longevity, socioemotional development) (Mumford 2015).

Relatively recent research has demonstrated a positive association between overparenting and child reports of increasing rates of risky behaviors (e.g., illegal drug use, shoplifting, self-harm) (Romm et al. 2020). Thus, an understanding of which contexts overparenting manifests at higher levels (e.g., those serving children with disabilities; Gagnon et al. 2020) is crucial in developing trainings to mitigate the potentially deleterious effects of overparenting on their programs and services. Lastly, while tangential to the primary study purpose, the finding of a positive association between increased time as a competitive climber and higher levels of parent reported socioemotional development provides additional support for the value of repeated high quality OST experiences as contexts which promote and/or enhance youth development across socioemotional domains. Put differently, OST programmers and administrators should continue to communicate the value continuous OST experiences have for youth and young people.

7.2 Limitations and Future Directions

While promising, the present study has a number of limitations that warrant deeper explanation. The study utilized a cross-sectional design, limiting inferences that can be made about how overparenting and the other measured variables may change over time. For instance, tracking potential attitudinal shifts in overparenting behaviors from the beginning of a youth athletes' participation in climbing and throughout their *career* may provide a more comprehensive illustration of how overparenting changes at an individual and contextual level. The lack of specific child demographic data prevented more comprehensive analyses to be utilized. It is likely that specific sub-groups of children experience overparenting and its consequences at different levels (Kouros et al. 2017). For instance, with the addition of demographic information for the children (e.g., child age, gender, additional OST experiences, and self-reported socioemotional development), a more comprehensive explanation of who/where the negative influence of overparenting occurs may have better contextualized the study findings.

The present study also lacked reports of overparenting from the child's perspective. As noted earlier, some research suggests parents and children may interpret overparenting at differing levels. For instance, Cui et al. (2019b) demonstrated in some instances parents and children reported conflicting levels of overparenting. Thus, the addition of child-reports of overparenting behaviors may yield a more nuanced understanding of the potential benefits and consequences of overparenting. Furthermore, the measurement of overparenting itself remains ambiguous in the broader literature (Padilla-Walker and Nelson 2012; Segrin et al. 2012; Luebke et al. 2018; Gagnon and Garst 2019a). Put differently, it is unclear at what threshold desirable parental

behaviors shift from developmentally appropriate to excessive, where parenting becomes “overparenting”. This complexity in measurement is further confounded by factors such as context (e.g., OST versus academic contexts), developmental differentiation (e.g., early adolescence versus emerging adulthood), and family structure (e.g., multi child versus only child) (Cui et al. 2019b; Gagnon et al. 2020; Buchanan and LeMoyné, 2020). Consequently, research towards the development of an index of when overparenting behaviors shift from harmless to harmful remains an important future direction.

While the intent behind the present study was to examine parents of children engaging in a national level sport, this approach may have excluded those more likely to engage in overparenting. As noted earlier, Dorsch et al. (2009) demonstrated less experienced and socialized parents tended to exhibit greater rates of the excessive and inappropriate behaviors associated with overparenting. Given that entry level parents are less likely to be affiliated with a national level of competition in their child’s first foray into a sport (Garst et al. 2019), the sample utilized in the present study and inferences there in, may be harmed by selection bias towards more experienced parents.

Contextual differences may have also biased the sample and study findings. As evidenced by Hong et al. (2015), Locke et al. (2016), and Gagnon and Garst (2019a), parents may parent differently within an OST context versus an academic context, with overparenting manifesting at a greater rate dependent on the parent’s motivations and perceptions of need within and across contexts. For instance, Sapieja et al. (2011) explained how one parent may be highly controlling within a specific context and more relaxed within another, whereas their co-parent may act in the opposite direction. These potential biases highlight an important and ongoing direction within the broader sphere of overparenting research, to determine how overparenting may manifest differently dependent upon the context (i.e., academic versus OST), culture, and demographic differences (e.g., parental age in relation to child) (Cui et al. 2019b; Gagnon et al. 2020; Jung et al. 2019; Leung and Shek 2019) may yield differing benefits and consequences of overparenting dependent on the child and setting.

The sample was relatively affluent and highly educated. While very reflective of the competition climbing population in the U.S. and overparenting research with youth in OST settings (Evans and Gagnon 2019; Garst et al. 2016), the relatively homogenous sample demographics also limit the more general inferences that can be made about the potential relation(s) between alternative sport and overparenting in more socioeconomically and racially heterogenous samples. Importantly, in an examination of the socioeconomic status associated with youth sport families, Post et al. (2018) highlighted how the ever escalating costs associated with youth sport specialization were pricing some families out of year-round teams and clubs. This same specialization is also becoming apparently necessary to sustain competitive success and involvement as a child matures (Padaki et al. 2017). In the present study context and sample, competition climbing is a “year-round sport” where competitions and training take place over most of the calendar year. Thus, the uniqueness of the sample within the present study represents another important direction for overparenting research within sport and OST contexts, to determine if single season youth athletes experience differing levels of overparenting and/or socioemotional development when compared to their peers who specialize at higher rates and/or engage in year-round sports.

8 Conclusion

In concert with or perhaps as a result of the increasing visibility of overparenting, those responsible for delivering out-of-school-time programs are facing escalating pressures to deliver meaningful benefits to the youth they serve across multiple domains including socioemotional development (Garst and Gagnon 2015), cognitive and academic performance (Hong et al. 2015; Locke et al. 2016), and athletic success (Harwood and Knight 2009). While there are many potential explanations for escalating pressures across OST programs within youth sport, the increasingly necessary time and financial resources for a child to participate may intensify parental expectations of their child's participation as an investment in their later educational, career, and socioemotional development (Dorsch et al. 2015; Dunn et al. 2016). Correspondingly, these increased expectations may result in greater and perhaps excessive levels of parental involvement (Coakley 2011; Sapieja et al. 2011).

In a study of parenting and youth sport, Wheeler and Green (2014) indicated for good parenting to occur, parents must encourage and support their child to participate in sport. In other words, parents must and should be involved in their child's sport experiences, but not to the degree where their involvement becomes excessive. With increasing rates of pressure on children to not only engage, but also succeed at a high level in structured sport experiences (Dunn et al. 2016; Jayanthi et al. 2015; Lindstrom-Bremer 2012) to ensure later career and collegiate success, it seems overparenting may continue to manifest. Thus, exploration of both the consequences and potential benefits of overparenting across contexts, cultures, and demographics represents an important and ongoing research direction. Notwithstanding its limitations, the present study builds upon the understanding of overparenting within an unexplored context, youth competition climbing, providing a foundation for investigations into both mainstream and alternative sports, the influences of parents across these contexts, and the potential benefits parents may bring to OST experiences for themselves and their children.

Compliance with Ethical Standards

Conflict of Interest This work was supported in part by USA Climbing in 2016. The contents of this article are solely the responsibility of the authors and do not necessarily reflect the official views of USA Climbing. USA Climbing was not involved in the manuscript development, data analysis, or interpretation of data.

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