

**Integrated Early Childhood Program Participation, Parenting and Child Development  
Outcomes: The Toronto First Duty Project**  
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This study examined predictors of program participation and, in turn, the effects of participation ‘dosage’ on child development in five school sites offering integrated preschool services as part of the Toronto First Duty (TFD) project. In the TFD model a variety of services for young children and their families are integrated by using the school as a hub for service delivery. Core service elements at every site include childcare, kindergarten and parenting support programs. Other services include public health, counselling, library and other community resources (Corter et al., 2007). In the TFD context, multiple services offer a ‘menu’ of services to appeal to diverse parental interests (Patel, Corter, & Pelletier, 2008).

Despite sound conceptual arguments for the utility of integrating early childhood services, no empirical studies have examined the relation between uptake of integrated preschool services and children’s developmental outcomes in ecological context. This study examined ‘dosage’ of program participation, while considering family and school level characteristics that may moderate or mediate the effectiveness of service integration efforts to improve child outcomes during the transition to school. The ecology of participation effects was examined through generalized linear modeling techniques analyzing a linked dataset (N=272) including: (1) systematic intake information on demographics and parent attitudes, along with subsequent tracking data on hours of program use (2) Early Development Instrument (EDI) teacher ratings of school readiness/child development across five domains (physical health and well-being, social competence, emotional maturity, language and cognitive development, communication and general knowledge), and (3) a measure of service integration levels across sites. Having the participation data to examine ‘dose-response’ in this complex early childhood intervention makes this study unique.

An examination of the factors that predicted participation in TFD (number of hours of utilization) helps to determine whether the project achieved equitable access. This analysis also has potential implications for outreach and retention issues in other integrated early childhood service initiatives. In this study the analyses of participation distinguished between ‘optional’ services and kindergarten. Although kindergarten is not mandatory in Ontario, enrolment in senior kindergarten is nearly universal, whereas enrolment in other services such as child care and family support programs is considerably lower. Analyses examining predictors of kindergarten absences in parallel with predictors of TFD participation in optional programs test whether these forms of participation have similar barriers and facilitators. The results provide evidence that TFD achieved its outreach aims in ensuring equitable access; demographic factors did not operate to reduce equitable participation in TFD. In fact there was only one significant demographic predictor of hours of service uptake: lower maternal education actually predicted higher participation. This success in outreach mirrors our previous finding that participant demographic characteristics matched the surrounding school communities. Parallel analyses comparing predictors of children’s kindergarten program absences yielded similar results in that parenting and site level program factors were not significant predictors. Furthermore, maternal education was also inversely related to kindergarten attendance. However there was one difference between participation in kindergarten and other TFD services: gender affected kindergarten absences, with males being absent more in kindergarten, but this relation was not found in optional TFD services.

Investigating predictors of lower overall child development outcomes (EDI) illuminates factors that may contribute and whether these factors include program dosage. Analyses of overall outcomes showed that parenting attitudes, including parents' being less child-centred in their reasons for using services and less interested in parent participation, were significantly associated with an increased likelihood of a child being in the lowest 25th percentile on at least one domain of the Early Development Instrument (EDI). A significant interaction was also found between maternal education and parents' interest in school involvement; when both were low, children were at greater risk for lower overall readiness, and at particular risk for the subdomain of language and cognitive development. These findings highlight the important but complex role of parenting factors in children's developmental outcomes. Although the number of hours of participation in TFD early childhood services did not predict overall readiness (the likelihood of a child being in the lowest 25th percentile on at least one domain of the EDI), the results did point to the importance of examining the patterns for each readiness domain on the EDI.

In fact, the 'dosage' of TFD services was a significant predictor of three domains of the EDI, namely, children's physical health and well-being, language and cognitive development, and communication and general knowledge. Thus, intensity of participation in integrated early childhood services predicted children's developmental outcomes, after taking into account potential moderating and mediating demographic, parenting, and site factors. For example, children's social competence was predicted by an interaction between language status and parents' interest in school involvement. For families who spoke English as a first language, greater interest in school involvement predicted higher levels of social competence in children, but the inverse relation was found for families who spoke another language at home. Thus, families' reasons for involvement in services may vary by family demographic characteristics such as language status and maternal education level. Demographic and parenting factors predicted each of the domain-specific child development outcomes in different ways, with unique interactions. These findings demonstrate the ecological complexities in understanding the potential processes or mechanisms by which program participation affects children's outcomes.

In summary, the results provide evidence that TFD achieved the goal of equitable access for all families. Furthermore, participation dose predicted children's physical health and well-being, language and cognitive development, and communication and general knowledge, after taking into account demographic, parenting and site factors. In addition, parents' being less child-centred and less interested in parent participation, were significant risk factors associated with children's developmental outcomes. Findings were not qualified by the degree of service integration across TFD sites; all five sites had moved to substantial levels of collaboration or integration across implementation of TFD.

### References

- Corter, C., Bertrand, J., Pelletier, J., Griffin, T., McKay, D., Patel, S., & Ioannone, P. (2007). Toronto First Duty Phase 1 Final Report: Evidence-based Understanding of Integrated Foundations for Early Childhood. [http://www.toronto.ca/firstduty/tfd\\_phase1\\_finalreport.pdf](http://www.toronto.ca/firstduty/tfd_phase1_finalreport.pdf)
- Patel, S. (2009). *Integrated early childhood program participation, parenting, and child development outcomes: The Toronto First Duty Project*. (Doctoral dissertation, University of Toronto, 2009). Retrieved from <http://hdl.handle.net/1807/18225>.
- Patel, S., Corter, C., & Pelletier, J. (2008). What do Families Want? Understanding their goals for early childhood services. In M. Cornish (Ed.) *Promising Practices for Partnering with Families In the Early Years*. Family School Community Partnership Monograph series. Information Age Publishing.

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