Prosocial Treatment by Peers in the Everyday Lives of Early Adolescents

Alison Farrell-Reeves

Department of Psychology

McGill University, Montreal

August 2023

A thesis submitted to McGill University in partial fulfillment of the requirements of the degree of Doctorate of Philosophy

Table of Contents

Abstract

Prosocial treatment by peers is a common experience for youth and evidence suggests that it plays a critical role in the development of emotional well-being. Little is known, however, about the types of prosocial behaviours that characterize youths' everyday interactions, nor about the daily associations between prosocial treatment and emotional adjustment. The present thesis consists of two daily-diary studies that, together, advance our understanding of early adolescents' everyday experiences of prosocial treatment, as well as how events are linked to youths' daily mood.

Study 1 gathered rich information about early adolescents' everyday experiences of prosocial treatment by peers and examined associations with daily mood and victimization. Youth in their first year of high school (Grade 7; $N = 257$, M age = 12.9, $SD = .34$, 63% female) participated in a daily-diary phone study for ten consecutive school days. During each call, early adolescents provided ratings of positive and negative affect, and indicated whether anything nice had happened for them that day. A semi-structured interview was utilized to collect detailed accounts of youths' reported prosocial treatment events, as well as evaluations of prosocial intent (i.e., the extent to which the actor in the event was trying to confer benefit). We also assessed reputations of victimization using peer nominations. Early adolescents described 1918 prosocial treatment events by peers that coded reliably into seven categories of received prosocial behaviours (helping, compliments, inclusion, sharing, comforting, cooperating, and defending). We found that while participants' overall daily reports of prosocial treatment were associated with increased positive mood, the associations between receipt of prosocial behaviour and daily negative mood varied by the type of event; helping and inclusion were linked to decreased negative affect, but comforting was linked to greater negative affect. Finally, participants'

evaluations of prosocial intent for events were not associated with daily mood and victimization did not predict everyday instances of prosocial treatment.

Using the detailed descriptions of received prosocial treatment events youth provided in Study 1, we developed a novel checklist of behaviours to assess early adolescents' daily experiences of prosocial treatment by peers in **Study 2.** Early adolescents in their final two years of elementary school (Grades 5 and 6; $N = 133$, M age = 10.78, $SD = .64$, 50.4% female) completed daily assessments of prosocial treatment and mood for five consecutive school days. Participants' daily reports of received prosocial behaviour were used to investigate links between (1) these experiences and daily mood; (2) evaluations of prosocial intent and daily mood; (3) reputations of victimization, prosocial behaviour, prosocial treatment, and acceptance and the frequency of daily prosocial treatment. Daily reports of comforting were associated with decreased positive affect and increased negative affect. Otherwise, results from this study indicated that everyday experiences of prosocial treatment were not related to day-to-day fluctuations in early adolescents' mood. On days youth perceived greater prosocial intention, they reported increased negative affect. Participants' reputations did not predict daily receipt of received prosocial behaviour, suggesting that peers' perceptions of youth are not necessarily representative of their actual daily experiences.

Taken together, this thesis advances our knowledge of early adolescents' everyday experiences of prosocial treatment, as well as how behaviours are linked to daily mood. Additionally, findings highlight the complexity of the associations between receipt of prosocial behaviour, as well as youths' evaluations of intent for these events, and daily mood. Finally, by adopting a daily-diary approach, the current research allows for a richer understanding of the nature and frequency of received prosocial behaviours youth encounter in their day-to-day lives

and how they are proximally related to emotional adjustment, thereby providing important information for future investigations and interventions.

Résumé

Le traitement prosocial par les pairs est une expérience courante chez les jeunes et la recherche démontre qu'il joue un rôle critique dans le développement de la santé émotive. Cependant, il existe peu de recherche sur les types de comportements prosociaux représentatifs des interactions quotidiennes des jeunes, ainsi que sur les associations quotidiennes entre le traitement prosocial et l'ajustement émotif. La présente thèse inclut deux études employant une méthode de journal personnel, qui avancent notre compréhension des expériences quotidiennes de traitement prosocial chez les jeunes adolescents et la manière dont ces événements sont liés à l'humeur quotidienne des jeunes.

L'étude 1 fournit des informations sur les expériences quotidiennes de traitement prosocial par les pairs chez les jeunes adolescents, et examine les associations avec l'humeur quotidienne et la victimisation. Durant dix jours d'école consécutifs des jeunes en première année de lycée (N = 257, âge moyen = 12.9, écart-type = .34, 63% de filles) ont participé à une étude téléphonique de journal personnel. Durant chaque appel, les adolescents ont évalué quantitativement leur affect positif et négatif et indiqué si un événement positif leur était arrivé le jour même. Une entrevue semi-structurée a été utilisée pour colliger les détails des événements prosociaux rapportés par les jeunes, ainsi que leurs évaluations des intentions prosociales (c.-à.-d. si l'acteur dans l'événement essayait d'agir de manière bénéfique). Nous avons aussi évalué les réputations quant à la victimisation, en utilisant une méthode de nomination par les pairs. Les jeunes adolescents ont décrit 1918 événements de traitement prosocial par les pairs, lesquels ont été codés de manière fiable en sept catégories d'événements prosociaux (l'aide, les compliments, l'inclusion, le partage, le réconfort, la coopération, et la défense). Nous avons découvert que les signalements quotidiens de traitement prosocial étaient associés avec une hausse de l'humeur

positive, alors que l'association entre la réception de comportement prosocial et l'humeur négative variait selon le type d'événement. L'aide et l'inclusion étaient liés à une diminution de l'affect négatif, mais le réconfort était lié à une augmentation de l'affect négatif. Enfin, l'évaluation des intentions prosociales n'étaient pas associés à l'humeur quotidienne et la victimisation ne prédisait les instances quotidiennes de traitement prosocial.

En nous basant sur les descriptions détaillées d'événements prosociaux rapportés par les jeunes dans la première étude, nous avons développé, dans **l'étude 2**, une nouvelle liste de comportements pour évaluer les expériences de traitement prosocial par les pairs dans la vie quotidienne des jeunes. Les jeunes adolescents en deux dernières années de l'école élémentaire (Classes 5 et 6 ; N = 133, âge moyen = 10.78, écart-type = .64, 50.4% de filles) ont complété des évaluations quotidiennes de traitement prosocial et d'humeur pour cinq jours d'école consécutifs. Les signalements quotidiens de comportement prosocial reçu ont été utilisé pour investiguer les liens entre (1) ces expériences et l'humeur au quotidien; (2) les évaluations des intentions prosociales et l'humeur au quotidien; (3) les réputations de victimisation, les comportements prosociaux, le traitement prosocial, et l'acceptation et la fréquence de traitement prosocial au quotidien. Les signalements quotidiens de réconfort étaient associés avec une diminution de l'affect positif et une augmentation de l'affect négatif. Outre cette association, les résultats de cette étude indiquent que les expériences quotidiennes de traitement prosocial n'étaient pas associées aux fluctuations quotidiennes de l'humeur des jeunes adolescents. Lors des jours où les jeunes ont perçu une plus grande intention prosociale, ils ont rapporté une hausse de l'affect négatif. La réputation des participants ne prédisait pas la réception quotidienne de comportement prosocial, ce qui suggère que la perception par les pairs n'est pas nécessairement représentative de l'expérience vécue au quotidien par les jeunes.

Dans l'ensemble, cette thèse approfondit les connaissances à propos des expériences quotidiennes de traitement prosocial chez les jeunes adolescents, ainsi que la manière dont les comportements sont liés à l'humeur au quotidien. De plus, les résultats démontrent la complexité des associations entre la réception de comportements prosociaux et l'évaluation des jeunes par rapport à l'intention derrière ces comportements, et l'humeur quotidienne. Enfin, en utilisant une approche de journal personnel au quotidien, cette recherche fournit un regard plus riche sur la nature et la fréquence des comportements prosociaux que les jeunes reçoivent dans leur vie quotidienne, et la manière dont ils sont intimement liés à l'ajustement émotif, ce qui fournit une information précieuse pour la recherche et l'intervention.

Acknowledgements

It is impossible to express how profoundly fortunate I feel to have completed my PhD at McGill University and in the extraordinary city of Montreal. I am deeply grateful to all of the people who have been instrumental in making this thesis and my graduate studies possible. I am incredibly thankful for their guidance, support, and unwavering encouragement that was reliably there every step of the way on this journey.

My first thank you is for my PhD supervisor, Dr. Melanie Dirks, whose genuine enthusiasm about research, profound knowledge of child and adolescent development, insatiable curiosity, and razor-sharp wit made all of this possible. Melanie, I am so grateful for the endless support, commitment, and mentorship you offered me. Your wisdom and thoroughness in everything you do have made me a more deeply critical thinker, greatly improved my writing, and inspired me to always strive for excellence. Thank you for being so patient with me.

I am also incredibly appreciative to my committee members, Dr. Kristen Dunfield and Dr. Anna Weinberg. Kristen, thank you for the generous time and effort you invested in me, and for the many thoughtful discussions about my research. Anna, I am so grateful for your kindness and support over the years – both in research and clinical endeavors. I am also appreciative of the guidance and encouragement you provided throughout my residency applications.

I would also like to thank the many other members of the Department of Psychology who have been immensely helpful throughout my time at McGill. Thank you to Chantale Bousquet, Nina Pinzarrone, and Giovanna LoCascio for their immeasurable patience and support. I am also thankful for all of the inspiring and deeply knowledgeable professors and psychologists who taught clinical classes and supervised my practicums, all of whom are exceptional examples of how curiosity and a profound appreciation of science and research greatly benefit clinical work.

Thank you to Dr. Judith LeGallais, Dr. Jennifer Russell, Dr. Jonathan Keeley, Dr. Ian Bradley, Dr. David Zuroff, Dr. Perry Adler, Dr. Dale Stack, and Dr. Mary DeRemer for the foundational training and clinical skills they provided me, for fostering my professional and personal growth, and for the countless pearls of wisdom that I still use on a daily basis. Thank you to Dr. Sarah Racine for all of your help and feedback on my residency applications. Thank you as well to the Department of Psychology, Social Sciences and Humanities Research Council of Canada, and Le Fonds de Recherche du Québéc – Société et Culture for their generous financial support throughout my graduate studies.

Many of my fondest memories of my time at McGill happened in the Child and Adolescent Social Competence Lab. I am so lucky to have worked with the graduate students, research coordinators, and volunteers of the lab, many of whom I formed lasting and meaningful connections with. The data collections for my thesis were intensive and stressful, and yet somehow always fun. From late nights creating questionnaire packages to early morning car rides to school visits, the members of the CASC lab were always dedicated and enthusiastic. Thank you especially to Talia Wigdor for all of your help with the diary study during my first year at McGill. Thank you to Steph Rajabi, Natalie Klein, Nathalie Cook, Katya Santucci, Mel Commisso, and Camila Bahn for their tremendous efforts. And thank you to Noa Givon for being both the hardest working volunteer and the best, most entertaining, and welcomed distraction ever. Thank you to the wonderful graduate students who were with me during my time in the lab: Michele Morningstar, Miriam Kirmayer, Thomas Khullar, Nicole Dryburgh, Allison MacNeil, and Erin Macdonald. There are really not words to describe how grateful I am for their support, encouragement, compassion, and kindness. It feels like true serendipity that I ended up in the same place at the same time as all of you.

This degree would have been much more difficult and much less enjoyable without the friends who were there for me throughout the entire journey. They brought an indescribable amount love and joy to my life, which are necessities while completing a PhD. I feel so lucky to have met so many thoughtful, caring, and funny friends during my time at McGill and in Montreal – Allison, Amanda, Cait, Connor, Danielle, Keli, Matteo, Michele, Miriam, Nicole, Olivia, Paige, Sarah P., Sarah S., Saskia, Shalini, Tara, and Tom. To Amanda, Nicole, and Paige: you are all the perfect mix of so much love and so much fun. I am so thankful that all of you became best friends. Matteo, thank you for always being up for dessert and for being so willing to talk about anything and everything. To Sarah S., thank you for being a big sister to me and for your endless kindness and generosity. Thank you Michele for being my soul sister and thank you Miriam for giving me hope and perspective through some tough times. To my twin Tom, I am so grateful for your compassion and wisdom.

I also want to thank my lifelong best friends who were endlessly understanding and supportive – Emily, Jess, Julia, Kate, Kelsey, Kira, Leah, Lizzy, Megan, and Robyn. To Emily, through laughter and tears you are always there, and I am so thankful for your friendship. Julia and Megan, since childhood, you have both consistently been the most wonderful and joyful friends; I am lucky to have friends who appreciate solidarity so much. Your visits to Montreal and my trips to Toronto meant the world to me and brought much needed balance to my life. To Kate, I cannot thank you enough for the countless motivational speeches and for always being so kind; no one got it like you did. Without a shadow of a doubt, I could not have done this without you. Lizzy, you have a heart of gold and it was such a comfort to have a friend from home so close by. To all of my friends, both old and new: from the bottom of my heart, thank you.

Last and certainly not least, I am endlessly thankful to my family. To my parents Bruce and Paula, my brother Trevor and sister-in-law Kelli, and my grandma Dorothy, thank you for being my biggest cheerleaders, for always believing in me, and for always making sure my life is filled with love, joy, and comfort. Mom and Dad, your unconditional love and constant support have always been the guiding lights in my life, and are what helped me through the most challenging moments of this degree. Thank you for believing in me and holding onto hope even when I could not see the finish line. I also want to thank my partner's parents, Lynn and Rob, for their love, generosity, support, and encouragement, and for always making me feel so welcome. Finally, to the love of my life and very best friend, Andrew: I could not have done any of this without you and I am so fortunate to have you by my side. Thank you for being my anchor, for taking such good care of me, and for making me feel loved every single day. Your selflessness, belief in me, support, and encouragement are what made all of this possible.

Contribution to Original Knowledge

The importance of prosocial treatment for youth's social and emotional functioning has been widely documented (e.g., Bowker, 2014; Crick et al., 1999; Griese & Buhs, 2014; Martin & Huebner, 2007; Storch & Masia-Warner, 2004; Stotsky et al., 2020; Troop-Gordon & Unhjem, 2018). However, surprisingly little is known about the behaviours, predictors, and outcomes of this social experience in early adolescents' daily lives. The two studies in this thesis utilize novel daily-diary designs to examine the nature and frequency of the received prosocial behaviours early adolescents encounter in their daily interactions with peers, as well as associations between events, socio-cognitive evaluations, peer-nominated behavioural reputations, and mood. Daily-diary methodologies are an ecologically valid way of assessing youths' lived experiences and capture meaningful within person variability, and – to the best of our knowledge – these are the first two studies to adopt this approach to examine prosocial treatment. The research in this thesis presents several original theoretical and methodological contributions to our understanding of early adolescents' everyday experiences of prosocial treatment by peers, as well as how the behaviours that comprise these interactions relate to daily emotional well-being. Moreover, the results of this thesis also highlight the multidimensional nature of prosociality, and add to growing evidence that behaviours within the larger construct are distinct and should be investigated separately (e.g., Dunfield, 2014; Dunfield & Kuhlmeier, 2013).

Study 1 gathered detailed information about early adolescents' daily experiences of prosocial treatment through semi-structured interviews and contributes to existing research in a number of notable ways. First, youths' reported descriptions of events provide rich qualitative information about the diversity of prosocial behaviours they receive from peers, which can be used to inform future assessments of prosocial treatment. Second, this study explored specific

categories of prosocial treatment, distinguishing it from past work that has typically examined the construct as singular. In doing so, the results not only confirm that prosocial treatment is common at the daily level, but also advance our understanding of the relative frequencies of distinct types of behaviours. This work provides normative information about prosocial treatment in this developmental period and highlights that some regularly occurring events (e.g., compliments) have been understudied thus far. Third, this study investigates daily links between overall levels, as well as specific types of, prosocial treatment and both positive and negative affect, thereby allowing us to better understand the proximal associations between prosociality and emotional adjustment. By examining differential relations among received prosocial behaviours and mood, the results also contribute to a more nuanced and contextualized understanding of how social interactions shape daily emotional experiences.

Study 2 builds on these results by examining received prosocial behaviours using a daily checklist of events that was developed from early adolescents' descriptions from Study 1. The results of this study provide evidence for the feasibility of this tool, which can be used to assess prosocial treatment by peers in future research. Additionally, inconsistent findings between the two studies with respect to received prosocial behaviours and daily mood offer insight into the importance of methodological considerations when designing daily-diary studies with youth. Findings from Study 2 also suggest that early adolescents' perceptions of prosocial intent are related to daily mood, which demonstrates the importance of continuing to evaluate now only which events are related to mood, but also how youths' socio-cognitive evaluations shape emotional responses. However, this finding was surprising and requires further exploration and replication. Finally, this study expands on previous work by examining whether a wide array of behavioural characteristics predict everyday occurrences of prosocial treatment. In doing so, the

results highlight that well-documented links between behaviours may be more nuanced at the daily level, as well as providing further support for the importance of examining multiple types of social experiences when researching youths' peer relationships.

Contribution of Authors

This thesis is comprised of two studies that advance our understanding of early adolescents' daily experiences of prosocial treatment by peers. Both studies were designed and conducted under the supervision of Dr. Melanie Dirks and this program of research would not have been possible without her guidance, support, and expertise. Study 1 was designed by Dr. Dirks and the first year of data collection began prior to the start of my graduate studies. I – along with a fellow graduate student, Allison MacNeil – was involved in the development and design of Study 2. For the second and third year of Study 1 and the entirety of Study 2, I was responsible for coordinating the studies, including recruiting participants, conducting interviews, training interviewers and other volunteers, organizing school visits, as well as overseeing other data collections, data entry, and data cleaning. I also created main study materials for Study 2, including programming the daily-diary assessment for use on tablets. Allison MacNeil was also heavily involved with data collection, entry, and cleaning for Study 2. A committed and enthusiastic team of lab coordinators and volunteers made the large and intensive data collections in both studies possible. The descriptive coding manual for the prosocial treatment events in Study 1 was developed by Dr. Dirks in collaboration with Dr. Kristina MacDonald and Dr. Kristen Dunfield. The coding was conducted by a team of graduate students working under Dr. McDonald's supervision at the University of Alabama, in close collaboration with Dr. Dirks. For both studies, I conducted literature reviews, developed research questions, analyzed data and interpreted results, and wrote and edited the text with feedback from Dr. Dirks. Study 1 (Chapter 3) was adapted from a manuscript co-authored by myself, Dr. Dirks, Dr. Kristen Dunfield, and Dr. McDonald.

List of Tables

Chapter 3 (Study 1)

Chapter 4 (Study 2)

Chapter 1: General Introduction

Peer relationships play a critical role in the everyday lives of early adolescents, as youth increasingly spend more time with friends and classmates and are less likely to be supervised by adults (Rubin et al., 2006). A consequence of this increased time spent with peers, is that youth likely have more interactions with their peers – both positive and negative. These social interactions are an important developmental task for youth and are associated with concurrent and prospective emotional adjustment (e.g., Casper & Card, 2017; Storch & Masia-Warner, 2004). Correspondingly, research has linked children's and adolescents' daily experiences with peers to their daily mood (e.g., Weinstein et al., 2006). One integral type of interaction is likely to be prosocial treatment by peers; that is, voluntary actions that benefit another person (Hay, 1994). Thus, examining prosocial treatment at the daily level, as well as associations with daily mood, may lead to a better understanding of the relationships between peer interactions and emotional adjustment.

Prosocial peer treatment is a relatively common experience for children and adolescents (e.g., Crick & Grotpeter, 1996). It is also associated with many emotional adjustment outcomes, such as loneliness, depression, and life satisfaction (e.g., Crick et al., 1999; Leadbeater et al., 2006; Martin & Huebner, 2007; Storch & Masia-Warner, 2004). Yet, few studies have investigated the proximal processes that may link prosocial peer treatment to emotional adjustment in youth. Further, little is known about the nature, frequency, and targets of the interactions that contribute to the broader construct. Therefore, an important next step is to examine prosocial peer treatment at the daily level, to better understand day-to-day occurrences of these interactions, as well as how they relate to daily mood.

The current research focuses on prosocial treatment by peers in the everyday lives of early adolescents. Much of the work to date examining prosocial treatment has utilized summary measures, which assess overall levels of received prosocial behaviours over extended periods of time. As such, little is known about what prosocial treatment looks like in the everyday lives of youth or how it relates to daily measures of emotional adjustment. Moreover, typically, these summary measures have not assessed behaviours consistent with youths' conceptions of prosociality (El Mallah, 2020). Therefore, some prosocial behaviours youth experience may have been understudied thus far. Due to these methodological differences, it is important to examine everyday occurrences of prosocial treatment through the lens of youth, as well as how the relevant behaviours are associated with daily mood.

In summary, this thesis extends previous research by addressing five main questions: (1) What types of prosocial behaviours do early adolescents report receiving from their peers?; (2) Is daily receipt of prosocial behaviour associated with daily reports of positive and negative mood?; (3) Are specific types of prosocial events differentially associated with daily mood?; (4) Are youths' evaluations of prosocial intention associated with daily mood?; (5) Who is likely to receive everyday prosocial behaviours? Investigating early adolescents' daily prosocial treatment by peers will ultimately allow us to gain a greater understanding of the processes by which this social experience contributes to positive emotional adjustment.

Chapter 2: Literature Review

In this literature review chapter, I will begin by discussing broad categories of social experiences children and adolescents encounter and how they are related to concurrent and prospective emotional adjustment. Next, I will provide an overview of daily mood, including theoretical underpinnings and evidence linking variability in mood to overall emotional adjustment. I will then review findings demonstrating associations between youths' social experiences and meaningful fluctuations in daily mood. Finally, I will introduce the primary social experience examined in this thesis, prosocial treatment by peers, and literature relevant to its measurement and current limitations, predictors, links to daily mood, and evaluations of prosocial intention.

Associations Between Social Experiences and Emotional Adjustment

Adolescence is a developmental period marked by increased interactions with peers (Larson et al., 1996) and greater sensitivity to their feedback (Somerville, 2013). Correspondingly, researchers have identified a number of key social experiences in childhood and adolescence, including negative interactions such as victimization and conflict, and positive interactions such as prosocial treatment and perceived support. Each of these experiences that happen to youth are concurrent and future predictors of emotional adjustment.

Peer victimization, experiences of aggressive behaviour by others (Hawker & Boulton, 2000), is likely the most widely studied social interaction in childhood and adolescence. It can take on a variety of forms, including physical, verbal, and relational aggression (Crick & Bigbee, 1998; Crick & Grotpeter, 1996). Past studies have documented robust associations between peer victimization and emotional adjustment. For example, victimization longitudinally predicts greater internalizing symptoms (Reijntjes et al., 2010) and loneliness (Kochenderfer & Ladd,

1996), as well as lower self-worth (Nishina et al., 2005). In sum, peer victimization is an important predictor of emotional adjustment for youth.

Similarly, conflict with peers, another negative interaction youth experience, is also linked to emotional adjustment. Friendships characterized by conflict are associated with internalizing symptoms, including anxiety and depressive symptoms in adolescence (Burk & Laursen, 2005; La Greca & Harrison, 2005). This may be because conflicts with peers result in rumination, which increases the risk for the later development of internalizing disorders (Gil-Rivas et al., 2003). Further, experiencing frequent conflicts may also threaten emotional adjustment by interfering with the availability of social support from peers (Laursen & Adams, 2018). Taken together, undesirable social experiences with peers have negative impacts on youths' experience of internalizing symptoms and other emotional outcomes.

Although negative peer interactions are important predictors of concurrent and future emotional adjustment, there is evidence to suggest that for many youth, these experiences are infrequent (e.g., Flook, 2011; Pouwels et al., 2016). For example, in a daily-diary study with sixth-grade students, 54% of participants reported that they had not experienced a victimization event over the course of four days (Nishina & Juvonen, 2005). Another daily-diary study with elementary-school aged children found that 87% of participants reported experiencing no peer victimization over the course of seven days (Reavis et al., 2015). Although children's and adolescents' experience of negative peer interactions are importantly related to their emotional adjustment, these events do not happen frequently, suggesting that there is value in examining other types of peer interactions.

Positive interactions with peers appear to be a common occurrence in youth's everyday lives; in fact, there is evidence to suggest that children and early adolescents experience far more

positive than negative interactions with their peers. In a daily-diary study spanning seven days, children reported positive exchanges with peers approximately three times as often as victimization events (Sandstrom & Cillessen, 2003). Similarly, Flook (2011) found that over the course of 14 days, the ratio of positive to negative events reported by adolescents is approximately 8:1. Given the frequency with which youth experience positive interactions, it is likely that these experiences contribute to their emotional well-being.

In examining the link between positive social experiences and youths' emotional adjustment, and central to the current work, much of the research has focused on prosocial treatment by peers. Prosocial behaviours are voluntary actions that benefit the recipient (Eisenberg et al., 2006; Hay, 1994), such as helping, sharing, and comforting (Dirks et al., 2018). Past research has demonstrated many concurrent associations between prosocial treatment by peers and emotional adjustment. For example, Crick and Grotpeter (1996) found that for children, the receipt of prosocial acts was associated with less loneliness and depression. More recent studies have also confirmed these findings (Compian et al., 2009; Crick et al., 1999; Griese & Buhs, 2014; Leadbeater et al., 2006; Storch & Masia-Warner, 2004). Further, Martin and Huebner (2007) found that the experience of prosocial treatment predicted higher levels of life satisfaction and positive affect, and lower levels of negative affect in adolescents. Finally, the receipt of prosocial behaviour is also longitudinally associated with better emotional adjustment, such that for children, greater reported prosocial treatment prospectively predicts fewer depressive symptoms (Troop-Gordon & Unhjem, 2018).

Several behaviours that might also be considered prosocial may be captured in the measurement of social support (e.g., receiving emotional or practical support). In meta-analyses examining associations between social support from peers and emotional adjustment, greater

perceived social support from peers was associated with better emotional well-being for children (Chu et al., 2010) and with lower depressive symptoms in adolescents (Rueger et al., 2016). Taken together, research suggests that prosocial treatment by peers is an important domain of positive peer relations that contributes to youths' emotional well-being.

Links Between Emotional Adjustment and Daily Mood

Given that adolescence is considered an at-risk period for the development of mood and anxiety disorders (Kessler et al., 2007), it is imperative to investigate micro-level variables that may contribute to the larger construct of emotional adjustment. Daily mood is one important indicator of emotional adjustment that has been widely studied, as variability in mood is related to the development of psychopathology (e.g., Cole et al., 2008; Houben et al., 2015), especially in adolescence (Meeus, 2016). This relationship is thought to exist because the accumulation of mood fluctuations in reaction to daily events may lead to long-term changes in affect (Wichers et al., 2015). Also, it has been hypothesized that higher mood variability is associated with a greater need to regulate such mood fluctuations, which leaves less capacity to adaptively function in other domains (Maciejewski et al., 2014).

Generally, daily mood is conceptualized to have two facets: positive affect and negative affect (Watson & Clark, 1994). Positive affect (PA) refers to the experience of pleasant emotional states such as happiness and enthusiasm; whereas negative affect (NA) refers to the experience of unpleasant states such as sadness and anger. Positive and negative affect are separable constructs, and thus, individuals can experience, for example, frequent negative affect and frequent positive affect concurrently and over time (Watson et al., 1988). Indeed, a youth who feels both excited (PA) and nervous (NA) differs from a youth who only feels excited or only feels nervous. Moreover, a lack of sadness does not necessarily indicate that a youth is

feeling happy, and vice versa. Thus, PA and NA, as well as experiencing varying degrees of both emotional states simultaneously, are likely linked to predictors and consequences in distinct ways, and therefore should be examined separately.

In addition, past studies have consistently found links between daily mood and well-being. An abundance of research shows that NA, particularly sadness, is highly correlated with markers of poor emotional adjustment, such as depressive symptoms (e.g., Clark & Watson, 1991; Cole et al., 2008; Larson et al., 1990). Additionally, a lack of PA in response to daily events (i.e., anhedonia, or a loss of pleasure in everyday activities) is a core symptom of depression. Furthermore, negative emotions manifest across multiple psychological disorders (Clark & Watson, 1991; Clark et al., 1994; Watson et al., 1994; Watson & Tellegen, 1985). Research with children and adolescents has shown that lower mean values of daily PA and higher mean daily NA are related to more depressive and anxiety symptoms, and rates of depression (Forbes et al., 2004; Larson et al., 1990; Neumann et al., 2011; Silk et al., 2003; van Roekel et al., 2016). Two recent longitudinal studies further suggest that mood variability predicts adjustment difficulty over time. For instance, a study of adolescents indicated that emotional reactivity to daily negative peer events maintained depressive symptoms over time (Herres et al., 2016). Moreover, another study in which adolescents were followed from ages 13 to 16, showed that mood variability predicted later depressive symptoms, but not vice versa (Maciejewski et al., 2014). All in all, these studies suggest that daily mood is an important predictor of emotional adjustment outcomes, and more research should investigate which events in everyday life are associated with changes in mood.

Daily Associations between Social Experiences and Mood

Due in part to the association between peer interactions - both positive and negative - and emotional adjustment, as well as the relationship between mood and the development of psychopathology, researchers have also examined links between social experiences and mood at the daily level. Given that youth engage in countless peer interactions each day, it is essential to examine more proximal associations between these events and outcomes. Examining the links between peer interactions and daily mood may provide insight into how social experiences contribute to emotional adjustment over time.

Many studies have documented daily associations between negative experiences with peers and mood. For example, on days when adolescents report experiencing conflict with friends, they report greater negative emotions such as anger and anxiety (Flook, 2011; Vannucci et al., 2018). For both children and adolescents, daily reports of victimization and exclusion by peers have been linked to higher daily negative emotions such as anger, sadness, and nervousness, and lower daily positive emotions such as happiness (e.g., Espinoza et al., 2013; Morrow et al., 2014; Nishina, 2012; Nishina & Juvonen, 2005; Reavis et al., 2015). Collectively, such work demonstrates that negative interactions with peers are associated with greater negative affect and lower positive affect.

A handful of studies have also shown that positive experiences with peers are associated with daily mood. For example, Flook (2011) documented that on days when adolescents reported getting along with a friend, they experienced less negative and more positive affect. Adolescents who report daily perceived support from friends experience greater same day happiness and social connectedness (Schacter & Margolin, 2019a). Similarly, on days when adolescents act prosocially, they report more positive affect (Schacter & Margolin, 2019b). Data such as these suggest that everyday positive events also have emotional implications, and that further work

mapping the associations between distinct types of positive peer interactions and daily affect is warranted.

Daily Experiences of Prosocial Treatment

Daily-diary methodologies have been described as a useful tool for "capturing life as it is lived" (Bolger et al., 2003). However, they have rarely been utilized to assess prosocial treatment. Typically, self-report measures – such as questionnaires used to assess victimization – require youth to recall events that occurred several weeks (e.g., Solberg & Olweus, 2003) to several months (e.g., Prinstein et al., 2001) prior. Consequently, such measures are subject to retrospective bias and they also fail to capture day-to-day variation in experiences. Conversely, daily measures reduce the time elapsed between the actual experience and their account of the event. Thus, daily assessments are able to provide a more valid and reliable account of the nature and frequency of social experiences, such as prosocial treatment.

Further, daily-diary methodologies allow for an examination of the associations between variables of interest at the individual and daily level, by tracking day-to-day changes in youths' experiences. For example, it is possible to answer questions such as: Do youth who have a reputation for receiving prosocial behaviour also report a higher average of daily received prosocial events?; as well as daily level questions such as: On days that youth report prosocial treatment experiences, do they report greater daily positive affect? In sum, this method is useful for investigating whether specific prosocial treatment behaviors are related to outcome measures, such as mood, on a daily basis.

Measuring Daily Prosocial Treatment

In examining children's and adolescents' everyday experience of prosocial treatment, it will be important to catalogue the types of prosocial behaviours youth report receiving. Little is

known about what prosocial behaviours adolescents report experiencing on a daily basis, or how frequently they occur day-to-day. Although prosocial behaviour takes various forms and is increasingly recognized as multidimensional, a majority of research into the receipt of this experience has conceptualized it as a singular construct (e.g., Crick & Grotpeter, 1996; Griese & Buhs, 2014; Martin & Huebner, 2007; Storch & Masia-Warner, 2004). However, more recently, researchers have argued that it is important to distinguish the many diverse types of prosocial behaviour, as they are likely differentially related to outcomes (El Mallah, 2020).

Work examining the early emergence of prosociality has identified at least three core varieties of prosocial behaviours: helping, which involves recognizing and responding to an instrumental need (e.g., Warneken & Tomasello, 2006); sharing, which involves recognizing and responding to an unmet material desire (e.g., Brownell et al., 2009); and comforting, which involves recognizing and responding to another individual's emotional distress (e.g., Svetlova et al., 2010). Each of these behaviors emerge in infancy and early childhood, and youth continue to identify each of these three behaviors as important exemplars of prosociality (Bergin et al., 2003; Cotney & Banerjee, 2019), suggesting that they likely each occur in youths' daily lives. Although this taxonomy of prosocial behaviour provides a useful approach to understanding and classifying some prosocial behaviours based on the needs young children can represent, it was intended to help explain the emergence of prosociality. As a result, this taxonomy likely does not fully capture the diversity of prosocial opportunities adolescents experience.

Beginning in middle childhood, research has suggested that prosocial behaviours expand from the more traditional view of helping, sharing, and comforting to also include behaviors that are intended to initiate and sustain peer relationships (Greener & Crick, 1999). This expanded definition of prosocial behaviour suggests there are numerous other actions beyond the

traditional taxonomy that youth commonly encounter. It has recently been argued that moving forward, researchers should assess prosocial behaviour through the eyes of youth when studying this age group, as most studies and questionnaires to date do not accurately reflect what prosocial behaviour looks like during this developmental period (El Mallah, 2020). Indeed, research utilizing focus groups has shown that adolescents identify other types of behaviors as prosocial, such as being inclusive, standing up for others (i.e., defending), and offering compliments (Bergin et al., 2003; Cotney & Banerjee, 2019). Though clearly important in youths' lives, these relationally inclusive prosocial acts have received little attention in research to date, especially in the context of investigating prosocial treatment and with respect to how they are differentially related to outcomes such as emotional and social adjustment.

Inclusion can be defined as behaviours that initiate or sustain relationships with others (e.g., Greener & Crick, 1999), whereas defending reflects instances in which adolescents stand up for a peer experiencing harm (Bergin et al., 2003). Compliments are positive verbal expressions intended to increase positive affect in another individual (Bergin et al., 2003). Inclusion and defending may be particularly important prosocial behaviours during adolescence because being excluded and victimized are associated with increased distress (e.g., Nishina & Juvonen, 2005; Reijntjes et al., 2010). Further, reputation and status become increasingly salient in friendship selection, and social acceptance takes on greater importance for positive adjustment (Brown & Larson, 2009; Rubin et al., 2006). As a result, not experiencing inclusion and defending events during adolescence may be associated with not only daily negative emotions, but a poorer overall social reputation as well. Compliments can be considered prosocial because they provide an emotional benefit to the recipient. Interestingly, adolescents consider compliments to be prosocial regardless of whether the recipient was experiencing negative affect

prior to the compliment (Cotney & Banerjee, 2019). As such, compliments may have received less attention in the prosocial literature because they do not correspond neatly to a need or deficit. Given that adolescents identify each of these behaviors as salient examples of prosociality, and the importance of peer acceptance during this time period, it is likely that these three behaviors occur in the daily lives of adolescents. Moreover, they may be linked to changes in daily mood and contribute to youths' emotional well-being.

Taken together, these findings highlight the diversity of children's and adolescents' prosocial treatment experiences. While past research has tended to measure prosocial treatment as a singular construct or by focusing on more typically assessed behaviours defined in the literature (e.g., helping, sharing), a strength of the present research is that it attempts to capture the full spectrum of prosocial treatment events youth encounter within their peer relationships. The two studies in this thesis employ a broadened taxonomy of clearly defined and differentiated prosocial acts by drawing on and classifying youths' lived experience. This is in line with a recent directive for studies to assess prosociality using behaviours that youth consider to contribute to the construct (El Mallah, 2020). Through a daily-diary design, the current studies facilitate an examination of which types of prosocial behaviour described above are present in youth's everyday lives, as well as how often they occur day-to-day. Finally, measuring daily prosocial treatment also allows for an assessment of the proximal associations between specific types of prosocial behaviour and daily mood.

Links Between Prosocial Treatment Events and Daily Mood

Although daily-diary methodologies are recognized as promising methods in assessing social experiences, there have only been a handful of studies investigating prosocial treatment at the daily level. Sandstrom and Cillessen (2003) have stressed the need for daily research to

examine whether peer interactions are associated with adaptive functioning indices, such as emotional adjustment. Accordingly, this study examines how prosocial peer treatment experiences are related to early adolescents' emotional well-being on a day-to-day basis.

There is strong reason to believe that prosocial peer treatment will be associated with daily mood. Given that research has demonstrated that prosocial treatment by peers is associated with youths' emotional adjustment (e.g., Compian et al., 2009; Crick et al., 1999; Griese & Buhs, 2014; Martin & Huebner, 2007; Storch & Masia-Warner, 2004), an important next step is to gain an understanding of the proximal processes linking prosocial treatment by peers and emotional adjustment by testing whether daily receipt of prosocial behavior is linked to daily mood.

When assessing how the diversity of prosocial behaviours early adolescents experience are associated with daily mood, it is important to consider both positive and negative affect. As described previously, numerous researchers have argued that positive and negative mood reflect orthogonal dimensions (e.g., Larsen et al., 2001; Lucas et al., 2009; Martin & Huebner, 2007), such that individuals can experience both positive and negative emotions simultaneously (Watson et al., 1988). For instance, in the context of victimization, examining negative mood exclusively may underestimate the adverse effects of victimization events because they fail to capture the reduction in positive mood (Martin & Huebner, 2007). Further, daily-diary studies with adolescents have shown that positive social experiences may be differentially associated with daily positive and negative affect. For example, Flook (2011) found that daily reports of getting along with a friend was linked to greater positive mood and lower negative mood; in contrast, Schacter and Margolin (2019b) reported that, among adolescents, behaving prosocially was associated with greater daily positive mood but was not tied to daily negative affect. As such, the present research measures both daily positive and negative affect, which allows for

youth to report multiple and potentially contrasting mood states (e.g., high PA and low NA; low PA and low NA).

Examining both positive and negative affective experiences may be particularly crucial when considering daily receipt of prosocial behavior. Although prosocial behaviours benefit another individual, they are often enacted in response to negative events. For instance, an adolescent may comfort a peer who is experiencing emotional distress. In other words, many prosocial actions may be elicited by negative affect, which may complicate the associations between daily prosocial events and mood. Of course, prosocial behaviours may also be elicited by events linked to a positive mood state. For example, an adolescent may receive a compliment from a teammate after winning a race at a swim meet or after receiving a good grade on a challenging test. When prosocial treatment occurs in the context of a positive event, it may be unclear whether a corresponding increase in daily mood is due to the prosocial behaviour, or to the antecedent event. Thus, when examining the associations between prosocial treatment and daily mood, it is important to examine whether positive or negative affect was present when the prosocial treatment occurred.

Links Between Evaluation of Prosocial Intention and Daily Mood

A daily examination of prosocial treatment also provides an opportunity to examine youths' social-cognitive evaluations of events. A key interpretation for prosocial behaviour may be the perception of the actors' intent. Even though prosocial behaviour, by definition, are actions that benefit another person (Eisenberg et al., 2006; Hay, 1994), it has been documented that individuals engage in them for multiple reasons. For instance, youth may engage in prosocial behaviours to gain some benefit for themselves, such as affiliation with and acceptance by their peers (Wentzel, 2014). However, other studies have documented that early adolescents report

sometimes using prosocial behaviours to achieve instrumental goals for themselves; for example, adolescents sometimes help their friends to get something they want themselves (Boxer et al., 2004). Thus, although the outcomes are beneficial, the motivations for prosocial behaviour can in fact be varied.

Other research has hinted that youth may be sensitive to perceiving differences in motivations for prosocial behaviour, and this may have consequences for their emotional adjustment. Work on adolescents' judgements of intent for negative events provides evidence that youth differentially perceive motivations for behaviour. A large body of work has documented a hostile attribution bias, such that some youth are more likely to perceive negative intentions behind the actions of others (Dodge, 1980; Verhoef et al., 2019). Adolescents' judgements of intent for negative events are not only important for shaping their understanding of social situations, they are also associated with affective responses. For example, when children perceive hostile intent, they exhibit greater emotional distress (Crick et al., 2002; Mathieson et al., 2011; Nelson et al., 2018). In a study with early adolescents, when youth made hostile attribution biases for hypothetical relationally aggressive situations, they also reported feeling higher levels of anger and sadness (Wright, 2017). Further, the induction of negative emotions results in more severe hostile attribution biases and aggressive behaviour (de Castro et al., 2002; Dodge & Somberg, 1987; Reijntjes et al., 2011). These studies suggest that youth's perception of intent is linked to their emotional state and response.

To date, limited work has examined youth's perceptions of the intent of prosocial behavior, however, work with young children hints that these perceptions may matter. Dunfield and Kuhlmeier (2010) presented 21-month-olds two scenes: one in which an actor was unable to share a toy with them, and another scene in which an actor was unwilling to share a toy with

them. When given the choice to help one of the two actors, infants were more likely to help the actor who was unable to share a toy with them. These results indicate that infants prefer to help others who have previously intended to help them, even if the outcome is not positive. What has yet to be investigated, is whether youth perceive variability in intent in everyday prosocial interactions, and whether they are sensitive to those differences. It may be that individuals' perceptions of intent are linked to daily mood as well, such that perceiving an action as more prosocially motivated – that is, the actor's intention was to be nice to the recipient – may be associated with changes in daily mood. Since work with negative events has suggested that children's perception of negative intent is associated with greater negative affect, perceptions of positive intent might be associated with greater positive affect.

Predictors of Daily Prosocial Treatment

Since prosocial peer treatment is evidently a valuable predictor of youths' emotional adjustment, it is important to further understand who is likely to be targeted by these behaviours on a daily basis. Past research has demonstrated that other social experiences and reputations, such as victimization and peer preference, are associated with global measures of self- and peer-reported received prosocial behaviour (e.g., Bowker, 2014; Casper & Card, 2017; Griese & Buhs, 2014). Further, these relationships have also been demonstrated longitudinally (Stotsky et al., 2020; Troop-Gordon & Unhjem, 2018). Thus, there is reason to believe that certain social experiences and peers' perceptions may contribute to youths' likeliness of being targets of daily prosocial behaviours as well.

One social experience that may predict daily prosocial peer treatment is victimization. A negative association between victimization and received prosocial behaviour has been well documented (e.g., Casper & Card, 2017; Griese & Buhs, 2014; Martin & Huebner, 2007; Storch

& Masia-Warner, 2004). Troop-Gordon and Unhjem (2018) have also found that for boys, peer victimization is predictive of lower levels of prosocial peer treatment overtime. Conceptually, this inverse association is to be expected when placed in the larger context of peer relationships. While prosocial treatment represents a positive form of peer treatment, victimization represents a negative form. Taken together, these two behaviours may represent opposite ends of a spectrum of how youth are generally treated. Moreover, youth who receive prosocial treatment may be at reduced risk for peer victimization over time as a result of greater social inclusion and a higher likelihood of having defenders. Conversely, victimized youth may be viewed negatively and as unworthy of support, or even tend to withdraw from their peers, which may lead to decreased prosocial treatment. Interestingly, and particularly relevant to the current studies, in a daily-diary study with youth aged 10-13, peer-reported victimization did not predict daily positive social interactions (Sandstrom & Cillessen, 2003). While the researchers of this study did note that the positive events were intended as filler items and highlighted that the relationship should continue to be explored, it is also plausible that relationships with reputation measures of victimization may not emerge in daily-diary assessments because the short period of time assessed does not capture the same relative stability of behaviours. Thus, further examining associations between victimization and prosocial treatment using daily assessments is warranted.

Several studies have found evidence that there is a reciprocal relationship between prosocial treatment and prosocial behaviour, such that youth who act prosocially are more likely to be treated prosocially by others. This relationship has been shown both concurrently (Bowker, 2014; Griese & Buhs, 2014; Leadbeater et al., 2006) and longitudinally (Stotsky et al., 2020). Given the importance of forming close and supportive friendships in childhood and adolescence (Rubin et al., 2006; Schwartz-Mette et al., 2020), it may be that peers are more likely to direct

prosocial behaviour toward youth who they believe are likely to reciprocate. By examining associations between peer-nominations and daily reports of prosocial treatment, the present research can offer insight into whether having a reputation for acting prosocially predicts everyday occurrences of received prosocial behaviours from peers.

Peer acceptance – the degree to which a youth is well-liked by their peers – is also associated with the receipt of prosocial behaviour. Past work has found that greater peer acceptance is positively associated with prosocial treatment, both concurrently (Bowker, 2014; Leadbeater et al., 2006) and longitudinally (Stotsky et al., 2020). This relationship may exist, in part, because youth who receive prosocial treatment may generally be viewed more positively within peer groups. Further, it may also be that well-liked youth are targets of higher levels of prosocial behaviour due to peers' desires to be friends with preferred children and adolescents (Dijkstra et al., 2010; Thomas & Bowker, 2013). However, in a diary study of early adolescents, peer-reports of acceptance were not associated with youths' daily reports of positive interactions (Sandstrom & Cillessen, 2003). Therefore, it is important to further investigate whether youth are well-liked are likely targets of daily prosocial treatment.

A daily-diary design also allows for an examination of the concordance between peer and daily-diary reports of prosocial treatment. There is some evidence to suggest that peer and daily reports of other social experiences, such as victimization, are positively correlated. For example, Pellegrini and Bartini (2000a) found that children with a reputation for being victimized were also likely to report daily episodes of victimization. Youth who have a reputation for being victimized may experience highly salient negative peer events, and these observable incidents of mistreatment may then contribute to general dislike in the peer group (Coie, 1990). The reputation may then lead to more frequent daily peer victimization events. However, another

daily-diary study did not find an association between peer-reported and daily instances of victimization (Pouwels et al., 2016), and generally the correlation between self and peer-reports of victimization are at best moderate (Pellegrini & Bartini, 2000a; Pouwels et al., 2016; Scholte et al., 2013). Thus, it is unclear whether a reputation for being a target of frequent prosocial acts will result in greater daily received behaviours, and the inconsistency in findings with respect to victimization warrants further exploration into the concordance between peer and daily reports of prosocial peer treatment.

A critical next extension of work examining predictors of prosocial peer treatment is to investigate how the relationships described above translate into the amount of daily prosocial behaviours youth report receiving. Based on limited research to date and inconclusive findings when peer-reports have been compared to daily reports, this thesis will investigate associations between peer-reported victimization, prosocial behaviour, prosocial treatment, and acceptance and youths' own daily reports of received prosocial behaviours in an exploratory manner.

Gender Differences in Daily Prosocial Treatment and Its Associations with Daily Mood

Another goal of this thesis was to examine potential gender differences in everyday prosocial treatment. Previous work has found that girls tend to experience more prosocial treatment than boys when behaviours are measured over an extended period of time (e.g., Bowker, 2014; Crick & Grotpeter, 1996; Leadbeater et al., 2006; Troop-Gordon & Unhjem, 2018). Daily-diary studies assessing positive social events and prosocial treatment events have produced mixed results, with some studies finding evidence that girls are more likely to report these events (Flook, 2011; Sandstrom & Cillessen, 2003) while others find similar patterns of reporting across girls and boys (e.g., Schacter & Margolin, 2019a). Given that prosocial treatment is a relatively understudied construct and gender differences in daily assessments of

positive social experiences have been inconsistent, additional research is needed to better understand whether girls' and boys' day-to-day reports of received prosocial behaviours mirror global assessments. The design of the current studies will also allow for an examination of whether gender differences exist across the many forms of everyday prosocial treatment.

In the context of youths' daily lives, further work is needed to investigate gender differences in associations between prosocial treatment and mood. Compared to boys, girls value friendships and receive more emotional benefit from relationships (Rose & Asher, 2004; Rose & Rudolph, 2006). Accordingly, prosocial treatment may be associated with better daily mood for girls than boys, as these events may be especially salient and impactful in girls' daily lives. However, findings from longitudinal studies on prospective links between prosocial treatment and emotional adjustment have been inconsistent. Although Troop-Gordon and Unhjem (2018) found that prosocial treatment prospectively predicts lower levels of depressive affect for both boys and girls, results from a study by Griese and Buhs (2014) indicated that prosocial treatment only predicts lower levels of loneliness for girls but not boys. Evidence from daily-diary studies is limited, but one study did find that girls had greater fluctuations in mood than boys on days when they reported positive peer interactions such that experienced less negative and more positive affect (Flook, 2011). Since there is little evidence from daily-diary studies, and due to discrepancies in findings with respect to gender differences in prosocial treatment, gender was examined in an exploratory way in the current studies.

The Current Studies

The current studies use daily-diary approaches to examine the prosocial treatment events early adolescents experience, as well as predictors and outcomes of these behaviours. Gaining a more comprehensive understanding of prosociality in the everyday lives of youth will contribute

valuable knowledge to both the literature on prosocial treatment by peers and the literature on the links between social experiences and emotional outcomes. Considering that peer relationships take on heightened importance for youths' emotional well-being as they age (Larson et al., 1996) and that prosocial behaviour is a common occurrence in youths' lives (e.g., Crick & Grotpeter, 1996), gaining additional knowledge of prosocial treatment by peers could provide key insights that may ultimately help us better understand and improve youths' peer relationships.

Study 1 is an exploratory investigation of prosocial treatment in the everyday lives of early adolescents. A large sample of youth were called after school for 10 consecutive days and were asked whether anyone did anything kind for them and to report on their daily mood. All of these reported events were subsequently coded into categories of prosocial behaviour. We then assessed how overall frequency and distinct types of received prosocial behaviours, as well as youths' evaluations of perceived intent for these events, were associated with day-to-day changes in both positive and negative mood. Additionally, participants' reputations for victimization were assessed using peer nominations and examined in relation to prosocial treatment. The results describe commonly experienced received prosocial behaviours and provide insight into some of the relationships between predictors and correlates of prosocial treatment in early adolescence. In doing so, we advance our understanding of prosocial treatment during this developmental stage as well as how these behaviours relate to emotional adjustment.

Study 2 builds upon Study 1 by using the rich information of youths' experiences of prosocial behaviour that was collected in Study 1 and creates a checklist of these events – a much less time consuming method of administration. In this subsequent study, we examine the associations between prosocial treatment and daily mood in a sample of early adolescents in a different school setting – the final two years of elementary before the transition to high school.

This study also expands on Study 1 by investigating relationships between a wider array of behavioural characteristics and daily received prosocial events. Together, these studies provide rich qualitative and quantitative data regarding prosocial treatment, raise additional questions and directions of interest, and provide new tools that can be used in future research, including two daily-diary methodologies for assessing received prosocial behaviours.

Chapter 3: Prosocial Treatment by Peers in the Everyday Lives of Early Adolescents – Initial Investigation of Reported Experiences and Links to Emotional and Social Adjustment (Study 1)

The goals of this study were to advance our knowledge of early adolescents' everyday experiences of prosocial treatment by peers and to investigate the associations between these events, daily mood, and peer-nominated victimization. Using a daily-diary procedure, we asked early adolescents about their positive and negative affect and then administered a semi-structured interview focused on their receipt of prosocial behavior from peers, seeking to answer the following research questions: (1) What types of prosocial behaviors do early adolescents report receiving from their peers?; (2) Is daily receipt of prosocial behaviour associated with daily reports of positive and negative affect?; (3) Are specific types of prosocial events differentially associated with daily affect?; (4) Does perceived intention of prosocial treatment predict daily mood?; (5) Does a reputation for being victimized predict daily prosocial treatment? We also explored whether there are gender differences in both the receipt of prosocial behavior and in the daily associations between prosocial treatment and affect.

The first aim was to explore the types of prosocial behavior early adolescents report receiving. Based on the literature, we expected that participants would report early emerging prosocial behaviors such as helping, sharing, and comforting (Dunfield & Kuhlmeier, 2013), as well as other behaviours adolescents identify as prosocial, including inclusion, defending, and compliments (Bergin et al., 2003; Cotney & Banerjee, 2019). Second, past daily-diary studies examining the associations between daily positive events and mood suggest that the daily receipt of prosocial behaviour will be associated with greater positive affect and lower negative affect (Flook, 2011; Schacter & Margolin, 2019a). When examining the associations between the daily

receipt of prosocial behaviour and mood, we controlled for whether positive or negative affect was present when the event happened. We chose to do so because prosocial behaviours may be enacted in response to both positive (e.g., compliments) and negative affect (e.g., comforting). To develop a more nuanced picture of the connections between daily prosocial treatment and mood, we also explored whether these links varied across several types of prosocial events. We also planned to examine whether perceived intention of the actor's degree of prosociality was associated with daily mood. Third, given inconsistent findings in the literature, we explored associations between peer-nominated victimization and the receipt of daily prosocial events. Finally, we examined gender differences in total received prosocial behaviour, types of prosocial behaviours reported, and the relation between prosocial treatment and daily mood. Past research on the receipt of prosocial behaviour during adolescence has resulted in inconsistent findings concerning gender differences, making it important to continue exploring whether the everyday experience of prosocial treatment differs for boys and girls.

Methods

Participants were students attending Grade 7 in a high school in a large Canadian city. For three consecutive years in the Fall, consent forms were sent home to parents of all students in Grade 7 (N = 536) asking for written consent for participation in a school-based study. At this time, parents were also asked if they were interested in learning more about the daily-diary study. Two hundred and fifty-seven adolescents (47.9% of all Grade 7 students) participated in the daily-diary study (M age = 12.9, SD = .34, 63% female, 83% non-Hispanic White; 69.1% had a family income greater than $100,000/year, as reported by a parent).

Procedure

All procedures were approved by the relevant Research Ethics Boards. Written parental consent was obtained for all participants, who also provided written assent. Participants completed a daily-diary procedure, during which a female research assistant (RA) called them on the telephone for 10 consecutive school days. We only called participants on days they attended school to ensure they would have interacted with peers that day. If a participant missed school, we added an extra call to the end of the schedule. Due to the nature of the questions being asked, it was important that participants felt comfortable with the RA. Accordingly, participants received an introductory email from the RA assigned to them, which included her photograph and a brief description. The same RA made all 10 phone calls. Before beginning the daily-diary protocol, the RA had an introductory phone call with the family, during which they worked out the best time to make the call each day. These procedures yielded a high rate of compliance for the phone calls: 98.8% of youth completed all 10 calls. Most calls were completed in approximately 10 minutes.

Research assistants started each phone call by assessing daily mood using the 10-item version of the Positive and Negative Affect Scale for Children (PANAS-C; Ebesutani et al., 2012). Then, they asked participants "Did anyone do anything mean to you today?" If they said yes, the RA asked them a structured series of questions about each event. These data are not reported here. After probing about any mean events (i.e., victimization), the RA asked "Did anyone do anything nice for you today? This could include things that happened in person, or over text, or by email. If you aren't sure, you should tell me, and we'll figure it out." We chose to ask the question this way instead of using the term "prosocial" because "nice" is consistent with how adolescents talk about prosocial behaviour (e.g., Bergin et al., 2003; Cotney & Banerjee, 2019), as well as with the phrasing used in peer nomination procedures of prosocial

behaviour (e.g., Bowker, 2014). During the first few calls, the RA provided the participant with a brief description of nice events: "Nice things include sharing with you, comforting you or cheering you up, or helping you in some way. These things could have happened out of the blue, or maybe they were responding to something that you did."

If participants indicated that they had experienced such an event, the RA asked, "How many things like that happened today?" If participants reported they had experienced more than three such events, RAs told them "Let's think about the three best ones." For each event, RAs began by asking the participant "What happened?" To obtain enough detail, in the initial calls RAs also said, "Imagine we were making a movie, and this was a scene in the movie, tell me what I need to know to shoot the scene." Then, RAs asked participants a series of semi-structured questions assessing what happened, who did it, why the participant thought it happened, and what happened next. The interview manual can be found in Appendix A. All interviews were audio recorded and transcribed verbatim.

Lastly, in the spring, RAs visited the school to complete peer nomination measures. These measures were completed later in the school year in order to give students an opportunity to get to know each other. The measures were administered to participants while they were in class and RAs were available to answer any questions. Additional visits were scheduled to gather data from participants who were absent during the first data collection.

Measures

Daily Mood. Daily mood was assessed during each phone interview using the 10-item version of the Positive and Negative Affect Scale for Children (PANAS-C; Ebesutani et al., 2012). Five items each captured positive mood (i.e., joyful, cheerful, happy, lively, and proud; α=.86) and negative mood (i.e., miserable, mad, afraid, scared, and sad; α=.73). Participants were

asked to rate how often they felt that way for each emotion over the course of the day on a scale from 1 (very slightly or not at all) to 5 (very). Measures of daily positive affect and daily negative affect were created by averaging participants' ratings on the five corresponding items.

Prosocial Treatment by Peers. Participants' responses to the daily-diary interview were used to construct indices of daily prosocial treatment. Reliable coding systems were developed based on a review of the relevant literature (e.g., Bergin et al., 2003; Crick & Grotpeter, 1996; Dunfield & Kuhlmeier, 2013), as well as the interview data. Six female coders who had no previous contact with the participants or their data were trained to code the descriptions of the prosocial events. Training was conducted after extensive discussion with the senior investigators of the study. Four coders were trained on the coding system through practice coding and meetings with two lead coders until they reached the criteria of k = .80 on all codes. Coders read through each of the adolescents' descriptions of the events at least once before attempting to code. Coders were encouraged to read and re-read the descriptions as many times as needed to accurately code all aspects of the events. Coding was also monitored with reliability checks by the head coders to avoid observer drift and assure that kappas were maintained at high levels throughout the coding process. In total, 19.5% of episodes were double coded to calculate reliability estimates.

(1) Presence of a Prosocial Event. RAs coded whether the event described was prosocial (k = .94). Prosocial events were coded when the participant described a peer engaging in a behaviour that benefited them in some way (Hay, 1994).

(2) Type of Prosocial Event. Events classified as prosocial were then further coded into specific categories describing the type of event. Seven categories were identified. Helping behaviours were defined as acts that involved peers giving time, information, or material goods

to support participants in achieving an instrumental goal. Examples of this category included receiving support from a peer to complete homework or receiving a reminder for an upcoming due date of an assignment. Sharing actions involved a peer giving up a resource(s) to the participant to meet a material desire. An example of sharing is a friend sharing their cookies with the participant at lunch. Comforting was coded when a participant described a peer trying to alleviate their emotional distress or elevate their mood. Comforting behaviours nearly always (92.4%) occurred in the presence of negative affect. For example, a peer trying to cheer up a participant after they received a poor grade on a test was coded as comforting. However, comforting was also coded when a peer attempted to increase positive affect even when no negative affect was present (e.g., showing the participant a funny video to make them laugh), as the act was intended to elevate the participant's mood. Cooperating was defined as behaviours involving two people working together to achieve a shared goal. For example, two classmates working together on an assignment with which they are both struggling was coded in this category. Inclusion behaviours were defined as actions by peers involving the participant in an activity or event, or providing the participant with companionship. Inclusion was coded when participants were asked to join a group game, or when a peer waited while a participant finished lunch. Defending was coded when peers stood up for or protected a participant from harm. For example, defending was coded when a peer spoke up when the participant was being teased. Finally, compliments were defined as positive verbal expressions of praise, acknowledgement, or admiration. Examples of compliments include "I really like your new hair" or "you did really good during that presentation." All kappas exceeded .80. See Table 1 for examples, frequencies, and kappas of all categories. Nearly all events (99.7%) were coded into at least one category; 5.3% of events were coded into multiple categories.

(3) Antecedent Positive and Negative Affect. Review of the events reported indicated that both positive and negative affect preceded prosocial events. For example, a friend may have comforted a participant who was upset about having done poorly on a test (i.e., antecedent negative affect) or complimented a participant who had just won a race at a swim meet (i.e., antecedent positive affect). To clarify the extent to which the prosocial treatment was linked to daily mood, rather than the context in which the event occurred, we coded each event for whether negative (κ=.73) or positive (κ=.73) affect was present prior to the receipt of a prosocial behaviour. Antecedent positive affect was present for 8.3% of events whereas antecedent negative affect was present for 34.2% of events.

Perceived Intention. For each prosocial event they described, participants were asked about the actor's prosocial intention, "Do you think the person meant to be nice?", and provided a rating from 1 (not at all) to 5 (very).

Peer Victimization. Participants' reputation for victimization was assessed with peer nominations. Participants were presented with a range of descriptions of behaviors, which were each paired with a list of 60 random participating students within their cohort (Bellmore et al., 2010). Participants made unlimited nominations for each item and were then asked to rate whether the behaviour occurred for each nominee "sometimes" or "a lot" (Ladd & Kochenderfer-Ladd, 2002). A total of five descriptions that assessed physical, verbal, relational, and general victimization were drawn from established peer nomination measures (e.g., Dirks et al., 2017; Ladd & Kochenderfer-Ladd, 2002). One item asked about physical victimization (i.e., "Someone who gets hit or pushed by other kids"), one item tapped into verbal victimization (i.e., "Someone who gets teased, called names, or made fun of by other kids"), two items assessed relational victimization (i.e., "Someone who other kids gossip about or say bad things behind

his/her back"; "Someone who is excluded by a group of friends or given the 'silent treatment'"), and the final item described general victimization (i.e., "Someone who gets picked on by other kids"). Youth were also given a list of all participating students and were instructed to cross out the name of anyone they did not know (Bellmore et al., 2010). When this occurred, students were not counted as having been on those rosters. Scores for each item were calculated by adding up the number of nominations participants received and dividing by the number of raters. Peer-nominated victimization was calculated by averaging participants' scores across all five items and mean scores were standardized within cohort ($\alpha = .86$).

Data-Analytic Plan

First, we examined the frequencies of reported prosocial events, as well as gender differences in the report of daily prosocial treatment. We then computed summary scores of prosocial treatment. Specifically, we constructed an overall prosocial treatment variable by summing the number of events reported each day. Scores ranged from 0 to 3, which was the maximum number of prosocial events participants could report. Further, we constructed daily totals for specific types of prosocial events (e.g., total number of comforting events), as well as total events in which antecedent positive affect was present, and total events in which antecedent negative affect was present. Scores occurring on fewer than 1% of days were recoded to the next highest value. For example, a score of 3 for compliments (i.e., a participant reported three separate events involving compliments) occurred on only one day, thus it was recoded to 2. Defending occurred on only 0.7% of days and was thus not considered as a discrete type of event.

Associations between Prosocial Treatment and Daily Mood. We used these variables to examine the daily associations between prosocial treatment and mood. In these data, days

were nested within participants, thus we used MPlus 8.0 (Muthén & Muthén, 2008-2016) to construct a two-level model using the MLR estimator, which is robust to non-normality. We began by fitting a null model in which we let PA and NA vary within and between participants, to determine whether there was significant variability in affect across days. Then, we constructed a series of models examining the associations between daily prosocial treatment and mood. PA and NA were included simultaneously as dependent variables in all models. In the first model, the primary predictor of interest was daily sum of prosocial behaviours reported. In subsequent analyses, total scores for each of helping, compliments, sharing, inclusion, comforting, and cooperating were included as independent variables in separate models. We estimated random effects for each of these predictors. When the effect varied significantly across participants, we planned to examine whether gender was a significant predictor of the associations.

We also tested whether perceived intention of how nice the actor meant to be predicted daily PA and NA. Since perceived intention was assessed in the context of an event, we only tested the association on days when participants had reported at least one event. A daily average score of perceived intention across participants' events was calculated. Next, we person-centered these scores for each day, and used the resulting variable in the model. Random effects of perceived intention on PA and NA were also estimated.

Associations between Victimization and Daily Prosocial Treatment. In this model, daily scores of prosocial treatment served as the dependent variable and peer nominations of victimization were the primary predictor. We again began by fitting a null model in which we let the prosocial treatment variable vary within and between participants, to determine whether there was significant variability in prosocial treatment across days. We included victimization scores as between-participant predictors to examine whether they predicted receiving prosocial

treatment on a daily basis. Since prosocial treatment was the dependent variable, this model also tested whether daily prosocial treatment differed by gender.

In all multilevel models described above, day, which was continuously coded with the first day = 0 was included as a within-participant covariate. Additionally, in the models examining associations between prosocial treatment and mood, we included two other within-participant covariates: (1) participants' report of positive and negative affect from the previous day, which allowed us to examine how prosocial treated predicted changes in daily affect (Schacter & Margolin, 2019a) and (2) daily totals for antecedent positive and negative affect. In a preliminary model, we tested whether the association between each of the covariates and positive and negative affect varied significantly across participants, and we included those random effects in the models testing our predictors of interest. Moreover, daily scores for the overall prosocial treatment variable were included as a within-participant covariate in the model examining perceived intention. In all models, gender (dummy coded, 0 = male) was a between-participants predictor, and cohort, which was mean-effect coded, was a between-participants covariate.

Results

Frequency of Daily Prosocial Treatment

Across the 10 days of data collection the 257 participants reported receiving 1918 prosocial events. The average number of events reported per participant was 7.5 (*SD* = 4.34), and 96.1% of participants reported receiving at least one event. Across all reported events, helping was coded for 41.2% of the events, followed by compliments (22.6%), inclusion (16.5%), sharing (15.0%), comforting (6.7%), cooperating (2.2%), and defending (1.0%). More than half of the participants reported experiencing at least one event each of helping (81.3%), compliments

(64.6%), inclusion (51%), and sharing (52.9%) across the 10 days. Reports of at least one event of comforting (31.1%), cooperating (14%), and defending (6.6%) over the course of the study were less frequent.

The average number of prosocial events as a function of gender are presented in Table 2. Girls reported more prosocial events than did boys, $t(255) = 4.58$, $p < .001$. Compared to boys, girls also reported receiving more compliments, $t(255) = -2.87$, $p = .004$; sharing, $t(255) = -2.88$, $p = .004$; comforting, $t(255) = -3.86$, $p < .001$; and helping, $t(255) = -2.00$, $p = .048$. Gender was also associated with peer-nominated victimization, such that boys were rated as more victimized than girls. Within- and between-person correlations among the main variables in the study are found in Table 3.

Associations between Prosocial Treatment and Daily Mood

Due to interviewer error or participants missing the call, across all participants, we did not have daily mood ratings on 14 days. Moreover, including previous day's affect as a covariate meant we had to exclude Day 1 from the multilevel analyses. Thus, these analyses were based on 2296 days nested within 257 participants. We began by testing a null model in which the intercepts of PA and NA were allowed to vary within- and between-participants. The Intraclass Correlation Coefficient (ICC) for NA, which is a measure of how much variance is between participants, was .47, which indicated that 53% of the variance was within participants. The intercept, or average level, of NA was 1.31 ($SE = .02$). The variance within participants was 0.11, $p < .001$, and the variance between participants was 0.10, $p < .001$. For PA, the ICC was .72, which indicated that 28% of the variance was within participants. The intercept for PA was 3.60 ($SE = .04$), and the variance within and between participants was 0.19 and 0.48, respectively, ps $< .001$. Further preliminary analyses revealed that the association between day

and positive affect varied significantly across participants. Thus, this random effect was included in these models.

Results of the model examining the overall associations between prosocial treatment and PA and NA are presented in Table 4. Total number of prosocial events received was associated with daily PA, $B = 0.04$, $p = .027$. In other words, participants reported greater PA on days when they received more prosocial behaviour, even after accounting for PA on the previous day. Antecedent positive affect – that is, positive affect described as being present before the prosocial event occurred – was also associated with greater PA, $B = 0.18$, $p < .001$. Receipt of prosocial behaviour was not associated with daily NA, $B = -0.01$, $p = .56$. Daily NA was also not associated with antecedent negative affect, $B = 0.02$, $p = .30$, or with antecedent positive affect, $B = .03$, $p = .34$. Neither the association between received prosocial behavior and positive affect and negative affect varied across participants; variance = 0.005, $p = 0.29$ and variance = 0.001, $p = .90$, respectively. Given this homogeneity, we did not test whether gender predicted either of these associations.

Table 5 reports a summary of the results of our multilevel regressions examining the associations between specific types of prosocial events and PA and NA. Full results of each model are presented in tables in Appendix B. None of the event types were associated with PA. In contrast, reports of helping and inclusion events were associated with lower NA ($B = -0.04$, $p < .01$, $B = -0.05$, $p = .031$, respectively), whereas comforting was associated with greater NA, $B = 0.18$, $p < .01$. We estimated random effects for all of the associations between distinct types of received prosocial behavior and both PA and NA. Only the association between comforting and NA varied significantly across participants, variance = 0.05, $p = .021$. We ran a subsequent model in which we included gender as a predictor of this slope, finding it to be non-significant, B

= -0.06, p = .49. This result suggests that the daily association between comforting and NA is similar for boys and girls.

Associations Between Intention and Daily Mood

Results of the model examining the associations between perceived intention and daily mood are presented in Table 6. This model, which only included days with at least one prosocial event, was based on 1338 days nested within 241 participants. Daily person-centered averages of perceived intention were not associated with daily PA, B = -0.02, p = .27, or NA, B = -0.01, p = .66. Neither the association between perceived intention and positive affect and negative affect varied across participants; variance = 0.00, p = 0.91 and variance = 0.00, p = .71, respectively. Given this homogeneity, we did not test whether gender predicted either of these associations.

Associations Between Victimization and Daily Levels of Prosocial Treatment

We began by testing a null model in which the intercept of daily prosocial treatment was allowed to vary within- and between-participants. The null model indicated that the ICC for prosocial treatment was .31, signifying that 69% of the variance was within participants. The intercept, or average level, of prosocial treatment was 0.75 (SE = .03). The variance within participants was 0.34, p < .001, and the variance between participants was 0.15, p < .001.

Results of the model examining the associations between peer-nominated victimization and daily levels of prosocial treatment are presented in Table 7. Gender was the only significant predictor, B = 0.23, p < .001, such that girls reported receiving more day-to-day prosocial behaviors. Victimization was not associated with daily prosocial treatment, B = -0.04, p = .13.

Discussion

The current study provided rich qualitative and quantitative information on prosocial treatment by peers in early adolescence, as well as insights into how these events are associated

with markers of daily well-being. Using a daily-diary approach, this study identified and described (1) the categories, frequencies, and gender differences of everyday received prosocial events early adolescents report experiencing; (2) the association between reputations for victimization and daily reports of received prosocial behaviours; (3) the daily associations between specific types of prosocial treatment, as well as evaluations of perceived intention for these events, and positive and negative mood. Since the data was obtained from youths' own daily reports, the descriptions of events are representative of early adolescents' everyday experiences with received prosocial behaviour.

The Nature and Frequency of Everyday Prosocial Treatment

A primary goal of the current study was to gain a better understanding of the daily prosocial treatment behaviours youth report experiencing when asked in an open-ended manner. Findings regarding the overall frequency of received prosocial behaviour revealed that 96.1% of participants reported experiencing at least one event over the course of 10 days. Building on findings from past daily-diary studies that youth are commonly involved in positive interactions with peers (e.g., Flook, 2011; Sandstrom & Cillessen, 2003), our results suggest that prosocial treatment is one set of behaviours that regularly occur in these exchanges. Further, given that youth increasingly spend time with peers and rely on them as their primary source of social support (La Greca & Harrison, 2005), the high incidence of prosociality in this sample of early adolescents is unsurprising.

Prosocial treatment is typically assessed using global ratings at a single time point (e.g., Compian et al., 2009; Leadbeater et al., 2006; Storch & Masia-Warner, 2004) and sometimes using a single item (e.g., Bowker, 2014; Stotsky et al., 2020). The current findings extend previous work by asking youth to recall received prosocial behaviours through multiple daily

reports. The descriptions of events gathered through the diaries, and subsequent coding procedures, allowed us to classify and independently examine the diversity of behaviours. Moreover, the events represent behaviours youth themselves consider to constitute prosocial treatment, which likely strengthens the ecological validity of the present research (El Mallah, 2020). Review of the literature indicated that early adolescents would likely not only identify the well documented early emerging prosocial behaviours of helping, sharing, and comforting (Dunfield et al., 2011; Dunfield & Kuhlmeier, 2013), but that they would also describe other behaviours that focus groups of youth have identified as important, such as inclusion, defending, and compliments (Bergin et al., 2003; Cotney & Banerjee, 2019).

As hypothesized, early adolescents described many instances of prosocial treatment that correspond to helping, sharing, and comforting. The most frequently reported prosocial behaviour across all events was helping (41.2%). Sharing (15%) and comforting (6.7%) were also identified in the descriptions of events, though were reported much less often than helping. Taken together, these findings suggest that helping, sharing, and comforting are behaviours that emerge in early childhood (Dunfield et al., 2011) and remain relevant examples of prosociality in early adolescence (Bergin et al., 2003; Cotney & Banerjee, 2019). The second and third most common prosocial treatment behaviours youth described were compliments (22.6%) and inclusion (16.5%). Although these behaviours have received less attention in the prosocial literature, it is not surprising that compliments and inclusion emerged as common events given the salience of peer relationships during this developmental period. The prevalence of these behaviours likely attests to the growing importance of the opinions and approval of peers in adolescence (La Greca & Harrison, 2005) and reflects youths' efforts to affiliate with one another. Additionally, the high prevalence of compliments and inclusion contribute to our overall

understanding of the nature of prosocial treatment and will inform future assessments of the construct. Finally, early adolescents reported experiencing instances of cooperating (2.2%) and defending (1%) relatively infrequently. One explanation for the low prevalence of these events may be that because cooperation involves the participants' own efforts and defending is usually enacted in the context of negative events such as victimization, youth may have been less likely to report these behaviours in response to the prompt used to elicit examples of prosocial treatment ("Did anyone do anything nice for you today?").

Associations Between Prosocial Treatment and Daily Mood

Another goal of this study was to examine day-to-day associations between prosocial treatment by peers and mood. As hypothesized, daily reports of overall received prosocial behaviours were associated with day-to-day changes in positive affect. However, contrary to hypotheses, overall reports were not associated with daily negative affect. This pattern of results is both consistent and inconsistent with past daily-diary studies investigating other types of positive events such that we only found an association with increased daily positive affect whereas other studies have also found associations with decreased negative affect (Flook, 2011; Schacter & Margolin, 2019b). We also explored whether each type of prosocial treatment behaviour was associated with daily mood. Across all seven categories of prosocial behaviour, associations between daily reports of events and positive mood did not emerge. This was somewhat surprising to us given that existing research has found that prosocial treatment is related to better emotional adjustment (e.g., Griese & Buhs, 2014; Martin & Huebner, 2007; Troop-Gordon & Unhjem, 2018). The discrepancy in findings may be due, in part, to differences in methodologies between past studies and the current one. Specifically, documented links with positive emotional adjustment have typically used summary measures of prosocial treatment that

do not differentiate between different types of behaviours. These results are in fact consistent with evidence from the current study that the overall daily sum of received prosocial behaviours is associated with increased positive mood. In sum, the current results suggest that experiencing prosocial treatment in general impacts youths' well-being more than any specific type of behaviour.

We also found that helping, inclusion, and comforting were associated with negative mood in both unsurprising and less straightforward ways, suggesting that prosocial treatment has a complex relationship with emotional adjustment. Helping and inclusion were linked to day-to-day decreases in negative affect, which is line with other studies that have demonstrated relationships between youths' prosocial treatment and lower levels of more global measures of negative affect (e.g., Martin & Huebner, 2007). Conversely, daily instances of comforting were associated with increased negative affect. Possible explanations for this result should be considered in light of the fact that comforting is often directed to individuals in emotional distress (e.g., Svetlova et al., 2010). Thus, it may be that increased negative affect points to the presence of youths' possibly intense negative mood on days they reported being comforted by a peer rather than indicating that the act of comforting itself adversely impacts mood. Taken together, the associations between prosocial treatment and negative mood highlight that although prosocial behaviours are intended to confer benefit (Eisenberg et al., 2006; Hay, 1994), they are enacted in the broader context of an individual's current circumstances, which may be positive, such as winning a game, or negative, such as struggling with classwork, being excluded, or losing a loved one.

Finally, there were no significant associations between perceived prosocial intention of the actor in youths' reported events and daily positive and negative mood. Although studies have

found evidence that perceived hostile intent of negative events, such as victimization, is associated with emotional distress (Crick et al., 2002; Mathieson et al., 2011; Nelson et al., 2018; Wright, 2017), an opposite yet similarly straightforward pattern for intent evaluations of prosocial treatment was not found. It is possible that this pattern was not found because of fundamental differences between prosocial and negative interactions. For example, in the current study, because of the way the prompt was phrased ("Did anyone do anything nice for you today?"), youth only reported events that they at least to some degree perceived as prosocial. Thus, it is reasonable to assume that youth generally viewed the event as positive or as conferring some benefit. In contrast, perceived hostile intent represents varying degrees of the actors' intended harm to the youth and is measured in the context of adverse events. As such, early adolescents' evaluations of whether peers' truly intended to be prosocial may not have any observable impact on daily mood because intent is less connected to the outcome. However, it is important to note that to the best of our knowledge, this was the first study to examine links between evaluations of daily prosocial behaviour and mood, and additional research is clearly needed to investigate these relationships.

Victimization and Daily Reports of Prosocial Treatment

In the current sample of early adolescents, peer-reported victimization was not associated with daily levels of prosocial treatment. In other words, youth with reputations for being highly victimized did not report less frequent received prosocial behaviour than their less victimized peers. Although some studies have demonstrated links between global assessments of victimization and prosocial treatment (e.g., Casper & Card, 2017; Griese & Buhs, 2014; Leadbeater et al., 2006; Troop-Gordon & Unhjem, 2018), findings from at least one other daily-diary study are consistent with our results (Sandstrom & Cillessen, 2003). These contradictory

findings indicate that further research is needed to better understand the more proximal day-to-day associations between victimization and prosocial treatment. Furthermore, the current findings add to a growing body of work suggesting that victimization and prosocial treatment are relatively independent experiences, and both should continue to be investigated.

Gender Differences in Daily Prosocial Treatment and Its Associations with Daily Mood

An overall pattern of gender differences emerged that was consistent across nearly all of the categories of everyday prosocial treatment. Overall, girls reported higher frequencies of prosocial treatment events than boys, as well as more occurrences of helping, compliments, sharing, and comforting. Similarly, there was also a trend that girls reported more inclusion events than boys. Cooperation and defending did not differ between boys and girls. However due to the low frequencies of both of these events, further research directly assessing these behaviours is warranted. These results expand upon previous findings that, when assessed over longer periods of time, girls experience more prosocial treatment than boys (e.g., Bowker, 2014; Leadbeater et al., 2006; Troop-Gordon & Unhjem, 2018).

Gender differences in the associations between daily reports of received prosocial behaviours and mood were not formally tested as we did not find evidence that associations between day-to-day prosocial treatment and positive and negative affect varied across participants. The lack of variability across participants was inconsistent with daily-diary research suggesting that girls are more emotionally reactive to positive interpersonal events than boy (Flook, 2011), though perhaps consistent with evidence that the relationship between prosocial treatment and emotional adjustment does not differ by gender (Troop-Gordon & Unhjem, 2018). Our findings unfortunately did not provide clarity into the discrepancies in findings in the

literature and point to the need for more research examining gender differences in links between prosocial treatment and daily measures of emotional adjustment.

Conclusion

The daily-diary approach used in Study 1 provided us with a unique opportunity to explore what received prosocial behaviours look like in the daily lives of early adolescents. In summary, Study 1in this thesis collected descriptive information about early adolescents' everyday experiences of prosocial treatment in the context of peer relationships and classified the events into distinct categories of behaviours. Results suggested that early adolescents frequently experience prosocial treatment and that these events are linked to daily mood in both straightforward and more nuanced ways. Importantly, the findings also provide a catalogue of commonly reported daily events from which future measures of received prosocial behaviours can be created.

Table 1

Early Adolescents' Reported Everyday Prosocial Treatment Events: Categories, Examples, Frequencies, and Inter-Rater Reliability

Category	Example	% of Total Prosocial Events Reported	κ
Helping	My friend helped me study for a test	41.2	.88
Compliments	"Oh, you got new shoes. They're nice."	22.6	.92
Inclusion	I was eating lunch by myself and a girl came and ate her lunch with me.	16.5	.90
Sharing	My friend had a bag of cookies and he gave some to me.	15.0	.81
Comforting	I had a test and I was scared I wouldn't do well and my friend cheered me up.	6.7	.87
Cooperating	This girl and I worked together to solve a math problem.	2.2	1.0
Defending/Protecting	A kid in my class started singing happy birthday to me to distract the teacher from the fact that I did not have the math book I was supposed to bring.	1.0	1.0

Table 2

Mean (SE) Number of Prosocial Treatment Events Reported by Girls and Boys

	Girls (N = 155)	Boys (N = 102)	t (255)	p
Total	8.43 (0.35)	5.99 (0.39)	---	---
Helping	3.35 (0.23)	2.66 (0.25)	-2.00	.048
Compliments	1.99 (0.16)	1.24 (0.21)	-2.87	.004
Inclusion	1.41 (0.16)	0.96 (0.15)	-1.96	.051
Sharing	1.34 (0.14)	0.77 (0.11)	-2.88	.004
Comforting	0.68 (0.09)	0.24 (0.05)	-3.86	<.001
Cooperating	0.14 (0.05)	0.19 (0.05)	0.99	.323
Defending	0.09 (0.02)	0.05 (0.02)	-1.12	.266

Table 3

Bivariate Correlations Among Main Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Positive Affect	-	-.27***	.09	-.10	.23**	.01	-.06	-.04	.09	.12	-.05	.00	.05	-.07	-.05
2. Negative Affect	-.26***	-	.14	.03	-.05	.31	.37	.04	.51	-.03	-.14	.00	.08	.05	.22**
3. All events	.06**	-.01	-	.43	.68***	.58	.52	.45	.49	.38	-.40	.00	.30***	-.09	-.17*
4. Compliments	.08***	.04*	.40***	-	-.10	-.08	.39	.17	.29	-.11	-.21	-.00	.21*	-.18*	-.10
5. Helping	-.01	-.05*	.46***	-.17**	-	.42***	.07	-.08	.32	.43	-.32	.00	.15*	-.11	-.12*
6. Sharing	.01	.02	.28*	-.04	-.15	-	.44	.08	.04	.00	-.37	.00	.23	-.04	.00
7. Comforting	-.04	.08*	.18	.06	-.04	-.04	-	.30	.32	.02	-.40	-.00	.38	-.08	-.05
8. Inclusion	.02	-.03	.27***	-.10	-.10	-.10	-.04	-	.27	.38	.07	.00	.14	.10	-.12
9. Defending	-.02	.03	.05	-.01	-.06	-.00	.03	-.00	-	.57	-.19	.00	.17	-.14	.15
10. Cooperating	-.02	-.02	.11	-.01	.01	-.03	-.03	-.04	.02	-	-.07	.00	-.14	-.19	-.08
11. Perceived Intention	-.01	-.02	-.03	-.00	-.03	.02	.03	-.05	-.01	.03	-	-.01	-.18	.08	.07
12. Day	-.02	-.01	-.20***	-.08***	-.10***	-.06**	-.04*	-.04	-.01	-.01	-.01	-	-	-	-
13. Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	.07	-.27***
14. Cohort	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.00
15. Peer-Nominated Victimization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes. Within-person correlations are shown below the diagonal, and between-person correlations are shown above the diagonal.
$^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$

Table 4

Results of a Multilevel Regression Examining Daily Associations Between Prosocial Treatment by Peers and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	2.94	0.14	<.001	1.19	0.09	<.001
Within participants						
Prosocial treatment	0.04	0.02	.027	-0.01	0.02	.555
Antecedent positive affect	0.17	0.05	<.001	0.03	0.03	.340
Antecedent negative affect	-0.04	0.02	.100	0.02	0.02	.300
Prior day positive affect	0.18	0.03	<.001	-0.01	0.02	.525
Prior day negative affect	-0.04	0.04	.282	0.11	0.03	.002
Day	0.00	0.00	.976	-0.01	0.00	.070
Between participants						
Gender	0.05	0.08	.505	0.03	0.03	.356
Cohort 1	0.02	0.05	.778	-0.01	0.02	.593
Cohort 2	0.06	0.05	.243	-0.03	0.02	.199

Notes. B = unstandardized regression coefficient, *SE* = standard error. Prosocial treatment is the total number of prosocial behaviors across all categories that participants reported receiving each day (range of 0-3). Antecedent positive and negative affect is the daily total number of events that participants described positive or negative affect being present prior to the prosocial behaviour. Prior day positive and negative affect is the participants' report from the previous day. Day is coded continuously with the first day = 0. Gender is dummy coded with males = 0. Cohort is the year that participants participated in the study and is mean effect coded. Preliminary analyses revealed that the associations between day and positive affect varied significantly across participants. Thus, this random effect is included in the model, as is the random effect of prosocial treatment on positive and negative affect.

Table 5

Summary of Results from Multilevel Regressions Examining Daily Associations Between Distinct Types of Prosocial Treatment and Daily Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Helping	0.03	0.02	.223	-0.04	0.02	<.01
Compliments	0.02	0.03	.473	0.04	0.03	.090
Inclusion	0.05	0.03	.096	-0.05	0.02	.031
Sharing	0.02	0.04	.554	0.03	0.03	.429
Comforting	-0.08	0.06	.168	0.18	0.06	<.01
Cooperating	-0.05	0.07	.534	-0.09	0.08	.225

Notes. Results are shown for six multilevel models that separately examined each category of prosocial behaviour. *B* = unstandardized regression coefficient, *SE* = standard error. Antecedent positive and negative affect, prior day affect, and day are included as within participant covariates in each of the separate models. Gender (dummy coded male = 0) is included as a between participant predictor and cohort (mean effect coded) is included as a between person covariate. Random effects of each type of received prosocial behaviour on positive and negative affect are included in the models, as well as the random effect of day on positive affect. Full results of each model are found in Appendix B.

Table 6

Results of a Multilevel Regression Examining Daily Associations Between Perceived Intention of Prosocial Treatment Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	2.39	0.29	<.001	0.95	0.15	<.001
Within participants						
Perceived intention	-0.02	0.02	.27	-0.01	0.02	.66
Prosocial treatment	0.05	0.04	.16	-0.00	0.03	.90
Prior day positive affect	0.35	0.07	<.001	-0.01	0.03	.71
Prior day negative affect	-0.05	0.06	.43	0.31	0.07	<.001
Day	-0.00	0.00	.38	-0.00	0.00	.62
Between participants						
Gender	-0.00	0.07	.95	0.04	0.03	.26
Cohort 1	-0.03	0.05	.51	-0.01	0.03	.84
Cohort 2	0.07	0.05	.12	-0.03	0.02	.15

Notes. This model only included days that participants reported at least one event (1138 days nested in 241 participants). *B* = unstandardized regression coefficient, *SE* = standard error. Perceived intention is participants' daily average rating across reported prosocial treatment events; daily scores are person-centred. Prior day positive and negative affect is the participants' report from the previous day. Day is coded continuously with the first day = 0. Gender is dummy coded with males = 0. Cohort is the year that participants participated in the study and is mean effect coded. Random effects of perceived intention on positive and negative affect are included in the model, as well as the random effect of day on positive affect.

Table 7

Results of a Multilevel Regression Examining Associations Between Peer-Nominated Victimization and Daily Prosocial Treatment

	Prosocial Treatment		
	B	*SE*	*p*
Intercept	0.79	0.05	<.001
Within participants			
Day	-0.04	0.00	<.001
Between participants			
Peer-Nominated Victimization	-0.04	0.02	.13
Gender	0.23	0.06	<.001
Cohort 1	0.09	0.04	.03
Cohort 2	-0.06	0.04	.10

Notes. *B* = unstandardized regression coefficient, *SE* = standard error. Peer-nominated victimization scores are standardized within cohort. Prior day positive and negative affect is the participants' report from the previous day. Day is coded continuously with the first day = 0. Gender is dummy coded with males = 0. Cohort is the year that participants participated in the study and is mean effect coded.

Chapter 4: Prosocial Treatment by Peers in the Everyday Lives of Early Adolescents – Examining Links to Emotional and Social Adjustment Using a Novel Daily Checklist (Study 2)

The second study of this thesis investigates everyday experiences of prosocial treatment by peers and associations with daily mood and social reputations in a sample of early adolescents in a different school setting than Study 1. It expands upon Study 1 in three ways. First, this study employs a checklist of prosocial treatment events that was created using the rich information about youths' reported experiences gathered in Study 1. While assessing received prosocial behaviours through daily interviews is an effective way to gather rich qualitative descriptions of events, checklists are a more commonly used assessment tool in daily-diary studies (e.g., Flook, 2011; Morrow et al., 2014). An advantage of this alternative method is that having participants complete checklists rather than interviews is more efficient and less labour intensive. Furthermore, indicating whether an event happened or not based on a menu of options relies on participants' recognition as opposed to their recall, which may lead to a better understanding of the scope of prosocial events youth experience daily. The checklist used in this study is also in line with a recent argument that prosocial behaviour should be assessed through the eyes of youth when studying this age group (El Mallah, 2020). Thus, assessing everyday prosocial treatment using a checklist based on previously collected data of youths' actual experiences can provide additional information on these experiences, as well as preliminary evidence for a new measure of this construct.

Second, we examine everyday prosocial treatment experiences of youth in a different school context. This sample of early adolescents were in the two most senior years of elementary whereas participants in Study 1 were in their first year of high school. While early adolescents in

the later years of elementary typically have spent many years with similar peer groups that are largely intact throughout the day, the transition to high school is a particularly challenging period for youth accompanied by many changes to peer groups and interactions (Pellegrini & Bartini, 2000b). Given that prosocial treatment by peers is related to better adjustment, it may be that the everyday associations between these events, daily mood, and social reputations vary depending on youths' broader peer context. The results of this study may provide valuable insights regarding potential contextual differences in how prosocial treatment by peers is linked to adjustment, including how specific types of events may be differentially associated with mood during different stages of school.

Third, Study 2 also expands on Study 1 by examining additional peer-reported behavioural and social reputations that may predict receipt of prosocial treatment. Youth can develop a number of reputations, both positive and negative, and there is evidence that some of these peer perceptions are associated with summary and peer assessments of received prosocial behaviours (e.g., Bowker, 2014; Casper & Card, 2017; Leadbeater et al., 2006; Stotsky et al., 2020; Troop-Gordon & Unhjem, 2018). Moreover, reputations can sometimes translate into the frequency or likelihood of daily social experiences (Pellegrini & Bartini, 2000a). Therefore, exploring predictors of daily prosocial treatment by peers may provide insight into which youth are likely to be targeted by prosocial behaviours.

The goals of the current study were to examine everyday experiences of prosocial treatment by peers in early adolescents, to explore links with daily mood, and to identify potential predictors of daily receipt of these events. We created a novel daily checklist to assess received prosocial behaviours to answer the following research questions: (1) What types of prosocial behaviours do youth identify receiving?; (2) Is daily receipt of prosocial behaviour

associated with daily reports of positive and negative affect?; (3) Are specific types of prosocial events differentially associated with daily affect?; (4) Does perceived intention of prosocial treatment predict daily mood?; (5) Do peer-reports of reputations for victimization, prosocial behaviour, prosocial treatment, and likability predict daily prosocial treatment? Consistent with Study 1, we also explored gender differences across these questions.

The first goal of this study was to assess prosocial treatment by peers using a newly developed checklist of behaviours, which also allowed us to gather initial information regarding the feasibility of this tool. Drawing on results from Study 1, we expected that youth in the current sample would frequently endorse receiving the full variety of prosocial behaviours early adolescents described. Results from Study 1 indicated that links between daily receipt of prosocial behaviour and positive and negative affect are not straightforward and vary depending on the type of event; thus, we continued to explore connections between daily prosocial treatment, as well as participants' evaluations of prosocial intent of these events, and mood. Although the existing literature suggests that targets of prosocial treatment are less likely to be victimized (e.g., Casper & Card, 2017; Troop-Gordon & Unhjem, 2018), having a reputation for being victimized was not related to received prosocial behaviours in Study 1. Given these inconsistent findings, we continued to explore associations between peer-nominated victimization and daily prosocial treatment, as well as relationships between other peer-rated reputations (i.e., engaging in prosocial behaviour, acceptance, prosocial treatment) and the frequency of daily received prosocial behaviours. Conversely, we expected that youth who are perceived by their peers as frequently engaging in prosocial behaviour, as well-liked, and as common targets of prosocial behaviour would report more day-to-day occurrences of prosocial treatment. Finally, we expected based on our previous findings that gender differences would

emerge in total received prosocial treatment and across the types of behaviours, and we continued to examine gender differences in the relation between receipt of prosocial behaviour and daily mood.

Methods

Participants

Participants were 133 early adolescents attending Grade 5 or 6 in two elementary schools in Montreal, recruited to participate in a school-based study (*M* age = 10.78, *SD* = .64, 50.4% female, 60.9% White; no other ethnic identity comprised more than 5% of the sample). Forms were sent home to parents of all students in Grade 5 and 6 (*N* = 179) asking for written consent, with options of selecting "yes" or "no" to their child's participation. One hundred and fifty (84%) parents returned the form, and 139 (77.7%) gave consent. Six youth did not provide assent or were absent throughout data collections. The participation rate of all possible Grade 5 and 6 students was 74.3%.

Measures

Peer Nominations. Participants completed peer nomination procedures to assess for reputations of being victimized and behaving prosocially. Youth were presented with items describing different behaviours, which were each paired with a list of participating students within the same grade. We chose to assess within grade rather than within class because at both schools, there were only two classes per grade, and teachers reported that students within grades frequently interacted with each other. Participants made unlimited nominations for each item. If participants did not believe any other student fit the behavior, they were instructed to select an option saying, "I can't think of anybody," which led them to the next description. Scores for each

item were calculated by adding up the number of nominations participants received and dividing by the number of raters in a grade.

Peer Victimization. A total of five descriptions that assessed physical, verbal, relational, and general victimization were drawn from established peer nomination measures (see Dirks et al., 2017). One item asked about physical victimization (i.e., "Someone who gets hit or pushed by other kids"), one item tapped into verbal victimization (i.e., "Someone who gets teased, called names, or made fun of by other kids"), two items assessed relational victimization (i.e., "Someone who other kids gossip about or say bad things behind his/her back"; "Someone who is excluded by a group of friends or given the 'silent treatment'"), and the final item described general victimization (i.e., "Someone who gets picked on by other kids"). Peer-nominated victimization was calculated by averaging participants' scores across all five items and mean scores were standardized within grade and school ($\alpha = .95$).

Prosocial Behavior. Reputations for engaging in prosocial behaviors were also assessed using five peer nomination items. One item each corresponded respectively to helping (i.e., "Someone who helps or does favours for other kids"), sharing (i.e., "Someone who often shares their stuff with other kids"), comforting (i.e., "Someone who comforts other kids who are sad, worried, or upset"), inclusion (i.e., "Someone who tries really hard to include other kids in groups and activities or to spend time with kids who are alone"), and general prosocial behaviors (i.e., "Someone who is very nice and kind to other kids"). The items were adapted from relevant studies with similar peer nomination procedures (e.g., Griese & Buhs, 2014; Pursell et al., 2008). Peer nominations for each item were averaged to create a prosocial behaviour score and were standardized within grade and school ($\alpha = .90$).

Peer Ratings. Consistent with past research investigating sociometric status and behaviors directed at participants (e.g., Closson & Hymel, 2016; Pursell et al., 2008), we collected peer-report ratings for each participating student. Using a procedure adapted from Veenstra and colleagues (2007), we used the ratings to assess levels of acceptance and prosocial treatment in each grade within each school. For the items described below, participants were asked to provide ratings for every participating student within their own grade. Thus, for each youth, we were able to better understand how accepted they are, as well as whether they are infrequent or common targets of prosocial behavior from their peers.

Sociometric Acceptance. Participants were asked to rate each grade mate in terms of their personal liking for that individual using the item "How much do you like each of these other boys/girls?," from 1 (do not like at all) to 5 (like a lot); this item and procedure were adapted from Closson and Hymel (2016). Youth were also given two additional options for each student: "I do not know this person" and "I prefer not to answer." Ratings for each participant were averaged across every available rating and standardized within grade and school. The resulting score represented each participant's mean acceptance level relative to participating students in their grade.

Peer Ratings of Received Prosocial Behavior. Participants were also instructed to rate how often they direct prosocial behavior toward each participating grade mate using a total of five items, from 1 (never) to 5 (a lot). One item each assessed helping (i.e., "How often do you help or do favors for each person?"), sharing (i.e., "How often do you share your stuff with each person?"), comforting (i.e., "How often do you cheer up or comfort each person?"), inclusion (i.e., "How often do you try to include each boy/girl in group activities, or spend time with him/her when he/she is alone?"), and compliments (i.e., "How often do you give compliments to

each person?"). These items were selected because results from Study 1 demonstrated that these are common examples of the five most frequently reported categories of everyday prosocial treatment. Youth were also given two additional options for each student: "I do not know this person" and "I prefer not to answer." Available ratings for each participant were averaged across every rater, then averaged across the five items, and standardized within grade and school. The resulting scores represented how often youth are targets of prosocial treatment from peers, relative to participating students in their grade (α = .94).

Daily Mood. Daily mood was assessed using the 10-item version of the Positive and Negative Affect Scale for Children (PANAS-C; Ebesutani et al., 2012). Five items captured positive mood (i.e., joyful, cheerful, happy, lively, and proud; α=.90), and five items captured negative mood (i.e., miserable, mad, afraid, scared, and sad; α=.80). Two additional items (i.e., ashamed, embarrassed) were added because we hypothesized they may be related to other measures in the study, but they are not included in these totals or reported in these results. Participants were asked to rate how often they felt that way today on a scale from 1 (very slightly or not at all) to 5 (very). Daily scores for positive affect (PA) and negative affect (NA) were calculated by averaging across participants' ratings of the five respective items.

Daily Prosocial Treatment by Peers. A sixteen-item checklist was administered daily for five days to assess received prosocial events. The items reflect seven categories of prosocial behavior as well as three independent events (see Table 8 for a complete list of items and corresponding categories). These items were selected from commonly reported prosocial treatment events in Study 1 of this thesis. Youth were asked to indicate how frequently they had experienced each event that day using the following scale: did not happen that day (0), happened once (1), happened more than once (2). We chose this scale because results from Study 1

indicated that early adolescents most often reported experiencing zero or one prosocial treatment event a day. Daily scores were computed for each category, as well as an overall prosocial treatment variable containing all events, by averaging across youths' responses to items within a given category for each day.

Perceived intention. To assess perceived intention, participants were asked the following question for selected reported prosocial events, "Did the person do this to be nice to you?" Youth provided a rating from 1 (not at all) to 5 (very much). Participants were also asked a similar question, "Did the person do this on purpose?" However, we chose to use the former option because it mirrored the question presented to participants in Study 1.

Procedure

All procedures were approved by the relevant Research Ethics Board. Written parental consent and student assent were obtained for all participants. In the spring, research assistants visited the classrooms to complete assent procedures with participants for whom parental consent had been obtained. During this visit, demographic (e.g., ethnicity, socioeconomic status), symptomology (e.g., depression, anxiety), and global experience (e.g., victimization, school-climate) questionnaires, as well as peer nomination measures were administered to students on tablets.

Shortly after these initial visits, research assistants returned to the classrooms for the daily-diary portion of the study. These visits were scheduled for five consecutive school days and were conducted at the end of the school day, so that participants were able to report on events from their entire day. Daily assessments were administered on tablets and research assistants were available to answer questions. Participants had the option to select "I choose not to answer" to any question.

Daily-dairy questionnaires began by assessing daily mood. Then, participants completed a checklist of prosocial events, indicating whether each event occurred for them on that day or not. For up to three events that participants indicated had occurred, a series of follow up questions was administered. The questionnaire was programmed to select these events randomly, based only on events that participants indicated had happened to them. For example, if a youth indicated that they had experienced helping, sharing, comforting, inclusion, and a compliment on a given day, they would answer follow up questions about three of those events (e.g., sharing, inclusion, and compliments). Participants also answered questions about daily food insecurity, victimization events, and situations in which others could have responded prosocially but did not. These data are not reported here.

Data-Analytic Plan

The average number of prosocial treatment events reported on the first day was much higher than the other four days (M=8.5 on day one vs. M=4.35 across the other four days). This may have been because on the first day of daily-diary assessments, participants thought they were supposed to report on whether the events had ever happened to them, rather than just on that particular day. On subsequent days, it is likely that it became more obvious to students that they were only supposed to report on that day, as we had just visited the previous day. Thus, diaries from day one are excluded from all further analyses. In other words, all of the results presented here only include days two through five.

Missing Data. If a student was absent on a data collection day, their diary for that day was missing and not collected at a later date. As a result of absences, 73.7% of the sample completed all five days, 18.8% completed four days, 6.8% completed three days, and 0.7% completed two days.

In addition to missing days, some diaries include a large amount of missing data on the individual checklist items. A sizable number of participants often selected the "I choose not to answer" response for a number of the prosocial treatment events, which resulted in a significant amount of missing data. Across all sixteen prosocial treatment items, the number of missing responses ranged from 5.5% to 12.5% (Day 2 = 5.5-11%; Day 3 = 5.7-9%; Day 4 = 7.4-10.7%; Day 5 = 9.2-12.5%).

To handle the missing data described above, we decided to construct two data sets with two different sets of inclusion rules for daily-diary assessments. We did so in an effort to reduce possible biases associated with systematic missing data patterns and to examine the generalizability of our results. To understand if we introduced new bias into the data, we continuously examined associations between the number of days included (i.e., 0-4) for each participant and a number of between-participant variables that we hypothesized may influence associations with the primary outcome variables of interest. These variables included gender, school, grade, socioeconomic status, school climate; self-reported victimization, prosocial treatment, depressive symptoms, and anxiety symptoms; peer-reported prosocial behavior and victimization; as well as peer ratings of prosocial treatment and acceptance.

In the first data selection procedure, we only included days which contained no missing responses to any of the prosocial treatment items. In other words, in this data set, we only included days when participants selected a valid response to answer all sixteen prosocial treatment items. This resulted in a sample of 126 early adolescents (*M* age = 10.79, *SD* = .64, 49.2% female, 64.3% non-Hispanic White) and 417 days. Of this sample, 56.4% participants completed all four days. We found that in this data selection procedure, the number of days

included for each participant was not associated with any of the between-participant variables we examined.

In the second data selection procedure, we included diaries which were missing responses to no more than half of the sixteen prosocial treatment items and contained valid responses for at least half of the items for all seven categories. This resulted in a sample of 129 early adolescents (*M* age = 10.79, *SD* = .65, 50.4% female, 64.3% non-Hispanic White) and 432 days. Of this sample, 60.9% participants completed all four days. We found that in this second data selection procedure, increasing days included was associated with greater peer ratings of prosocial treatment, $r(121) = .18$, $p = .04$.

All analyses that are presented here were conducted with diaries from the second data selection procedure. Ultimately, we chose this approach because it contained the highest number of participants and days. However, due to the large amount of systematic missing data, all analyses presented in this study should be interpreted with caution. Finally, to check whether the results differed between the two data selection procedures, we conducted sensitivity analyses using the other data set.

Preliminary Analyses. The data presented here are organized into two levels. Level 1 (daily reports) consists of 432 days and level 2 (participant level) includes 129 early adolescents. First, we examined descriptive information for all variables used in subsequent analyses. Level 1 descriptive statistics were calculated using all 432 days of data. Level 2 descriptive statistics were calculated by aggregating daily reports within youth, which resulted in one average score for each variable for each participant. For example, if a youth had four valid daily reports of helping, those scores were aggregated to create one average helping score. Overall means, standard deviations, and ranges were calculated at both levels. Where applicable, within- and

between-participant correlations were tested for all variables. Gender differences were explored by conducting independent-sample t tests for variables at Level 2, except for variables used as outcomes in later analyses (i.e., daily mood, daily overall prosocial treatment variable).

Multilevel Modelling Approach. Next, we investigated the daily associations between our variables of interest. We used MPlus 8.0 (Muthén & Muthén, 2008-2016) to construct a series of two-level models using the MLR estimator, which is robust to non-normality. In all models, day was included as a within-participant covariate, which was continuously coded with the first day = 0. In a preliminary model, we tested whether the association between day and each of the outcome variables varied significantly across participants, and we included those random effects in the models testing our predictors of interest. Gender (dummy coded, 0 = male) was a between-participants predictor, and grade (dummy coded, 0 = grade 5) and school (mean-effect coded) were between-participants covariates. We also estimated random effects for each of the within-person predictors in the primary models. When the effect varied significantly across participants, we planned to examine whether gender was a significant predictor of the associations.

Associations Between Prosocial Treatment and Daily Mood. To examine the daily associations between prosocial treatment and mood, we began by fitting a null model in which we let positive affect (PA) and negative affect (NA) vary within and between participants, to determine whether there was significant variability in affect across days. We then constructed a series of models examining the associations between daily prosocial treatment and mood. PA and NA were included simultaneously as dependent variables in all models. Primary predictors across all models were daily average variables which were subsequently person-centered by subtracting participants' average score across all days from their daily score. The resulting

variables represent daily deviations from participants' typical reports of prosocial treatment. Thus, a positive value indicates that a youth experienced more prosocial treatment on a given day than their average report across all four days, and a negative value indicates less reported prosocial treatment than average. In the first model, the primary predictor of interest was the daily overall prosocial treatment variable. In subsequent analyses, daily scores for each of helping, sharing, comforting, compliments, inclusion, defending, and cooperating were included as independent variables in separate models. We chose to examine these associations in separate models because the prosocial variables were highly correlated with each other (see Table 10). Therefore, including all of them in one regression model is likely too stringent of a test.

Perceived Intention as a Predictor of Daily Mood. We tested whether perceived intention of how nice the actor meant to be predicted daily PA and NA. Since perceived intention was assessed in the context of an event, we only tested the association on days when participants had reported at least one event. A daily average score of perceived intention across participants' events was calculated. Next, we person-centered these scores for each day, and used the resulting variable in the model. Person-centered scores of daily prosocial treatment were included as an additional covariate to those described above.

Peer Nominations and Ratings as Predictors of Daily Prosocial Treatment. In this model, the average daily prosocial treatment variable served as the dependent variable and peer nominations and ratings were the predictors. We began by fitting a null model in which we let the prosocial treatment variable vary within and between participants, to determine whether there was significant variability in prosocial treatment across days. We included scores of peer-nominated victimization and prosocial behavior, as well as scores of peer ratings of likability and prosocial treatment as between-participant predictors to examine whether they predicted

receiving prosocial treatment on a daily basis. Since prosocial treatment was the dependent variable, this model also tested whether daily prosocial treatment differed by gender.

Results

Frequency of Daily Prosocial Treatment

Descriptive statistics and within- and between-person correlations for all of the variables in the study are found in Tables 9 and 10. Across the four days of data collection presented in these results, experiencing at least one prosocial treatment event was reported in 336 of the diaries (77.8%) and 98.4% of participants indicated being treated prosocially at least once. Reports of experiencing at least two events were also frequent, occurring on 295 days (68.2%) and for 96.9% of the participants across the four days. More than half of the participants reported experiencing at least one event each of helping (78.3%), sharing (65.1%), cooperating (58.1%), inclusion (76.7%), and compliments (70.5%). Reports of at least one event of comforting (47.3%) and defending (36.4%) over the course of the study were less frequent across participants. The average number of prosocial events as a function of gender are presented in Table 11. Compared to boys, girls reported receiving more compliments, $t(127) = -2.67$, $p = .008$; and comforting events, $t(127) = -2.08$, $p = .04$. Gender was also associated with peer-nominated prosocial behaviour and peer ratings of prosocial treatment and acceptance, such that girls were rated as engaging in more prosocial behaviour, receiving more prosocial treatment, and as more accepted than were boys.

Associations Between Prosocial Treatment and Daily Mood

We began by testing a null model in which the intercepts of PA and NA were allowed to vary within- and between-participants. The Intraclass Correlation Coefficient (ICC) for PA, which is a measure of how much variance is between participants, was .68, which indicated that

32% of the variance was within participants. The intercept, or average level, of PA was 3.60 (*SE* = .09). The variance within participants was 0.45, $p < .001$, and the variance between participants was 0.97, $p < .001$. For NA, the ICC was .32, which indicated that 68% of the variance was within participants. The intercept for NA was 1.32 (*SE* = .04), and the variance within and between participants was 0.27 and 0.13, respectively, ps < .001. In a preliminary model, we tested whether the associations between day and the dependent variables varied significantly across participants. The association between day and PA was found to vary significantly across participants, .08, $p < .01$; thus, we included that random effect in the models testing our predictors of interest.

Results of the model examining the associations between prosocial treatment and PA and NA are presented in Table 12. The average number of prosocial events received was not associated with daily PA, $B = -0.04$, $p = .86$. Prosocial treatment was also not associated with daily NA, $B = 0.11$, $p = .50$. Neither the association between received prosocial behavior and PA and NA varied across participants; variance = 0.07, $p = 0.79$ and variance = 0.10, $p = .25$, respectively. Given this homogeneity, we did not test whether gender predicted either of these associations.

Table 13 presents a summary of the results of our multilevel regressions examining the associations between specific types of prosocial events and PA and NA. Full results of each model are found in Appendix C. On days participants reported receiving more comforting events than they normally do, they also reported lower PA, $B = -0.41$, $p < .001$ and greater NA, $B = 0.39$, $p < .001$. In the model testing the associations between comforting and mood, participants' report of positive affect significantly decreased across the four days, $B = -0.08$, $p = .02$. The associations between comforting and PA and NA did not vary across participants; variance =

0.03, $p = 0.73$ and variance = 0.12, $p = .30$, respectively. Thus, we again did not test whether gender predicted either association. None of the other types of prosocial treatment were associated with PA or NA.

Associations Between Intention and Daily Mood

Results of the model examining the associations between perceived intention and PA and NA are presented in Table 14. Daily person-centered averages of perceived intention were associated with increased levels of daily NA, $B = 0.08$, $p < .01$. In other words, on days participants perceived prosocial behaviour to be more intentional than they do on average, they also reported greater NA. Perceived intention was not associated with daily PA, $B = -.03$, $p = .56$. Neither the association between perceived intention and PA and NA varied across participants; variance = 0.01, $p = 0.74$ and variance = 0.00, $p = .87$, respectively. Given this homogeneity, we did not test whether gender predicted either of these associations.

Associations between Peer Nominations and Ratings and Daily Levels of Prosocial Treatment

Lastly, we examined whether peer nominations and ratings of behaviours and characteristics of participants predicted daily reports of prosocial treatment. We began by testing a null model in which the intercept of daily prosocial treatment was allowed to vary within- and between-participants. The ICC for prosocial treatment was .72, signifying that 28% of the variance was within participants. The intercept, or average level, of prosocial treatment was 0.43 ($SE = .04$). The variance within participants was 0.07, $p < .001$, and the variance between participants was 0.19, $p < .001$.

Results of the model examining the associations between peer-nominated victimization and prosocial behavior, peer ratings of prosocial treatment and acceptance, and gender and daily levels of prosocial treatment are presented in Table 15. In this model, participants' reports of

prosocial treatment significantly decreased across the four days they completed diaries, $B = -0.10$, $p < .001$. Gender was the only significant between-participant predictor, $B = 0.27$, $p < .01$, such that girls reported receiving more day-to-day prosocial behaviors. None of the peer-nominated or peer rating variables were associated with daily prosocial treatment.

Sensitivity Analyses

For all of the models described above, we also conducted sensitivity analyses using the second data set that was created from a different set of inclusionary rules for missing data. While the data set that was used in the primary analyses included diaries with some missing data, the data set used in these sensitivity analyses was created using diaries with no missing data on any of the prosocial treatment items. We re-ran the models using this second data set and found that the results did not change. Results from all of the sensitivity analyses are presented in Appendix D.

Discussion

The current study aimed to advance our understanding of early adolescents' day-to-day encounters with prosocial treatment by peers. We developed a novel checklist of received prosocial behaviours and administered it to participants daily over the course of a school week to (1) gather information about youths' everyday experiences of prosocial treatment; (2) examine associations between daily reports of distinct types of received prosocial behaviours, as well as perceived intention of these events, and positive and negative affect; (3) examine the associations between behavioural and social characteristics of youth as reported by peers and daily reports of prosocial treatment; (4) explore gender differences in early adolescents' everyday received prosocial behaviours and emotional reactivity to these events.

Everyday Prosocial Treatment

Findings regarding the prevalence of received prosocial behaviours in the current sample revealed that everyday incidents of prosocial treatment by peers were regular and frequent. Specifically, 98.4% of participants reported receiving at least one prosocial behaviour from a peer over the course of four days and 96.9% reported receiving at least two. Across all 432 of the diaries that were completed, 77.8% reported at least one prosocial treatment event and 68.3% reported at least two events. Taken together, these findings indicate that prosocial treatment by peers is a common everyday occurrence for youth aged 10 and 11. Moreover, the current results are consistent with findings from Study 1 in this thesis, as well as the literature more broadly, that prosocial treatment and other positive interactions frequently occur in youths' day-to-day lives (e.g., Flook, 2011; Sandstrom & Cillessen, 2003). Thus, the current study provides further evidence that prosocial treatment appears to be a relatively routine daily social experience for many youth and it also extends upon previous work by demonstrating that there is a common set of behaviours that is recognized and endorsed by multiple samples of early adolescents.

As hypothesized, participants reported frequently experiencing the same diversity of prosocial treatment behaviours that early adolescents described in Study 1. During a brief window of only four days, more than half of the participants reported at least one event of helping, compliments, inclusion, sharing, and cooperating (range of 58.1% to 78.3%). Although fewer youth reported at least one occurrence of comforting (47.3%) and defending (36.4%), they remained relatively common received prosocial behaviours. These findings build upon previous research investigating the typology of prosocial behaviour youth encounter (Bergin et al., 2003; Cotney & Banerjee, 2019) by offering a day-to-day snapshot of early adolescents' diverse experiences of prosocial treatment by peers. Furthermore, the fact that all seven of the categories

of behaviour were widely endorsed across the current sample provides further evidence that the checklist is a representative portrait of youths' prosocial treatment.

Associations Between Prosocial Treatment and Daily Mood

In examining participants' emotional reactivity to prosocial treatment by peers, we found little evidence of daily associations between reports of received prosocial behaviours and mood in the current sample of early adolescents. Surprisingly, the majority of findings from Study 1 were not replicated. The daily overall measure of prosocial treatment was not associated with positive or negative mood, nor were any of the categories of received prosocial behaviours, with the exception of comforting. The lack of significant associations also largely diverges with previous work demonstrating links between prosocial treatment and emotional adjustment (e.g., Martin & Huebner, 2007; Troop-Gordon & Unhjem, 2018) and links between daily positive events and mood (e.g., Flook, 2011; Schacter & Margolin, 2019a). One explanation for why we did not find many associations between everyday prosocial treatment and mood in the current study may be due to the brief assessment period of four days. Oftentimes, daily-diary studies assess behaviours and well-being over two weeks (e.g., Study 1 in this thesis; Espinoza et al., 2013; Flook, 2011; Schacter & Margolin, 2019a, 2019b; Vannucci et al., 2018). It is possible that assessing prosocial treatment during one school week does not fully capture youths' experiences or the extent of variability in their daily mood. Future daily-diary research over an extended window of time will be critical in better understanding proximal relationships between received prosocial behaviours and emotional adjustment.

Daily associations between participants' reports of comforting and mood were consistent with and extended upon early adolescents' reports from Study 1; youth not only experienced higher levels of negative affect on days they reported more comforting events than average, but

they also experienced lower positive affect. Although other positive events appear to have more straightforward links to daily mood (e.g., Flook, 2011; Schacter & Margolin, 2019a, 2019b), our results further suggest that prosocial treatment is related to youths' daily affective experiences in complex ways.

Finally, results from the current sample suggested that youths' evaluations of prosocial intention were linked to daily mood in an unexpected way; on days participants perceived greater prosocial intention than they typically do, they also experienced increased negative affect. Given that previous research has demonstrated a positive association between perceptions of hostile intent of negative events and emotional distress (Crick et al., 2002; Mathieson et al., 2011; Nelson et al., 2018; Wright, 2017), it is somewhat surprising that favourable perceptions of a positive event had a similar relationship to negative affect. A possible explanation is that youths' perceptions were influenced by their negative mood state such that they were more likely to perceive that a peer intended to be kind when they experienced prosocial treatment. In other words, on days that participants reported increased negative affect, they may have been more likely to evaluate any suggestion of prosociality as more intentional than usual due to their discrepant mood. For example, although early adolescents are regularly complimented by peers, a youth who is feeling sad and anxious after receiving a poor grade may find a flattering comment about their athletic abilities particularly meaningful. In sum, while this finding requires additional examination and replication, it likely further speaks to the complexity of the relationship between prosocial treatment and mood. Early adolescents' perceptions of prosocial intention despite negative mood may also suggest that youth have nuanced understandings of their daily lives; they can simultaneously feel down and still recognize that a peer was kind towards them.

Associations Between Peer Nominations and Ratings and Daily Levels of Prosocial Treatment

Overall, we did not find evidence that participants' behavioural and social reputations, as rated by peers, predicted daily reports of prosocial treatment. Despite a well-documented inverse relationship between victimization and prosocial treatment such that youth who are victimized also lack support from peers (e.g., Casper & Card, 2017; Troop-Gordon & Unhjem, 2018), the present finding is consistent with results from Study 1 and another daily-diary study of positive events (Sandstrom & Cillessen, 2003). Taken together, the lack of association adds to growing evidence that suggests global measures of victimization may in fact not be associated with prosocial treatment at the daily level.

The results also did not support links between engaging in greater amounts of prosocial behaviour or being more widely accepted by peers and daily reports of prosocial treatment. Additionally, there was no concordance between peer ratings and daily reports of prosocial treatment. In general, research that has demonstrated relationships between victimization, prosocial behaviour, acceptance, and prosocial treatment has typical utilized the same reporters for all variables of interest (Bowker, 2014; Martin & Huebner, 2007; Stotsky et al., 2020; Troop-Gordon & Unhjem, 2018). In contrast, the current study examined associations between peer-reported assessments of youth and participants own daily reports of prosocial treatment. While daily-diaries are a measure of the frequency of behaviours in a given day and are influenced by a participant's subjective experience (Bolger et al., 2003), peer nominations and ratings correspond to youths' reputations and do not always accurately capture an individual's own experience as they can be biased by past rather than recent incidents of a behaviour (Ladd & Kochenderfer-Ladd, 2002; Scholte et al., 2013). Indeed, findings from a meta-analysis examining the relationship between prosocial treatment and victimization found that peer-reports resulted in

significantly larger associations than youths' self-reports (Casper & Card, 2017). Furthermore, past studies have examined prosocial treatment and its predictors over extended periods of time, which likely tap into stable patterns of behaviour, whereas youth in the current sample only reported events over four days. It may be that prosocial treatment varies throughout the school year, and assessing behaviours over a single school week may not have been a long enough window to provide a reliable measure of the average frequency of daily received prosocial acts. In the future, it will be important to examine whether relationships between youths' behavioural and social characteristics and the frequency of their everyday reported prosocial treatment emerge over longer daily-diary assessments.

Gender Differences in Daily Prosocial Treatment and Its Associations with Daily Mood

Finally, we also explored gender differences in reports of overall and specific types of prosocial treatment. Compared to boys, girls reported more daily instances of prosocial treatment, a pattern that is consistent with previous research and results from Study 1 in this thesis (e.g., Bowker, 2014; Crick & Grotpeter, 1996; Leadbeater et al., 2006; Troop-Gordon & Unhjem, 2018). However, in examining the specific categories of received prosocial behaviours, girls only reported higher frequencies of compliments and comforting events than did boys. We did not explore gender differences in the daily associations between prosocial treatment and mood, as results indicated that these associations were similar across participants.

Conclusion

This study contributes to our understanding of early adolescents' everyday experiences of prosocial treatment and provides further evidence that daily-diary checklist protocols are feasible and valuable assessment tools. The results highlight and confirm that prosocial treatment by peers is a common social experience for youth in early adolescence across multiple school

settings. Notably, youth recognized and frequently reported encountering the descriptions of events developed from Study 1 in this thesis, emphasizing the importance of employing assessments that reflect youths' own reports of prosocial treatment. Finally, this study illustrates the nuanced and complex daily associations between received prosocial behaviours, as well as youths' intent evaluations of those events, and mood.

Table 8

Daily-Diary Checklist: Items and Corresponding Categories

Item	**Category**
Helped you with schoolwork	Helping
Reminded you of something	Helping
Helped you solve a problem	Helping
Told you something important	Helping
Shared something with you	Sharing
Gave you a gift	Sharing
Listened to you	Comforting
Tried to make you feel better	Comforting
Spent time with you	Inclusion
Included you	Inclusion
Stood up for you	Defending
Gave you a compliment	Compliment
Group project	Cooperating
Did something polite for you	--
Saved you a seat	--
Lent you something	--

Table 9

Descriptive Statistics for Main Study Variables

	Level 1 (Daily) *M (SD)*	Level 1 (Daily) Range	Level 2 (Participant) *M (SD)*	Level 2 (Participant) Range
Positive Affect	3.57 (1.19)	1.00-5.00	3.60 (1.07)	1.25-5.00
Negative Affect	1.31 (0.63)	1.00-5.00	1.33 (.51)	1.00-3.40
All events	0.40 (0.51)	0.00-2.00	0.43 (0.47)	0.00-2.00
Helping	0.31 (0.51)	0.00-2.00	0.34 (0.46)	0.00-2.00
Sharing	0.32 (0.52)	0.00-2.00	0.35 (0.43)	0.00-2.00
Comforting	0.30 (0.61)	0.00-2.00	0.35 (0.57)	0.00-2.00
Inclusion	0.48 (0.67)	0.00-2.00	0.52 (0.58)	0.00-2.00
Defending	0.26 (0.59)	0.00-2.00	0.30 (0.55)	0.00-2.00
Compliments	0.59 (0.78)	0.00-2.00	0.65 (0.64)	0.00-2.00
Cooperating	0.52 (0.75)	0.00-2.00	0.53 (0.60)	0.00-2.00
Perceived Intention	3.34 (1.57)	1.00-5.00	3.24 (1.43)	1.00-5.00
Peer Victimization	--	--	-0.06 (0.94)	-0.70-4.37
Prosocial Behaviour	--	--	0.01 (0.98)	-1.53-3.29
Acceptance	--	--	0.03 (0.94)	-2.68-1.72
Prosocial Treatment	--	--	0.03 (0.95)	-2.33-2.26

Note. M = mean, *SD* = standard deviation.

Table 10

Bivariate Correlations Among Main Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.
1. Positive Affect	-	-.26*	.41***	.41***	.37***	.44***	.43***	.37***	.42***	.25*	.46	-.09	-.10	-.07	-.03	.04	.11	.04	.07
2. Negative Affect	-.31**	-	-.10	-.09	-.05	-.08	-.13	-.06	-.04	-.10	.21	.19	.08	.03	.05	-.08	.17	-.13	-.21
3. All events	.00	.13	-	.99***	.95***	.95***	.98***	.96***	.92***	.80***	.28	-.54	.07	.13	.15	-.06	.05	-.05	-.02
4. Helping	-.00	.11	.82***	-	.93***	.95***	.94***	.95***	.89***	.76***	.28	-.56	.04	.12	.14	-.10	.02	-.10	-.05
5. Sharing	-.05	.11	.69***	.50***	-	.87***	.90***	.93***	.85***	.70***	.28	-.45	.00	.11	.17	-.02	.04	-.05	-.03
6. Comforting	-.20**	.30***	.64***	.50***	.36***	-	.91***	.96***	.84***	.66***	.20	-.62	.01	.06	.19*	-.07	.09	-.03	-.04
7. Inclusion	.06	.01	.71***	.45***	.41***	.41***	-	.92***	.92***	.81***	.26	-.49	.07	.10	.10	-.09	.02	-.04	-.01
8. Defending	-.03	.13	.54***	.46***	.30***	.41***	.30***	-	.82***	.74***	.21	-.57	.05	.13	.17	-.06	.09	-.07	-.06
9. Compliments	-.05	.00	.61***	.42***	.36***	.30***	.33***	.27***	-	.70***	.33	-.42	.03	.14	.25*	.03	.10	.01	.03
10. Cooperating	.03	.06	.40***	.30***	.22***	.09	.19**	.07	.20***	-	.29	-.36	.51***	.31**	-.05	-.11	.05	-.12	-.05
11. Perceived Intention	.01	.14*	.11	.03	.08	.08	.05	.08	.13	-.04	-	.21	.05	.14	.11	-.31	.37	-.63	.58
12. Day	-.08	-.15**	-.44***	-.31***	-.29***	-.26***	-.37***	-.18***	-.33***	-.13*	-.15*	-	-	-	-	-	-	-	-
13. Grade	-	-	-	-	-	-	-	-	-	-	-	-	-	-.16	-.12	-.02	.06	-.05	-.04
14. School	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.01	-.01	.06	-.02	-.03
15. Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.50***	.02	.26**	.18*
16. Prosocial Behaviour	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.24***	.67***	.62***
17. Peer Victimization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.49***	-.57***
18. Prosocial Treatment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.90***
19. Acceptance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes. Within-person correlations are shown below the diagonal, and between-person correlations are shown above the diagonal.
***p<.001, **p<.01, *p<.05.

Table 11

Mean (SE) Number of Prosocial Treatment Events Reported by Girls and Boys

	Girls (N = 65)	Boys (N = 64)	t (127)	p
Helping	0.40 (0.51)	0.28 (0.40)	-1.47	.145
Compliments	0.79 (0.69)	0.50 (0.55)	-2.67	.008
Inclusion	0.58 (0.64)	0.47 (0.51)	-1.10	.275
Sharing	0.43 (0.50)	0.28 (0.34)	-1.92	.057
Comforting	0.46 (0.68)	0.25 (0.41)	-2.08	.040
Cooperating	0.49 (0.63)	0.57 (0.58)	0.719	.473
Defending	0.39 (0.66)	0.21 (0.38)	-1.85	.067

Table 12

Results of a Multilevel Regression Examining Daily Associations Between Prosocial Treatment by Peers and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.89	0.15	<.001	1.35	0.10	<.001
Within participants						
Prosocial treatment	-0.04	0.23	.86	0.11	0.16	.50
Day	-0.06	0.04	.17	-0.06	0.03	.06
Between participants						
Gender	-0.14	0.17	.41	0.05	0.08	.58
School	-0.08	0.08	.37	0.02	0.04	.57
Grade	-0.27	0.17	.12	0.07	0.08	.40

Notes. B = unstandardized regression coefficient, *SE* = standard error. Prosocial treatment was calculated by averaging across participants' responses to all of the prosocial items in the checklist for each day; the resulting scores were person-centered. Day is coded continuously with the first day = 0. Gender is dummy coded with males = 0. School is mean-effect coded. Grade is dummy coded with Grade 5 = 0. Preliminary analyses revealed that the associations between day and positive affect varied significantly across participants. Thus, this random effect is included in the model, as is the random effect of prosocial treatment on positive and negative affect.

Table 13

Summary of Results from Multilevel Regressions Examining Daily Associations Between Distinct Types of Prosocial Treatment and Daily Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Helping	0.01	0.18	.96	0.09	0.12	.42
Sharing	-0.16	0.12	.19	0.09	0.10	.35
Comforting	-0.41	0.12	<.001	0.39	0.11	<.001
Compliments	0.05	0.08	.54	-0.05	0.07	.48
Inclusion	0.13	0.09	.18	-0.07	0.09	.39
Defending	-0.05	0.10	.64	0.15	0.11	.17
Cooperating	-0.04	0.08	.61	0.04	0.06	.46

Notes. Results are shown for seven multilevel models that separately examined each category of prosocial behaviour. *B* = unstandardized regression coefficient, *SE* = standard error. Each type of prosocial treatment is participants' average score across the corresponding items for each day; the resulting scores were person-centered. In each model, day is a within person covariate, gender is a between participant predictor, and school and grade are between participant covariates. Random effects of each type of received prosocial behaviour on positive and negative affect are included in the models, as well as the random effect of day on positive affect. Full results of each model are found in Appendix C.

Table 14

Results of a Multilevel Regression Examining Daily Associations Between Perceived Intention of Prosocial Treatment Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.90	0.15	<.001	1.25	0.08	<.001
Within participants						
Perceived intention	-0.03	0.06	.56	0.08	0.02	<.01
Prosocial treatment	-0.02	0.17	.91	0.16	0.19	.42
Day	-0.07	0.04	.13	-0.01	0.04	.77
Between participants						
Gender	-0.09	0.17	.73	0.06	0.09	.49
School	-0.06	0.09	.48	-0.00	0.08	.93
Grade	-0.31	0.17	.07	0.12	0.09	.17

Notes. This model only included days that participants reported at least one event (326 days nested in 124 participants). *B* = unstandardized regression coefficient, *SE* = standard error. Perceived intention is participants' average rating across reported prosocial treatment events in a given day; daily scores are person-centred. Daily average scores of prosocial treatment are also person-centred in this model. Day is coded continuously with the first day = 0. Gender is dummy coded with males = 0. School is mean-effect coded. Grade is dummy coded with Grade 5 = 0. Preliminary analyses revealed that the associations between day and positive affect varied significantly across participants. Random effects of perceived intention on positive and negative affect are included in the model, as well as the random effect of day on positive affect.

Table 15

Results of a Multilevel Regression Predicting Daily Prosocial Treatment from Peer Nominations and Peer Ratings

	Prosocial Treatment		
	B	*SE*	*p*
Intercept	0.39	0.08	<.001
Within participants			
Day	-0.10	0.01	<.001
Between participants			
Victimization	0.02	0.05	.74
Prosocial behavior	-0.11	0.07	.10
Acceptance	0.13	0.11	.22
Prosocial treatment	-0.09	0.12	.43
Gender	0.27	0.10	<.01
School	0.06	0.04	.12
Grade	0.12	0.08	.14

Notes. *B* = unstandardized regression coefficient, *SE* = standard error. Peer-nominated victimization and prosocial behaviour, and peer ratings of acceptance and prosocial treatment are standardized within grade and school. Day is coded continuously with the first day = 0. Gender is dummy coded with males = 0. School is mean-effect coded. Grade is dummy coded with Grade 5 = 0.

Chapter 5: General Discussion

Peer relationships and the interactions that comprise them are central to youths' well-being. The early years of adolescence represent a developmental period during which youth increasingly spend more time with peers, and as a result encounter countless behaviours at the hands of their peers – both positive and negative. Examining behaviours within peer relationships at the daily level is important to capturing these events as they are actually experienced by youth. The daily-diary methodology has been used in the study of numerous negative peer interactions (e.g., Espinoza et al., 2013; Morrow et al., 2014; Nishina, 2012; Nishina & Juvonen, 2005; Reavis et al., 2015) and in a handful of positive peer interactions (e.g., Flook, 2011; Schacter & Margolin, 2019a). However, very little research has applied daily-diary methodologies to prosocial treatment by peers. The overarching aim of this thesis was to advance understanding of the everyday prosocial peer treatment experiences of early adolescents. The current studies did so by addressing three central goals. First, existing research on prosocial peer treatment has most often utilized one time point methodologies and has also predominantly focused on the construct as singular rather than a collection of varied behaviours. Thus, relatively little is known about daily occurrences of prosocial peer treatment, as well as the nature and frequency of these events. The results of these studies extend on previous research by mapping the types of prosocial overtures youth reported in recounting their everyday lives. Second, in an effort to better understand the relationship between prosocial peer treatment and positive adjustment, associations between daily receipt of prosocial behaviour and positive and negative affect were examined. Lastly, this thesis attempted to identify which youth commonly experience prosocial peer treatment, by investigating whether certain reputations predicted daily receipt of prosocial behaviour.

The current research demonstrated that in their day-to-day lives, youth described and reported frequently receiving a diversity of prosocial behaviours from peers. These events included not only behaviours from a more traditional taxonomy of prosociality, including helping, sharing, and comforting, but also actions that have received less attention in the literature, such as compliments and inclusion. Further, these prosocial peer treatment events were commonly reported across two methodologies and by two large samples of youth aged 10 to 13. This thesis also contributes to our understanding of the links between prosocial peer treatment and emotional adjustment. Results from Study 1 revealed that on days when early adolescents reported receiving more prosocial behaviors, they also reported higher positive affect, even after controlling for the presence of positive affect before the prosocial events and report of positive affect on the prior day. Moreover, analyses examining associations between specific events and daily mood highlighted that, across both studies, the links between types of prosocial peer treatment and positive and negative affect are varied and complex. Taken together, the findings in this thesis provide a window into the prosocial peer treatment experiences that comprise youths' daily lives, as well as initial evidence of how they are differentially related to mood. Differences in patterns of results between the two studies also highlight how methodology and school transitions may possibly influence our understanding and assessment of everyday prosocial peer treatment.

The Nature and Frequency of Everyday Prosocial Treatment

Previous studies have documented that children and adolescents experience far more daily positive than negative interactions with peers (e.g., Flook, 2011; Sandstrom & Cillessen, 2003). Correspondingly, across the two studies in this thesis, youth reported many episodes of prosocial treatment. In Study 1, 96.1% of early adolescents reported at least one prosocial peer

treatment event in the 10 days. Similarly, in Study 2, 98.4% of youth in grades 5 and 6 reported experiencing at least one prosocial event across 4 days of diaries. In contrast, when considering victimization, only between 13% and 46% of youth report experiencing at least one event over a four to seven day period (e.g., Nishina & Juvonen, 2005; Reavis et al., 2015).

Despite how common prosocial peer treatment events are, little work has focused on disentangling, categorizing, and documenting the distinct types of prosocial behavior youth experience in their day-to-day social lives. El Mallah (2020) highlighted the importance of assessing prosocial behaviors that matter in the lives of adolescents. Work with young children has foregrounded helping, sharing, and comforting as key prosocial behaviors due to their correspondence with emerging social-cognitive understandings (Dunfield et al., 2011; Dunfield & Kuhlmeier, 2013); however, the growing interpersonal demands youth face as they age may introduce new ways to act on behalf of others. Indeed, focus groups conducted with early adolescents documented that they identify inclusion, defending, and compliments as important prosocial behaviors as well (Bergin et al., 2003; Cotney & Banerjee, 2019).

Results from Study 1 in this thesis indicate that this diverse array of prosocial behaviors are salient in the everyday lives of early adolescents. By far the most commonly described type of behavior was helping. This finding is consistent with work with young children demonstrating that simple instrumental helping is the earliest prosocial behavior to emerge (Dunfield et al., 2011); however, the demands of adolescence may shape the types of help peers provide. For example, supporting skill development (e.g., helping with academics or with sports) may be particularly important for adolescents (Bergin et al., 2003). One of the reasons that adolescents described helping so often may be that we asked about prosocial behaviors during the school

day; as such, there would have been many opportunities to receive assistance with class work and this type of help may be particularly relevant in youths' daily lives.

Early adolescents also frequently described sharing, another behavior that emerges in early childhood (e.g., Dunfield et al., 2011; Hay & Rheingold, 1983) and continues to be identified by adolescents as an important prosocial action (Bergin et al., 2003). Adolescents also described behaviors involving inclusion at a similar rate to sharing, and perhaps most interestingly, compliments were even more frequent and represented the second most commonly reported prosocial peer treatment event. These behaviors have not been highlighted in work with younger children or in the general prosocial literature, but may be particularly important for adolescents, who spend greater amounts of time with, and thinking about, peers than do younger children (e.g., Larson et al., 1996; Richards et al., 1998), and who are also increasingly sensitive to feedback from peers (Somerville, 2013). Specifically, because adolescents are more attuned to peer feedback and acceptance, compliments and inclusion may be a particularly salient and meaningful form of prosocial behavior. It is also possible that adolescents engage in these behaviors more frequently than do younger children because the social-cognitive demands of these forms of prosociality are greater. For example, engaging in inclusion requires both representing that companionship or belonging is a salient need for the person, as well as a potentially nuanced understanding of peer-group dynamics. Similarly, giving a compliment requires not only identifying something positive about the other person, but also attending to the extent to which the positive characteristic falls within a domain about which they care. Although little work has examined the developmental trajectory of giving effective compliments, younger children may struggle with both social-cognitive skills necessary for successful enactment of this behavior.

Youth have also identified comforting and defending as important prosocial actions (Bergin et al., 2003; Cotney & Banerjee, 2019). Children begin to engage in comforting around 2 years of age, and as they develop, are able to provide increasingly more sophisticated emotional support (Svetlova et al., 2010). Although helping peers to regulate their emotions appears central to adolescents' conceptualization of prosociality (Bergin et al., 2003), only 6.7% of events were coded as comforting. As comforting typically occurs in response to a perceived negative emotional state, the low rate of comforting may indicate that participants were not experiencing many episodes of distress during the school day. This hypothesis is consistent with daily mood ratings from this study, which revealed relatively low levels of negative affect across all 10 days. Similarly, only 1% of events were categorized as defending. Defending behaviors undoubtedly serve an important function in the peer group, as they protect youth targeted by bullies (Karna et al., 2011). As discussed previously, however, many adolescents experience victimization infrequently (Nishina & Juvonen, 2005; Reavis et al., 2015). As a result, there may not be many opportunities for peers to stand up for each other during the day, resulting in a low prevalence of defending behaviors.

The prompt used to elicit prosocial peer treatment events may also have influenced the types of behaviors that adolescents reported. Thus, a second explanation for the low rate of defending is that adolescents may not conceptualize a peer standing up for them, particularly in the context of a highly negative event, as "nice" and thus may not have identified such actions during their interviews. More frequent defending behaviors may be identified if youth are asked about such actions explicitly. The phrasing of the prompt may also explain why cooperating events happened relatively infrequently (2.2%). Although many researchers consider cooperation to be prosocial (Warneken et al., 2006), cooperative actions differ conceptually from other

prosocial actions in that the actors need each other to achieve benefit (e.g., two children playing together on a teeter-totter; Warneken et al., 2006). For this reason early adolescents may not have viewed cooperative behaviors – which require their own active participation and which yield benefit for their peer, as well for themselves – to be prosocial.

Study 2 of this thesis created a checklist of prosocial treatment events using the descriptions provided by youth in Study 1. The rich qualitative data from Study 1 allowed us not only to select examples of prosocial categories that are familiar and meaningful to youth, but also provided us with youths' own language to use in the wording of the events. We administered this checklist to a sample of early adolescents in the final two grades of elementary school. Results indicated that participants in Study 2 recognized and identified regularly experiencing the same prosocial peer treatment events as early adolescents in Study 1. Across both grades and schools, 98.4% of youth reported receiving at least one prosocial behaviour from a peer over the course of four days and 96.9% reported receiving at least two. Moreover, although frequencies between the current study and Study 1 in this thesis cannot be directly compared due to different methods of assessing daily events, the fact that both samples nearly universally endorsed encountering prosocial behaviours in relatively brief windows of time suggests that prosocial treatment is a prominent and meaningful experience for youth at this age. Future research across developmental periods is needed to better understand the emergence of the various behaviours, as well as how prosocial treatment changes as youth age and other domains of life, such as romantic relationships, become increasingly relevant and important.

We also found that for all but two of the categories of received prosocial behaviours, more than half of the early adolescents in Study 2 reported experiencing at least one event over the course of four days. Consistent with results from Study 1, the number of youth who reported

experiencing at least one comforting event was relatively lower than the other types of prosocial treatment. Although this study did include a specific prompt for defending by providing an example of this behaviour, the number of participants who reported experiencing at least one event was also relatively low. Notably, the checklist only contained one event for defending, and it may be that future research should provide more examples of defending to fully assess how often this event occurs for youth. However, it may also be that defending does in fact happen less frequently than other prosocial behaviours, which is reasonable to assume given that daily victimization happens relatively infrequently. A specific prompt appears to be necessary to accurately assess the frequency of cooperation in youths' daily lives, as over half of the participants in Study 2 reported at least one cooperation event, compared to only 14% in Study 1.

Associations Between Prosocial Treatment and Daily Mood

The second goal of this thesis was to examine the associations between prosocial peer treatment and daily positive and negative affect. The results from both studies highlight that everyday prosocial peer treatment experiences are related to early adolescents' emotional lives in both straightforward and more nuanced ways. In Study 1, as hypothesized, on days early adolescents reported more nice events, they also reported higher positive affect. This association was significant after controlling for whether or not the adolescent described positive affect being present prior to the prosocial event, which was itself a robust predictor of daily positive affect, as well as positive and negative affect on the prior day. These results are consistent with previous work linking the receipt of positive events to increases in daily positive mood (Flook, 2011; Schacter & Margolin, 2019a). Moreover, to the extent that variability in daily mood is linked to changes in emotional adjustment (Wichers et al., 2015), the association between daily acts of kindness and proximal positive affect provides a proposed mechanism for the documented links

between summary measures of prosocial peer treatment and global indices of positive emotional adjustment (e.g., Troop-Gordon & Unhjem, 2018).

In addition to examining the overall association between received prosocial behavior and daily positive affect, we also tested whether these associations varied across distinct types of prosocial treatment. In general, we did not see marked specificity of associations between prosocial events and daily positive affect in Study 1; no specific category of prosocial peer treatment predicted daily positive mood. However, the results hint that what may matter most for daily positive affect is that peers are kind, rather than the precise topography of that kindness.

Results of Study 1 also revealed complex daily links between prosocial peer treatment and negative affect. Contrary to our hypothesis, daily report of received prosocial behavior was not associated with negative mood. The lack of an overall association between prosocial treatment and negative affect, may be due, in part, to the differential associations we identified between specific types of prosocial treatment and negative affect. Specifically, we found that daily report of helping was associated with lower negative affect. As discussed previously, in the context of a school day, youth frequently experience difficulties with such things as classwork that offer opportunities for peers to enact helping behaviours that can provide benefit. Times or even days that youth require assistance likely indicates the presence of higher negative affect and our results suggest that on days they do receive help from peers, youth also experience reduced negative affect. Given that helping was by far the most commonly reported prosocial peer treatment experience early adolescents described, it may be such a regular everyday occurrence that it does not necessarily impact daily positive affect. Nonetheless, helping may still alleviate distress, as it is associated with lower levels of daily negative affect, which is an important protective factor against the development of persistent low mood and depression (Forbes et al.,

2004; Larson et al., 1990; Neumann et al., 2011; Silk et al., 2003; van Roekel et al., 2016). This finding is also in line with previous research showing that for youth, prosocial peer treatment is associated with lower levels of negative affect and less depressive symptoms (e.g., Compian et al., 2009; Crick et al., 1999; Leadbeater et al., 2006; Martin & Huebner, 2007; Storch & Masia-Warner, 2004). Though the exact mechanisms are likely numerous and require further investigation, receiving help from peers may be one way that prosocial peer treatment protects youth against developing mood disorders.

Our findings from the daily reports of early adolescents' in Study 1 also revealed that inclusion was associated with lower negative affect. This behavior may be particularly important for adolescents' emotional well-being, given the importance of peer acceptance during this developmental period (Somerville, 2013). Similarly to helping, although inclusion does not necessarily lead to day-to-day improvements in positive mood for youth, it does possibly provide benefit by reducing negative mood. Taken together, helping and inclusion represent prosocial behaviours that are especially relevant during the school day, as well as being particularly meaningful events for early adolescents given that areas of life such as academics and peer relationships contribute to feelings of competence and self-worth. Therefore, they are both perhaps unsurprisingly related to lower daily negative affect.

In contrast to helping and inclusion, comforting was associated with *greater* negative affect for early adolescents. This result highlights the potential complexity of the association between prosocial treatment and daily affect. Although prosocial behaviors are conceptualized as positive events (Dirks et al., 2018), they are often elicited by a specific need. Comforting, in particular, is generally enacted in response to perceived emotional distress. As such, amongst diaries from Study 1, events leading to comforting were often linked to greater negative affect,

and the comforting behavior, even if effective, may not have been sufficient to bring negative affect back to baseline. Furthermore, the experience of negative emotions may preclude youth from experiencing positive feelings or may cloud their memory for positive emotion at a later time point when recalling an event associated with distress.

The association between comforting and greater negative affect in Study 1 was present even after we accounted for the presence of negative affect prior to the prosocial event. One reason for this pattern may be that we coded only for the presence of negative affect, and not the intensity. Antecedent negative affect was present on days when comforting did not occur, and it is possible that the negative affect that elicited comforting behavior was more intense than that observed on other days. Although there was a robust association between antecedent positive affect and daily positive mood, antecedent negative affect was unrelated to daily negative affect. A possible explanation for this result may be that the received prosocial behaviour actually did confer benefit and was associated with a change in daily negative affect. For example, if a participant was distressed about a bad grade on a test and was comforted by a peer, the prosocial act may have been associated with a reduction in negative affect. As such, the association between antecedent negative affect and negative affect reported during the diary call may have been diminished. It is also important to note that both antecedent positive and negative affect were only coded in the context of prosocial events. Early adolescents experienced other affective experiences throughout the day, and it will be important for future work to provide a more complete picture of these events.

Overall, results from Study 2 of this thesis using another sample of early adolescents revealed even fewer associations between prosocial peer treatment and daily mood than findings from Study 1. In contrast to Study 1 and contrary to hypotheses, there were no overall

associations between reported receipt of prosocial behaviour and daily positive or negative affect. Likewise, nearly no associations between specific types of prosocial peer treatment and daily mood were found. The one exception to this was daily experiences of comforting; on days participants reported more comforting events than they typically do, they also reported lower positive affect and greater negative affect. While this finding is consistent with the association between comforting and greater daily negative affect in Study 1, the association with lower positive affect was not found among participants in that sample. The current finding may suggest that for some youth, the feelings of distress they experience and that peers enact comforting in response to, has a greater impact on their overall mood that day. The variability in associations between comforting and daily positive mood across both studies also potentially indicate that other factors, such as the quality of the behaviour or how attuned the act is to a youth's needs, may contribute to whether these acts buffer against the impact of distress on mood. As such, links between comforting and daily mood should continue to be investigated.

The lack of associations between prosocial peer treatment and mood in Study 2 is likely due to a number of factors. First, whereas early adolescents in Study 2 were in the final two years of elementary school, youth in Study 1 were in their first year of high school. Past research has identified the transition to high school as a particularly challenging time in development, in part due to increased rates of victimization (Pellegrini & Bartini, 2000b). Compared to early adolescents nearing the end of their elementary years who have established friendships, youth entering high school not only face a higher risk of victimization, but they also may have a completely new peer group and be without close friends. Thus, experiencing prosocial peer treatment during the first year of high school may be especially meaningful, as behaviours may be enacted within developing friendships or serve to increase acceptance in the broader peer

group. The potentially increased importance of prosocial peer treatment for early adolescents in Study 1 may have resulted in greater impacts of these events on daily mood.

Probably of most importance, observed differences in daily-level associations between emotions and received prosocial events across the two studies likely attest to differences in methodology. While time and resource intensive, Study 1 in this thesis utilized daily phone interviews to assess prosocial treatment and mood, which allowed us to encourage youth to answer thoughtfully, gather fulsome descriptions of acts of kindness, and ask clarifying and follow up questions. In Study 2, we administered diaries on tablets to youth at school and assessed prosocial peer treatment using a checklist that was developed based on the results from Study 1. Although this method was more efficient while still maintaining ecological validity, having participants complete assessments on their own, rather than collaboratively with an RA, may have increased measurement error. Another difference between the two studies was the number of received prosocial events youth could report; due to time limitations, early adolescents in Study 1 were limited to reporting three events and were told to choose the three best ones if they indicated receiving more. Using the checklist of prosocial treatment, youth were directed to indicate every event they had received that day. Given that results of this thesis show that prosocial peer treatment is a common event for early adolescents, a more guided reflection may be needed to help youth identify which events are important. It may be that because youth in Study 1 were asked to recall rather than recognize, they reported more meaningful received prosocial behaviours that were more likely to be associated with daily mood.

Evaluations of Prosocial Intention and Daily Mood

The current studies investigated whether early adolescents' perceptions of prosocial intent – the extent to which the actor in the event intended to be kind – were related to their daily

mood. For youth in Study 1, evaluations of prosocial intention were not associated with daily positive or negative affect. In other words, whether or not the participant believed the behaviour they reported experiencing was genuinely prosocial was not linked to day-to-day fluctuations in mood. Interestingly, in Study 2, the extent to which youth perceived prosocial intent was linked to daily negative but not positive affect. Specifically, on days youth evaluated greater prosocial intent than normal in the events they experienced, they also reported higher levels of negative mood. Though more straightforward than the present finding, this result builds on previous work linking youths' evaluations of hostile intent for negative peer events to greater emotional distress (Crick et al., 2002; Mathieson et al., 2011; Nelson et al., 2018; Wright, 2017).

Although somewhat counterintuitive, the association between greater perceived prosocial intent and daily negative mood provides more evidence that prosocial treatment is a complex and central social experience for youth. One interpretation of the result is that on days youth report increased negative affect, prosocial treatment by peers becomes more meaningful, and in turn influences their evaluations of the actor's behaviour because they may be in greater need of prosociality. On the other hand, peers may be reacting to youths' negative mood and their attempts to act prosocially might genuinely be more intentional, which recipients are picking up on. Taken together, both of these possibilities further highlight that prosocial treatment is an important aspect of youths' social interactions, and though the behaviours are intended to confer benefit – and most likely often do – they are not always related to positive changes in mood at the daily level. To better understand the relationship between mood and perceptions of prosociality, future studies should examine early adolescents' evaluations of intention for hypothetical prosocial treatment vignettes following the induction of either positive or negative affect.

However, given the association was only found in one of the two samples, and due to the exploratory nature of this specific investigation, the present result should be interpreted with caution and conclusions about links between variability in perceptions of prosocial intent and mood should not be drawn without further research and replication. Youths' social-cognitive evaluations of prosocial treatment have received little empirical attention and more focused research in this area is needed to better understand the relationship between perceptions of prosocial intent and emotional adjustment. Future work examining which youth are more or less likely to perceive prosocial intent may provide a clearer picture of the links between these evaluations and daily mood, as for some youth, prosocial treatment may not always be interpreted as positive or beneficial. For example, (Bowker, 2014) found that prosocial treatment was associated with increased rates of victimization for boys who were anxious and withdrawn; the author hypothesized that prosocial treatment makes these youth uncomfortable and may actually draw unwanted attention towards them. Thus, youths' individual differences may influence evaluations of prosocial intent, which may in turn impact daily mood.

Gender Differences in Prosocial Peer Treatment and Its Associations with Daily Mood

Not only did our daily-diary approach allow us to examine the diversity of prosocial behaviours youth experience in their day-to-day lives, we were also able to explore whether reports of these experiences varied by gender. We found that in both studies, girls reported receiving a greater number of daily prosocial overtures than did boys. For early adolescents, this gender difference was broadly consistent across all types of prosocial behavior identified, although girls and boys did not differ in their report of cooperating or defending, possibly due to the low base rates of these behaviors. These findings are consistent with previous work examining the frequency of daily positive social behaviours in early adolescence (Flook, 2011;

Sandstrom & Cillessen, 2003), as well as studies assessing global levels of received prosocial behaviours (e.g., Bowker, 2014; Leadbeater et al., 2006; Troop-Gordon & Unhjem, 2018). This gender difference may be driven, at least in part, by the fact that girls are generally thought to have more intimate peer relationships than do boys (Rose & Rudolph, 2006), which may open up more opportunities to engage prosocially. For instance, girls self-disclose with peers more than boys (e.g., McNelles & Connolly, 1999; Rose, 2002), which may lead to more opportunities for peers to respond to girls' instrumental and emotional needs. In Study 2, girls only reported receiving more compliments and comforting behaviours than boys, which is less consistent with the general prosocial peer treatment literature. Past studies that have found gender differences in received prosocial behaviour typically use global measures and it may be that when youth are given a checklist of many different examples, gender differences become less pronounced. However, it would be important to further explore this possibility, given that participants in Study 2 only reported events across four days, which may not have been a large enough window to detect true gender differences.

Although girls reported receiving more prosocial treatment than did boys, we did not find evidence that the associations between this treatment and daily mood varied by gender. In general, the daily associations between received prosocial behavior and positive and negative affect did not vary across participants, and so tests of gender differences were not supported by the data. Other studies have suggested that differences between girls and boys in the amount of prosocial behavior received may not translate into differences in the emotional correlates and consequences of these experiences (e.g., Stotsky et al., 2020; Troop-Gordon & Unhjem, 2018). One reason for this discrepancy may be that girls have higher expectations of their interactions with peers than do boys (e.g., Hall, 2011; Rose & Asher, 2017). Thus, although girls receive

more prosocial behavior, they may also expect more kindness, and correspondingly, daily prosocial treatment may not confer additional affective benefits for girls.

Predicting Targets of Everyday Prosocial Peer Treatment

The final aim of this thesis was to attempt to identify characteristics of the youth who are frequent targets of prosocial treatment events. In general, across both studies, peer-reports of victimization, as well as peer-reports in Study 2 of engaging in prosocial behaviour, acceptance, and prosocial treatment, were not associated with daily receipt of prosocial behaviour. Despite ample evidence that associations between these constructs exist when using summary measures of prosocial treatment, (e.g., Bowker, 2014; Leadbeater et al., 2006; Martin & Huebner, 2007; Stotsky et al., 2020; Troop-Gordon & Unhjem, 2018), daily-diary studies have found much less evidence for links between peer-reports and daily-reports. For instance, Pouwels and colleagues (2016) found no evidence of an association between peer- and daily-reports of victimization. Similarly, Sandstrom and Cillessen (2003) have shown that peer-reported acceptance, aggression, and withdrawal are not associated with youths' reports of daily positive interactions. Results from these studies, in combination with findings from the present work, suggest that peers' perceptions of youth may have little connection to youths' own report of their daily experiences of prosocial treatment.

There are a number of reasons why peer-reports of youths' behavioural and social characteristics may not predict who is a common day-to-day target of prosocial treatment. First, the majority of studies demonstrating links between prosocial treatment and other social experiences have used the same informants for both constructs (i.e., both peer-report or both self-report), which typically results in larger associations than across different informants due to shared method variance. Indeed, although we found no evidence that peer-reports predict daily

reports of received prosocial behaviours, correlations from Study 2 indicate that peer-reported victimization was negatively associated with peer-reported prosocial peer treatment, which in turn was positively associated with peer-reported prosocial behaviour and acceptance. Second, peer-reports tap into youths' reputations, which are not necessarily accurate reflections of youths' past or present lived experiences. To date, we have a limited understanding of how peers form these judgements. For example, a youth may experience one or two very salient victimization events and subsequently be viewed as highly victimized by the peer group, when in actuality they otherwise rarely encounter episodes of victimization. Finally, the brief periods of time assessed in this thesis may have been too short to capture and accurately represent youths' prosocial peer treatment experiences over a longer period of time. It is important to note that the majority of associations between peer- and daily- reports investigated in this thesis relied on data from Study 2, which was only comprised of four days of diaries. In the future, it will be important to examine whether relationships between youths' reputations and their daily-reports of prosocial treatment emerge over longer daily-diary assessments.

Limitations and Future Directions

While the current thesis advances our understanding of youths' everyday experience of prosocial treatment, findings should be considered in light of some limitations and a number of important directions for future research. Our sample was predominantly non-Hispanic white and affluent. It will be critical for future work to examine the associations between prosocial behavior and emotional adjustment in more diverse samples. The types of prosocial behavior in which youth engage, and how these behaviors are experienced, may differ in environments characterized by poverty. For example, sharing may be rarer and more impactful when resources are more limited (Corbit et al., 2020). Moreover, cultural differences, such as variability in the

extent to which prosocial behavior is seen as obligatory (e.g., Baron & Miller, 2000) may also shape associations between prosociality and emotional adjustment.

This thesis provides insight into the types of prosocial events that comprise youths' everyday interactions with peers and the associations between daily prosocial treatment and positive and negative affect. Due to concerns about collecting data from participants during school hours, as well as needing to gather rich behavioural descriptions in Study 1 through phone interviews, mood was only assessed once per day. A key extension of this work will be evaluating daily affect at multiple time points during the day. Many diary studies assess mood at one time point (e.g., Morrow et al., 2014; Schacter & Margolin, 2019b); however, future work including multiple assessments of affect and events over the course of the day will allow for a more detailed understanding of the likely transactional relationships between prosocial treatment and mood. The checklist of prosocial events that was created for Study 2 in this thesis could be further utilized as part of an ecological momentary assessment.

Although the present findings and past research clearly provide evidence that prosocial peer treatment is an important predictor of emotional adjustment, daily mood is almost certainly not the only mechanism through which the two constructs are related. At a basic level, youth share common social experiences and emotions in their daily lives, but what elicits a particular mood may differ according to qualities of the interaction or characteristics of the relationship with the peer enacting a behaviour, such as how attuned the behaviour is to an individual's need or friendship quality. Going forward, further investigating not only how, but when the receipt of prosocial behaviour is associated with daily mood will also advance our knowledge of how these processes unfold. For instance, it may be that two specific types of prosocial behaviours (e.g.,

helping or comforting) enacted in response to similar events (e.g., struggling with homework) may be differentially associated with daily mood.

Additionally, in order to understand atypical development, it is first necessary to understand normal development. The current research provides deep insight into typically developing youths' experience of daily prosocial treatment and how these events relate to mood. With this knowledge, it is important for future studies to investigate how individual characteristics and mood and anxiety disorders impact relationships between daily receipt of prosocial behaviour and emotional adjustment.

Finally, findings from the current research may also help inform the development of future clinical interventions. In a study by Seligman and colleagues (2005), adults were asked to identify three good things that happened to them every night for a week. Results indicated that the intervention had lasting results over a six-month period, such that participants reported experiencing increased happiness and decreased depressive symptoms. These findings are consistent with "accumulating positive emotions," which is one of the key principles used in Dialectical-Behaviour Therapy (DBT) for adolescents to improve emotion regulation (Rathus & Miller, 2002). Developing an intervention that asks youth to record their prosocial peer treatment experiences may be effective in promoting positive mood states and better psychological adjustment over time. Study 1 in this thesis provides an effective protocol for doing so and the checklist from Study 2 could be presented to youth who have more difficulty identifying positive events in their own daily life. Moreover, our findings suggest that prosocial treatment events are related to day-to-day changes in mood, and it therefore may be beneficial for future interventions to help bring youths' awareness to these more proximal connections, which in turn may promote more mindful awareness of positive emotions in the moment.

Conclusion

This thesis advances our understanding of youths' everyday social and emotional lives. Although the transition into adolescence is often viewed as a period of increased negative affect and interpersonal struggle, the results of this thesis suggest that prosocial treatment by peers occurs frequently. Moreover, these behaviours reflect and are responsive to the developing social needs of youth. In particular, early adolescents reported frequent experiences of inclusion and compliments, behaviors that may be particularly critical during this developmental period, when peer acceptance is highly valued. Our results also begin to elucidate the apparently complex associations between daily prosocial treatment and mood. For early adolescents in Study 1, daily receipt of prosocial behavior was linked to greater positive mood. However, across both studies, associations between receipt of prosocial treatment and negative mood varied based on the type of behaviour. Comforting, in particular, was associated with greater negative mood, likely because this prosocial act is typically elicited by intense negative affect. Finally, our findings suggest that early adolescents' evaluations of prosocial intention may be linked to daily mood, which highlights the importance of moving beyond solely whether or not an event occurred, and examining youths' understanding of their everyday interactions. Future work using ambulatory assessments will provide a more nuanced understanding of the temporal links between received prosociality and affect. Ultimately, this line of work may provide insight into proximal mechanisms linking peer interactions to emotional adjustment.

References

Baron, J., & Miller, J. G. (2000). Limiting the scope of moral obligations to help - A cross-cultural investigation. *Journal of Cross-Cultural Psychology*, *31*(6), 703-725. https://doi.org/10.1177/0022022100031006003

Bellmore, A., Jiang, X. L., & Juvonen, J. (2010). Utilizing peer nominations in middle school: A longitudinal comparison between complete classroom-based and random list methods. *Journal of Research on Adolescence*, *20*(2), 538-550. https://doi.org/10.1111/j.1532-7795.2010.00640.x

Bergin, C., Talley, S., & Hamer, L. (2003). Prosocial behaviours of young adolescents: a focus group study. *Journal of Adolescence*, *26*(1), 13-32, Article Pii s0140-1971(02)00112-4. https://doi.org/10.1016/s0140-1971(02)00112-4

Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, *54*, 579-616. https://doi.org/10.1146/annurev.psych.54.101601.145030

Bowker, J. C. (2014). Prosocial peer treatment and the psychosocial outcomes associated with anxious-withdrawal. *Infant and Child Development*, *23*(3), 314-322. https://doi.org/10.1002/icd.1857

Boxer, P., Tisak, M. S., & Goldstein, S. E. (2004). Is it bad to be good? An exploration of aggressive and prosocial behavior subtypes in adolescence. *Journal of Youth and Adolescence*, *33*(2), 91-100. https://doi.org/10.1023/B:JOYO.0000013421.02015.ef

Brown, B. B., & Larson, J. (2009). Peer relationships in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology: Contextual influences on*

adolescent development (pp. 74-103). John Wiley & Sons, Inc. https://doi.org/10.1002/9780470479193.adlpsy002004

Brownell, C. A., Svetlova, M., & Nichols, S. (2009). To share or not to share: When do toddlers respond to another's needs? *Infancy*, *14*(1), 117-130. https://doi.org/10.1080/15250000802569868

Burk, W. J., & Laursen, B. (2005). Adolescent perceptions of friendship and their associations with individual adjustment. *International Journal of Behavioral Development*, *29*(2), 156-164. https://doi.org/10.1080/01650250444000342

Casper, D. M., & Card, N. A. (2017). Overt and relational victimization: A meta-analytic review of their overlap and associations with social-psychological adjustment. *Child Development*, *88*(2), 466-483. https://doi.org/10.1111/cdev.12621

Chu, P. S., Saucier, D. A., & Hafner, E. (2010). Meta-analysis of the relationships between social support and well-being in children and adolescents. *Journal of Social and Clinical Psychology*, *29*(6), 624-645. https://doi.org/10.1521/jscp.2010.29.6.624

Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression - psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology*, *100*(3), 316-336. https://doi.org/10.1037/0021-843x.100.3.316

Clark, L. A., Watson, D., & Mineka, S. (1994). Temperament, personality, and the mood and anxiety disorders. *Journal of Abnormal Psychology*, *103*(1), 103-116. https://doi.org/10.1037/0021-843x.103.1.103

Closson, L. M., & Hymel, S. (2016). Status differences in target-specific prosocial behavior and aggression. *Journal of Youth and Adolescence*, *45*(9), 1836-1848. https://doi.org/10.1007/s10964-016-0481-7

Coie, J. D. (1990). Toward a theory of peer rejection. In S. A. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 365-401). Cambridge University Press.

Cole, P. M., Luby, J., & Sullivan, M. W. (2008). Emotions and the development of childhood depression: Bridging the gap. *Child Development Perspectives*, *2*(3), 141-148. https://doi.org/10.1111/j.1750-8606.2008.00056.x

Compian, L. J., Gowen, L. K., & Hayward, C. (2009). The interactive effects of puberty and peer victimization on weight concerns and depression symptoms among early adolescent girls. *Journal of Early Adolescence*, *29*(3), 357-375. https://doi.org/10.1177/0272431608323656

Corbit, J., Callaghan, T., & Svetlova, M. (2020). Toddlers' costly helping in three societies. *Journal of Experimental Child Psychology*, *195*, Article 104841. https://doi.org/10.1016/j.jecp.2020.104841

Cotney, J. L., & Banerjee, R. (2019). Adolescents' conceptualizations of kindness and its links with well-being: A focus group study. *Journal of Social and Personal Relationships*, *36*(2), 599-617. https://doi.org/10.1177/0265407517738584

Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A multiinformant approach. *Journal of Consulting and Clinical Psychology*, *66*(2), 337-347. https://doi.org/10.1037/0022-006x.66.2.337

Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology*, *8*(2), 367-380. https://doi.org/10.1017/s0954579400007148

Crick, N. R., Grotpeter, J. K., & Bigbee, M. A. (2002). Relationally and physically aggressive children's intent attributions and feelings of distress for relational and instrumental peer

provocations. *Child Development*, *73*(4), 1134-1142, Article Unsp 0009-3920/2002/7304-0010. https://doi.org/10.1111/1467-8624.00462

Crick, N. R., Grotpeter, J. K., & Rockhill, C. M. (1999). A social information-processing approach to children's loneliness. In K. J. Rotenberg & S. Hymel (Eds.), *Loneliness in childhood and adolescence* (pp. 153-175). Cambridge.

de Castro, B. O., Veerman, J. W., Koops, W., Bosch, J. D., & Monshouwer, H. J. (2002). Hostile attribution of intent and aggressive behavior: A meta-analysis. *Child Development*, *73*(3), 916-934. https://doi.org/10.1111/1467-8624.00447

Dijkstra, J. K., Cillessen, A. H. N., Lindenberg, S., & Veenstra, R. (2010). Basking in reflected glory and its limits: Why adolescents hang out with popular peers. *Journal of Research on Adolescence*, *20*(4), 942-958. https://doi.org/10.1111/j.1532-7795.2010.00671.x

Dirks, M. A., Cuttini, L. A., Mott, A., & Henry, D. B. (2017). Associations between victimization and adolescents' self-reported responses to peer provocation are moderated by peer-reported aggressiveness. *Journal of Research on Adolescence*, *27*(2), 436-451. https://doi.org/10.1111/jora.12282

Dirks, M. A., Dunfield, K. A., & Recchia, H. E. (2018). Prosocial behavior with peers: Intentions, outcomes, and interpersonal adjustment. In W. M. Bukowski, B. Laursen, & K. H. Rubin (Eds.), *Handbook of peer interactions, relationships, and groups, 2nd ed.* (pp. 243-264). The Guilford Press.

Dodge, K. A. (1980). Social cognition and childrens aggressive-behavior. *Child Development*, *51*(1), 162-170. https://doi.org/10.2307/1129603

Dodge, K. A., & Somberg, D. R. (1987). Hostile attributional biases among aggressive boys are exacerbated under conditions of threats to the self. *Child Development*, *58*(1), 213-224. https://doi.org/10.1111/j.1467-8624.1987.tb03501.x

Dunfield, K., Kuhlmeier, V. A., O'Connell, L., & Kelley, E. (2011). Examining the diversity of prosocial behavior: Helping, sharing, and comforting in infancy. *Infancy*, *16*(3), 227-247. https://doi.org/10.1111/j.1532-7078.2010.00041.x

Dunfield, K. A. (2014). A construct divided: prosocial behavior as helping, sharing, and comforting subtypes. *Frontiers in Psychology*, *5*, Article 958. https://doi.org/10.3389/fpsyg.2014.00958

Dunfield, K. A., & Kuhlmeier, V. A. (2010). Intention-mediated selective helping in infancy. *Psychological Science*, *21*(4), 523-527. https://doi.org/10.1177/0956797610364119

Dunfield, K. A., & Kuhlmeier, V. A. (2013). Classifying prosocial behavior: Children's responses to instrumental need, emotional distress, and material desire. *Child Development*, *84*(5), 1766-1776. https://doi.org/10.1111/cdev.12075

Ebesutani, C., Regan, J., Smith, A., Reise, S., Higa-McMillan, C., & Chorpita, B. F. (2012). The 10-Item Positive and Negative Affect Schedule for Children, child and parent shortened versions: Application of item response theory for more efficient assessment. *Journal of Psychopathology and Behavioral Assessment*, *34*(2), 191-203. https://doi.org/10.1007/s10862-011-9273-2

Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2006). Prosocial development. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (pp. 646-718). John Wiley & Sons.

El Mallah, S. (2020). Conceptualization and measurement of adolescent prosocial behavior: Looking back and moving forward. *Journal of Research on Adolescence*, *30*, 15-38. https://doi.org/10.1111/jora.12476

Espinoza, G., Gonzales, N. A., & Fuligni, A. J. (2013). Daily school peer victimization experiences among mexican-american adolescents: Associations with psychosocial, physical and school adjustment. *Journal of Youth and Adolescence*, *42*(12), 1775-1788. https://doi.org/10.1007/s10964-012-9874-4

Flook, L. (2011). Gender differences in adolescents' daily interpersonal events and well-being. *Child Development*, *82*(2), 454-461. https://doi.org/10.1111/j.1467-8624.2010.01521.x

Forbes, E. E., Williamson, D. E., Ryan, N. D., & Dahl, R. E. (2004). Positive and negative affect in depression - Influence of sex and puberty. In R. E. Dahl & L. P. Spear (Eds.), *Adolescent Brain Development: Vulnerabilities and Opportunities* (Vol. 1021, pp. 341-347). https://doi.org/10.1196/annals.1308.042

Gil-Rivas, V., Greenberger, E., Chen, C. S., & Lopez-Lena, M. M. Y. (2003). Understanding depressed mood in the context of a family-oriented culture. *Adolescence*, *38*(149), 93-109. <Go to ISI>://WOS:000183378500007

https://escholarship.org/content/qt1d537750/qt1d537750.pdf?t=nq7atp

Greener, S., & Crick, N. R. (1999). Normative beliefs about prosocial behavior in middle childhood: What does it mean to be nice? *Social Development*, *8*(3), 349-363. https://doi.org/10.1111/1467-9507.00100

Griese, E. R., & Buhs, E. S. (2014). Prosocial behavior as a protective factor for children's peer victimization. *Journal of Youth and Adolescence*, *43*(7), 1052-1065. https://doi.org/10.1007/s10964-013-0046-y

Hall, J. A. (2011). Sex differences in friendship expectations: A meta-analysis. *Journal of Social and Personal Relationships*, *28*(6), 723-747. https://doi.org/10.1177/0265407510386192

Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, *41*(4), 441-455. https://doi.org/10.1111/1469-7610.00629

Hay, D. F. (1994). Prosocial development. *Journal of Child Psychology and Psychiatry*, *35*(1), 29-71. https://doi.org/10.1111/j.1469-7610.1994.tb01132.x

Hay, D. F., & Rheingold, H. L. (1983). The early appearance of some valued social behaviors. In D. L. Bridgeman (Ed.), *The nature of prosocial development: Interdisciplinary theories and strategies* (pp. 73-94). Academic Press.

Herres, J., Ewing, E. S. K., & Kobak, R. (2016). Emotional reactivity to negative adult and peer events and the maintenance of adolescent depressive symptoms: A daily diary design. *Journal of Abnormal Child Psychology*, *44*(3), 471-481. https://doi.org/10.1007/s10802-015-0043-6

Houben, M., Van den Noortgate, W., & Kuppens, P. (2015). The relation between short-term emotion dynamics and psychological well-being: A meta-analysis. *Psychological Bulletin*, *141*(4), 901-930. https://doi.org/10.1037/a0038822

Karna, A., Voeten, M., Little, T. D., Poskiparta, E., Kaljonen, A., & Salmivalli, C. (2011). A large-scale evaluation of the kiva antibullying program: Grades 4-6. *Child Development*, *82*(1), 311-330. https://doi.org/10.1111/j.1467-8624.2010.01557.x

Kessler, R. C., Angermeyer, M., Anthony, J. C., R, D. E. G., Demyttenaere, K., Gasquet, I., G, D. E. G., Gluzman, S., Gureje, O., Haro, J. M., Kawakami, N., Karam, A., Levinson, D.,

Medina Mora, M. E., Oakley Browne, M. A., Posada-Villa, J., Stein, D. J., Adley Tsang, C. H., Aguilar-Gaxiola, S., . . . Ustün, T. B. (2007). Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry*, *6*(3), 168-176. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2174588/pdf/wpa060168.pdf

Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development*, *67*(4), 1305-1317. https://doi.org/10.2307/1131701

La Greca, A. M., & Harrison, H. M. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression? *Journal of Clinical Child and Adolescent Psychology*, *34*(1), 49-61. https://doi.org/10.1207/s15374424jccp3401_5

Ladd, G. W., & Kochenderfer-Ladd, B. (2002). Identifying victims of peer aggression from early to middle childhood: Analysis of cross-informant data for concordance, estimation of relational adjustment, prevalence of victimization, and characteristics of identified victims. *Psychological Assessment*, *14*(1), 74-96. https://doi.org/10.1037/1040-3590.14.1.74

Larsen, J. T., McGraw, A. P., & Cacioppo, J. T. (2001). Can people feel happy and sad at the same time? *Journal of Personality and Social Psychology*, *81*(4), 684-696. https://doi.org/10.1037//0022-3514.81.4.684

Larson, R. W., Richards, M. H., Moneta, G., Holmbeck, G., & Duckett, E. (1996). Changes in adolescents' daily interactions with their families from ages 10 to 18: Disengagement and transformation. *Developmental Psychology*, *32*(4), 744-754. https://doi.org/10.1037/0012-1649.32.4.744

Larson, R. W., Richards, M. H., Raffaelli, M., Ham, M., & Jewell, L. (1990). Ecology of depression in late childhood and early adolescence - a profile of daily states and activities. *Journal of Abnormal Psychology*, *99*(1), 92-102. https://doi.org/10.1037/0021-843x.99.1.92

Laursen, B., & Adams, R. (2018). Conflict between peers. In *Handbook of peer interactions, relationships, and groups* (Second ed., pp. 265-283). The Guilford Press.

Leadbeater, B. J., Boone, E. M., Sangster, N. A., & Mathieson, L. C. (2006). Sex differences in the personal costs and benefits of relational and physical aggression in high school. *Aggressive Behavior*, *32*(4), 409-419. https://doi.org/10.1002/ab.20139

Lucas, R. E., Diener, E., & Larsen, R. J. (2009). Measuring positive emotions. In E. Diener (Ed.), *Assessing well-being: The collected works of Ed Diener.* (pp. 139-155). Springer Science + Business Media. https://doi.org/10.1007/978-90-481-2354-4_7

Maciejewski, D. F., van Lier, P. A. C., Neumann, A., Van der Giessen, D., Branje, S. J. T., Meeus, W. H. J., & Koot, H. M. (2014). The development of adolescent generalized anxiety and depressive symptoms in the context of adolescent mood variability and parent-adolescent negative interactions. *Journal of Abnormal Child Psychology*, *42*(4), 515-526. https://doi.org/10.1007/s10802-013-9797-x

Martin, K. M., & Huebner, E. S. (2007). Peer victimization and prosocial experiences and emotional well-being of middle school students. *Psychology in the Schools*, *44*(2), 199-208. https://doi.org/10.1002/pits.20216

Mathieson, L. C., Murray-Close, D., Crick, N. R., Woods, K. E., Zimmer-Gembeck, M., Geiger, T. C., & Morales, J. R. (2011). Hostile intent attributions and relational aggression: The

moderating roles of emotional sensitivity, gender, and victimization. *Journal of Abnormal Child Psychology*, *39*(7), 977-987. https://doi.org/10.1007/s10802-011-9515-5

McNelles, L. R., & Connolly, J. A. (1999). Intimacy between adolescent friends: Age and gender differences in intimate affect and intimate behaviors. *Journal of Research on Adolescence*, *9*(2), 143-159. https://doi.org/10.1207/s15327795jra0902_2

Meeus, W. (2016). Adolescent psychosocial development: A review of longitudinal models and research. *Developmental Psychology*, *52*(12), 1969-1993. https://doi.org/10.1037/dev0000243

Morrow, M. T., Hubbard, J. A., Barhight, L. J., & Thomson, A. K. (2014). Fifth-grade children's daily experiences of peer victimization and negative emotions: Moderating effects of sex and peer rejection. *Journal of Abnormal Child Psychology*, *42*(7), 1089-1102. https://doi.org/10.1007/s10802-014-9870-0

Muthén, L. K., & Muthén, B. O. (2008-2016). *MPlus User's Guide 1998–2016* (Eighth ed.). Muthén & Muthén.

Nelson, D. A., Cramer, C. M., Coyne, S. M., & Olsen, J. A. (2018). Children's hostile intent attributions and emotional distress: What do parents perceive? *Aggressive Behavior*, *44*(1), 98-108. https://doi.org/10.1002/ab.21734

Neumann, A., van Lier, P. A. C., Frijns, T., Meeus, W., & Koot, H. M. (2011). Emotional dynamics in the development of early adolescent psychopathology: A one-year longitudinal study. *Journal of Abnormal Child Psychology*, *39*(5), 657-669. https://doi.org/10.1007/s10802-011-9509-3

Nishina, A. (2012). Microcontextual characteristics of peer victimization experiences and adolescents' daily well-being. *Journal of Youth and Adolescence*, *41*(2), 191-201. https://doi.org/10.1007/s10964-011-9669-z

Nishina, A., & Juvonen, J. (2005). Daily reports of witnessing and experiencing peer harassment in middle school. *Child Development*, *76*(2), 435-450. https://doi.org/10.1111/j.1467-8624.2005.00855.x

Nishina, A., Juvonen, J., & Witkow, M. R. (2005). Sticks and stones may break my bones, but names will make me feel sick: The psychosocial, somatic, and scholastic consequences of peer harassment. *Journal of Clinical Child and Adolescent Psychology*, *34*(1), 37-48. https://doi.org/10.1207/s15374424jccp3401_4

Pellegrini, A. D., & Bartini, M. (2000a). An empirical comparison of methods of sampling aggression and victimization in school settings. *Journal of Educational Psychology*, *92*(2), 360-366. https://doi.org/10.1037/0022-0663.92.2.360

Pellegrini, A. D., & Bartini, M. (2000b). A longitudinal study of bullying, victimization, and peer affiliation during the transition from primary school to middle school. *American Educational Research Journal*, *37*(3), 699-725. https://doi.org/10.2307/1163486

Pouwels, J. L., Lansu, T. A. M., & Cillessen, A. H. N. (2016). Peer victimization in adolescence: Concordance between measures and associations with global and daily internalizing problems. *Journal of Adolescence*, *53*, 195-206. https://doi.org/10.1016/j.adolescence.2016.10.004

Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and Relational Aggression in Adolescents: Social-Psychological Adjustment of Aggressors and Victims. *Journal of*

Clinical Child & Adolescent Psychology, *30*(4), 479-491. https://doi.org/10.1207/S15374424JCCP3004_05

Pursell, G. R., Laursen, B., Rubin, K. H., Booth-LaForce, C., & Rose-Krasnor, L. (2008). Gender differences in patterns of association between prosocial behavior, personality, and externalizing problems. *Journal of Research in Personality*, *42*(2), 472-481. https://doi.org/10.1016/j.jrp.2007.06.003

Rathus, J. H., & Miller, A. L. (2002). Dialectical behavior therapy adapted for suicidal adolescents. *Suicide and Life-Threatening Behavior*, *32*(2), 146-157. https://doi.org/10.1521/suli.32.2.146.24399

Reavis, R. D., Donohue, L. J., & Upchurch, M. C. (2015). Friendship, negative peer experiences, and daily positive and negative mood. *Social Development*, *24*(4), 833-851. https://doi.org/10.1111/sode.12123

Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse & Neglect*, *34*(4), 244-252. https://doi.org/10.1016/j.chiabu.2009.07.009

Reijntjes, A., Thomaes, S., Kamphuis, J. H., Bushman, B. J., de Castro, B. O., & Telch, M. J. (2011). Explaining the paradoxical rejection-aggression link: The mediating effects of hostile intent attributions, anger, and decreases in state self-esteem on peer rejection-induced aggression in youth. *Personality and Social Psychology Bulletin*, *37*(7), 955-963. https://doi.org/10.1177/0146167211410247

Richards, M. H., Crowe, P. A., Larson, R., & Swarr, A. (1998). Developmental patterns and gender differences in the experience of peer companionship during adolescence. *Child Development*, *69*(1), 154-163. https://doi.org/10.1111/j.1467-8624.1998.tb06140.x

Rose, A. J. (2002). Co-rumination in the friendships of girls and boys. *Child Development*, *73*(6), 1830-1843. https://doi.org/10.1111/1467-8624.00509

Rose, A. J., & Asher, S. R. (2004). Children's strategies and goals in response to help-giving and help-seeking tasks within a friendship. *Child Development*, *75*(3), 749-763. https://doi.org/10.1111/j.1467-8624.2004.00704.x

Rose, A. J., & Asher, S. R. (2017). The social tasks of friendship: Do boys and girls excel in different tasks? *Child Development Perspectives*, *11*(1), 3-8. https://doi.org/10.1111/cdep.12214

Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, *132*(1), 98-131. https://doi.org/10.1037/0033-2909.132.1.98

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In *Handbook of child psychology: Social, emotional, and personality development, Vol. 3, 6th ed.* (pp. 571-645). John Wiley & Sons, Inc.

Rueger, S. Y., Malecki, C. K., Pyun, Y., Aycock, C., & Coyle, S. (2016). A meta-analytic review of the association between perceived social support and depression in childhood and adolescence. *Psychological Bulletin*, *142*(10), 1017-1067. https://doi.org/10.1037/bul0000058

Sandstrom, M. J., & Cillessen, A. H. N. (2003). Sociometric status and children's peer experiences: Use of the daily diary method. *Merrill-Palmer Quarterly-Journal of Developmental Psychology*, *49*(4), 427-452. https://doi.org/10.1353/mpq.2003.0025

Schacter, H. L., & Margolin, G. (2019a). The interplay of friends and parents in adolescents' daily lives: Towards a dynamic view of social support. *Social Development*, *28*(3), 708-724. https://doi.org/10.1111/sode.12363

Schacter, H. L., & Margolin, G. (2019b). When it feels good to give: Depressive symptoms, daily prosocial behavior, and adolescent mood. *Emotion*, *19*(5), 923-927. https://doi.org/10.1037/emo0000494

Scholte, R. H. J., Burk, W. J., & Overbeek, G. (2013). Divergence in self- and peer-reported victimization and its association to concurrent and prospective adjustment. *Journal of youth and adolescence*, *42*(12), 1789-1800. https://doi.org/10.1007/s10964-012-9896-y

Schwartz-Mette, R. A., Shankman, J., Dueweke, A. R., Borowski, S., & Rose, A. J. (2020). Relations of friendship experiences with depressive symptoms and loneliness in childhood and adolescence: A meta-analytic review. *Psychological Bulletin*, *146*(8), 664-700. https://doi.org/10.1037/bul0000239

Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress - Empirical validation of interventions. *American Psychologist*, *60*(5), 410-421. https://doi.org/10.1037/0003-066x.60.5.410

Silk, J. S., Steinberg, L., & Morris, A. S. (2003). Adolescents' emotion regulation in daily life: Links to depressive symptoms and problem behavior. *Child Development*, *74*(6), 1869-1880. https://doi.org/10.1046/j.1467-8624.2003.00643.x

Solberg, M. E., & Olweus, D. (2003). Prevalence estimation of school bullying with the Olweus Bully/Victim Questionnaire [Article]. *Aggressive Behavior*, *29*(3), 239-268. https://doi.org/10.1002/ab.10047

Somerville, L. H. (2013). The teenage brain: Sensitivity to social evaluation. *Current Directions in Psychological Science*, *22*(2), 121-127. https://doi.org/10.1177/0963721413476512

Storch, E. A., & Masia-Warner, C. (2004). The relationship of peer victimization to social anxiety and loneliness in adolescent females. *Journal of Adolescence*, *27*(3), 351-362. https://doi.org/https://doi.org/10.1016/j.adolescence.2004.03.003

Stotsky, M. T., Bowker, J. C., & Etkin, R. G. (2020). Receiving prosocial behavior: Examining the reciprocal associations between positive peer treatment and psychosocial and behavioral outcomes. *Journal of Research on Adolescence*, *30*(2), 458-470. https://doi.org/10.1111/jora.12537

Svetlova, M., Nichols, S. R., & Brownell, C. A. (2010). Toddlers' prosocial behavior: From instrumental to empathic to altruistic helping. *Child Development*, *81*(6), 1814-1827. https://doi.org/10.1111/j.1467-8624.2010.01512.x

Thomas, K. K., & Bowker, J. C. (2013). An investigation of desired friendships during early adolescence. *Journal of Early Adolescence*, *33*(6), 867-890. https://doi.org/10.1177/0272431612469725

Troop-Gordon, W., & Unhjem, L. (2018). Is preventing peer victimization sufficient? The role of prosocial peer group treatment in children's socioemotional development. *Social Development*, *27*(3), 619-635. https://doi.org/10.1111/sode.12283

van Roekel, E., Bennik, E. C., Bastiaansen, J. A., Verhagen, M., Ormel, J., Engels, R., & Oldehinkel, A. J. (2016). Depressive symptoms and the experience of pleasure in daily life: An exploration of associations in early and late adolescence. *Journal of Abnormal Child Psychology*, *44*(5), 999-1009. https://doi.org/10.1007/s10802-015-0090-z

Vannucci, A., Ohannessian, C. M., Flannery, K. M., De Los Reyes, A., & Liu, S. Q. (2018). Associations between friend conflict and affective states in the daily lives of adolescents. *Journal of Adolescence*, *65*, 155-166. https://doi.org/10.1016/j.adolescence.2018.03.014

Veenstra, R., Lindenberg, S., Zijlstra, B. J. H., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2007). The dyadic nature of bullying and victimization: Testing a dual-perspective theory. *Child Development*, *78*(6), 1843-1854. https://doi.org/10.1111/j.1467-8624.2007.01102.x

Verhoef, R. E. J., Alsem, S. C., Verhulp, E. E., & De Castro, B. O. (2019). Hostile intent attribution and aggressive behavior in children revisited: A meta-analysis. *Child Development*, *90*(5), E525-E547. https://doi.org/10.1111/cdev.13255

Warneken, F., Chen, F., & Tomasello, M. (2006). Cooperative activities in young children and chimpanzees. *Child Development*, *77*(3), 640-663. https://doi.org/10.1111/j.1467-8624.2006.00895.x

Warneken, F., & Tomasello, M. (2006). Altruistic helping in human infants and young chimpanzees. *Science*, *311*(5765), 1301-1303. https://doi.org/10.1126/science.1121448

Watson, D., & Clark, L. A. (1994). Emotions, moods, traits, and temperaments: Conceptual distinctions and empirical findings. In P. Ekman & R. J. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp. 89-93). Oxford University Press.

Watson, D., Clark, L. A., & Harkness, A. R. (1994). Structures of personality and their relevance to psychopathology. *Journal of Abnormal Psychology*, *103*(1), 18-31. https://doi.org/10.1037/0021-843x.103.1.18

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect - the panas scales. *Journal of Personality and Social Psychology*, *54*(6), 1063-1070. https://doi.org/10.1037/0022-3514.54.6.1063

Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, *98*(2), 219-235. https://doi.org/10.1037/0033-2909.98.2.219

Weinstein, S. M., Mermelstein, R. J., Hedeker, D., Hankin, B. L., & Flay, B. R. (2006). The time-varying influences of peer and family support on adolescent daily positive and negative affect. *Journal of Clinical Child and Adolescent Psychology*, *35*(3), 420-430. https://doi.org/10.1207/s15374424jccp3503_7

Wentzel, K. R. (2014). Prosocial behavior and peer relations in adolescence. In L. M. Padilla-Walker & G. Carlo (Eds.), *Prosocial development: A multidimensional approach.* (pp. 178-200). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199964772.003.0009

Wichers, M., Wigman, J. T. W., & Myin-Germeys, I. (2015). Micro-level affect dynamics in psychopathology viewed from complex dynamical system theory. *Emotion Review*, *7*(4), 362-367. https://doi.org/10.1177/1754073915590623

Wright, M. F. (2017). Adolescents' emotional distress and attributions for face-to-face and cyber victimization: Longitudinal linkages to later aggression. *Journal of Applied Developmental Psychology*, *48*, 1-13. https://doi.org/10.1016/j.appdev.2016.11.002

Appendix A

Daily-Diary Interview Manual from Study 1

Each night, for 10 consecutive school nights, a research assistant will call the child, and ask him/her the following question:

"Rate how often you have felt this way today from 1 (very slightly or not at all) to 5 (very)":

Miserable
Mad
Afraid
Scared
Sad
Joyful
Cheerful
Happy
Lively
Proud

Note – need to vary order each day

(A) "Did anyone do anything mean to you today? This includes any fights or conflicts that happened in school, during an extracurricular activity, online, or through text messaging. If you aren't sure, you should tell me about it and we can figure it out."

In the first one or two calls, the RA may follow up with these questions:

"Some examples of people doing something mean are name-calling, saying mean things, physical bullying, hurting someone's feelings, talking about someone behind their back, or ignoring people. Did anyone do anything like that to you? It may have happened during a disagreement or conflict that you were having with someone, or it may have happened out of the blue."

If the child says no, the RA will move on to the next part of the interview. If the child says yes, the RA will ask:

"How many things like that happened today?"

"I am going to ask you some questions about each event. Think about which one you want to talk about first."

(1) What happened?
(2a) Do you think the person meant to be mean? (1 – not at all to 5 – very)
(2b) How much did it bother you? (1 – not at all to 5 – a lot)
(3) How did start?

(4a) Who was [were] the other person [people] (relationship e.g., friend, classmate)?
(4b) Who else was around?
(5) What time did it happen?
(6) Where did it happen?
(7) [Repeat back first event to child … So, the person did X, then …] what did you do?
(8) After that, what happened next?
(9) [Repeat back first two behaviors to the child – so the person did x, and then you did y] After you did that, did the situation get better or worse? [Rate from 1 (a lot worse) to 7 (a lot better)].
(10a) Do you think this conflict has ended? (Yes/No)
(b) What makes you think that this conflict is/is not ended?
(c) If it ended, what do you think ended it?
(11) Let's think again about how it started:
(a) Why do you think he/she did this?
(b) Did something happen to make him/her upset? (Yes/no)
(c) If yes, what?
(12a) Have you had conflicts with this person in the past? Yes/no
(b) Were these conflicts similar to today?

For questions (1), (3), (7), and (8) ask participants to provide a full behavioral description so that "someone who was not there could understand what happened." Use the following prompt: "Imagine we were making movie and what happened was a scene in the movie. Tell me what I need to know to shoot the scene."

Repeat the questions for event that happened.

(B) "Did anyone do anything nice for you today? This could include things that happened in person, or over text or by email. If you aren't sure, you should tell me, and we'll figure it out."

In the first few calls, we may include the following prompt:

"Nice things include sharing with you, comforting you or cheering you up, or helping you in some way. These things could have happened out of the blue, or maybe they were responding to something that you did."

If yes:

"How many times did that happen to you today?"

If more than 3 – "Let's think about the three best ones." Ask the questions for each incident separately.

(1) What happened?
(2a) Do you think the person meant to be nice? (1 – not at all to 5 – very)
(2b) How good did it make you feel? (1 – not at all to 5 – a lot)
(3a) Who was the other person/people? (relationship, e.g., friend, classmate)
(3b) Who else was around?

(4) What did you do?
(5) What happened next?
(6) Why do you think he/she did this?
(7a) Did you do something nice for that person first? (Yes/no)
(7b) If yes, what?
(7c) Were they trying to make something up to you? (Yes/no)
(7d) If yes, what?

For questions 1, 4, and 5 ask participant to provide a full behavioral description so that someone who was not there could understand.

Children will be asked to answer these questions for each incident that occurred that day, up to three incidents.

To ensure that the call ends on a positive note, the RA will ask the child to talk about one fun thing that happened that day (e.g., with family or friends).

Appendix B

Results of Multilevel Regression Models Examining the Daily Associations Between Specific Types of Prosocial Treatment Events and Positive and Negative Affect in Study 1

Table B1

Results of a Multilevel Regression Examining Daily Associations Between Helping Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.01	0.14	<.001	1.13	0.09	<.001
Within participants						
Helping	0.03	0.02	.223	-0.04	0.02	<.01
Antecedent positive affect	0.21	0.04	<.001	0.02	0.03	.642
Antecedent negative affect	-0.03	0.03	.304	0.03	0.02	.147
Prior day positive affect	0.17	0.03	<.001	-0.02	0.02	.341
Prior day negative affect	-0.05	0.04	.211	0.19	0.05	<.001
Day	-0.00	0.00	.882	-0.00	0.00	.170
Between participants						
Gender	0.06	0.08	.449	0.04	0.03	.254
Cohort 1	0.02	0.05	.754	-0.00	0.03	.931
Cohort 2	0.06	0.05	.264	-0.02	0.02	.307

Note. B = unstandardized beta, *SE* = standard error.

Table B2

Results of a Multilevel Regression Examining Daily Associations Between Compliment Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.02	0.14	<.001	1.12	0.09	<.001
Within participants						
Compliments	0.02	0.03	.473	0.04	0.03	.090
Antecedent positive affect	0.19	0.05	<.001	-0.01	0.04	.717
Antecedent negative affect	-0.02	0.02	.511	0.01	0.02	.670
Prior day positive affect	0.17	0.03	<.001	-0.02	0.02	.339
Prior day negative affect	-0.05	0.04	.198	0.19	0.05	<.001
Day	-0.00	0.00	.858	-0.00	0.00	.242
Between participants						
Gender	0.06	0.08	.458	0.03	0.03	.295
Cohort 1	0.02	0.05	.769	-0.01	0.03	.842
Cohort 2	0.06	0.05	.255	-0.02	0.02	.317

Note. B = unstandardized beta, *SE* = standard error.

Table B3

Results of a Multilevel Regression Examining Daily Associations Between Inclusion Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.01	0.15	<.001	1.13	0.09	<.001
Within participants						
Inclusion	0.05	0.03	.096	-0.05	0.02	.031
Antecedent positive affect	0.21	0.04	<.001	0.02	0.03	.597
Antecedent negative affect	-0.02	0.02	.458	0.01	0.02	.577
Prior day positive affect	0.17	0.03	<.001	-0.02	0.02	.339
Prior day negative affect	-0.05	0.04	.217	0.19	0.05	<.001
Day	-0.00	0.00	.855	-0.00	0.00	.206
Between participants						
Gender	0.06	0.08	.459	0.04	0.03	.249
Cohort 1	0.02	0.05	.746	-0.00	0.03	.903
Cohort 2	0.06	0.05	.260	-0.02	0.02	.289

Note. B = unstandardized beta, *SE* = standard error.

Table B4

Results of a Multilevel Regression Examining Daily Associations Between Sharing Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	2.97	0.14	<.001	1.10	0.09	<.001
Within participants						
Sharing	0.02	0.04	.554	0.03	0.03	.429
Antecedent positive affect	0.20	0.04	<.001	0.02	0.03	.477
Antecedent negative affect	-0.01	0.02	.547	0.01	0.02	.586
Prior day positive affect	0.18	0.03	<.001	-0.01	0.02	.531
Prior day negative affect	-0.04	0.04	.322	0.19	0.04	<.001
Day	-0.00	0.00	.828	-0.00	0.00	.246
Between participants						
Gender	0.06	0.08	.473	0.03	0.03	.323
Cohort 1	0.02	0.05	.760	-0.01	0.03	.851
Cohort 2	0.06	0.05	.255	-0.03	0.02	.285

Note. B = unstandardized beta, *SE* = standard error.

Table B5

Results of a Multilevel Regression Examining Daily Associations Between Comforting Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	2.98	0.14	<.001	1.11	0.09	<.001
Within participants						
Comforting	-0.08	0.06	.168	0.18	0.06	<.01
Antecedent positive affect	0.20	0.04	<.001	0.03	0.03	.444
Antecedent negative affect	-0.00	0.03	.960	-0.02	0.02	.245
Prior day positive affect	0.18	0.03	<.001	-0.02	0.02	.371
Prior day negative affect	-0.04	0.04	.284	0.19	0.05	<.001
Day	-0.00	0.00	.790	-0.00	0.00	.283
Between participants						
Gender	0.06	0.08	.425	0.03	0.03	.316
Cohort 1	0.02	0.05	.756	-0.00	0.02	.907
Cohort 2	0.06	0.05	.254	-0.02	0.02	.283

Note. B = unstandardized beta, *SE* = standard error.

Table B6

Results of a Multilevel Regression Examining Daily Associations Between Cooperating Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.02	0.14	<.001	1.20	0.09	<.001
Within participants						
Cooperating	-0.05	0.07	.534	-0.09	0.08	.225
Antecedent positive affect	0.20	0.04	<.001	0.02	0.03	.513
Antecedent negative affect	-0.01	0.02	.538	0.01	0.02	.585
Prior day positive affect	0.15	0.03	<.001	-0.02	0.02	.382
Prior day negative affect	-0.04	0.04	.219	0.19	0.05	<.001
Day	0.00	0.00	.840	-0.00	0.00	.216
Between participants						
Gender	0.06	0.08	.448	0.04	0.03	.275
Cohort 1	0.02	0.05	.750	-0.02	0.03	.928
Cohort 2	0.06	0.05	.258	-0.02	0.02	.295

Note. *B* = unstandardized beta, *SE* = standard error.

Appendix C

Results of Multilevel Regression Models Examining the Daily Associations Between Specific Types of Prosocial Treatment Events and Positive and Negative Affect in Study 2

Table C1

Results of a Multilevel Regression Examining Daily Associations Between Helping Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.88	0.15	<.001	1.36	0.09	<.001
Within participants						
Helping	0.01	0.18	.956	0.09	0.12	.424
Day	-0.06	0.04	.134	-0.06	0.03	.016
Between participants						
Gender	-0.14	0.17	.411	0.05	0.08	.582
School	-0.08	0.08	.377	0.02	0.04	.577
Grade	-0.27	0.17	.116	0.07	0.08	.400

Note. B = unstandardized beta, *SE* = standard error.

Table C2

Results of a Multilevel Regression Examining Daily Associations Between Sharing Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.91	0.15	<.001	1.35	0.089	<.001
Within participants						
Sharing	-0.16	0.12	.186	0.09	0.10	.352
Day	-0.07	0.04	.060	-0.06	0.03	.015
Between participants						
Gender	-0.15	0.17	.396	0.05	0.08	.583
School	-0.08	0.08	.367	0.02	0.04	.575
Grade	-0.27	0.17	.112	0.07	0.08	.402

Note. *B* = unstandardized beta, *SE* = standard error.

Table C3

Results of a Multilevel Regression Examining Daily Associations Between Comforting Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.93	0.15	<.001	1.33	0.09	<.001
Within participants						
Comforting	-0.41	0.12	<.001	0.39	0.11	<.001
Day	-0.08	0.04	.017	-0.04	0.02	.059
Between participants						
Gender	-0.15	0.17	.399	0.04	0.08	.600
School	-0.08	0.09	.338	0.02	0.04	.542
Grade	-0.28	0.17	.107	0.06	0.08	.412

Note. B = unstandardized beta, *SE* = standard error.

Table C4

Results of a Multilevel Regression Examining Daily Associations Between Compliment Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.87	0.149	<.001	1.376	0.096	<.001
Within participants						
Compliments	0.05	0.08	.537	-0.05	0.07	.478
Day	-0.05	0.04	.228	-0.08	0.03	<.01
Between participants						
Gender	-0.14	0.17	.415	0.05	0.08	.588
School	-0.07	0.08	.386	0.02	0.04	.595
Grade	-0.27	0.17	.116	0.07	0.08	.397

Note. B = unstandardized beta, *SE* = standard error.

Table C5

Results of a Multilevel Regression Examining Daily Associations Between Inclusion Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.86	0.15	<.001	1.38	0.09	<.001
Within participants						
Inclusion	0.13	0.09	.182	-0.07	0.09	.394
Day	-0.04	0.04	.280	-0.08	0.03	.013
Between participants						
Gender	-0.14	0.17	.432	0.05	0.08	.585
School	-0.08	0.08	.376	0.02	0.04	.595
Grade	-0.27	0.17	.119	0.07	0.08	.396

Note. B = unstandardized beta, *SE* = standard error.

Table C6

Results of a Multilevel Regression Examining Daily Associations Between Defending Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.89	0.15	<.001	1.35	0.09	<.001
Within participants						
Defending	-0.05	0.10	.639	0.15	0.11	.174
Day	-0.06	0.04	.091	-0.06	0.03	.024
Between participants						
Gender	-0.14	0.17	.412	0.05	0.08	.584
School	-0.08	0.09	.374	0.02	0.04	.567
Grade	-0.27	0.17	.116	0.07	0.08	.402

Note. *B* = unstandardized beta, *SE* = standard error.

Table C7

Results of a Multilevel Regression Examining Daily Associations Between Cooperating Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.89	0.14	<.001	1.36	0.09	<.001
Within participants						
Cooperating	-0.04	0.08	.605	0.04	0.06	.462
Day	-0.06	0.03	.090	-0.06	0.03	<.01
Between participants						
Gender	-0.14	0.17	.422	0.05	0.08	.580
School	-0.07	0.09	.387	0.02	0.04	.579
Grade	-0.27	0.17	.115	0.07	0.08	.400

Note. B = unstandardized beta, *SE* = standard error.

Appendix D

Results of Sensitivity Analyses Using the Alternate Missing Data Procedure in Study 2

Table D1

Results of a Multilevel Regression Examining Daily Associations Between Prosocial Treatment and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.90	0.15	<.001	1.35	0.10	<.001
Within participants						
Prosocial treatment	-0.03	0.24	.898	0.09	0.16	.562
Day	-0.06	0.04	.185	-0.06	0.03	.064
Between participants						
Gender	-0.17	0.18	.355	0.05	0.09	.574
School	-0.07	0.09	.449	0.02	0.04	.533
Grade	-0.31	0.18	.076	0.07	0.08	.403

Note. B = unstandardized beta, *SE* = standard error.

Table D2

Results of a Multilevel Regression Examining Daily Associations Between Helping Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.90	0.15	<.001	1.36	0.091	<.001
Within participants						
Helping	0.02	0.20	.927	0.09	0.12	.434
Day	-0.06	0.04	.143	-0.06	0.03	.020
Between participants						
Gender	-0.17	0.18	.353	0.05	0.09	.572
School	-0.06	0.09	.457	0.02	0.04	.537
Grade	-0.31	0.18	.075	0.07	0.08	.402

Note. *B* = unstandardized beta, *SE* = standard error.

Table D3

Results of a Multilevel Regression Examining Daily Associations Between Sharing Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.92	0.15	<.001	1.36	0.09	<.001
Within participants						
Sharing	-0.17	0.13	.190	0.07	0.10	.508
Day	-0.07	0.04	.062	-0.06	0.03	.020
Between participants						
Gender	-0.17	0.18	.342	0.05	0.09	.573
School	-0.07	0.09	.454	0.02	0.04	.537
Grade	-0.32	0.18	.072	0.07	0.08	.404

Note. B = unstandardized beta, *SE* = standard error.

Table D4

Results of a Multilevel Regression Examining Daily Associations Between Comforting Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.93	0.15	<.001	1.33	0.09	<.001
Within participants						
Comforting	-0.40	0.12	<.01	0.41	0.11	<.001
Day	-0.08	0.04	.027	-0.04	0.02	.071
Between participants						
Gender	-0.17	0.18	.348	0.05	0.09	.591
School	-0.07	0.09	.415	0.03	0.04	.511
Grade	-0.32	0.18	.067	0.07	0.08	.415

Note. B = unstandardized beta, *SE* = standard error.

Table D5

Results of a Multilevel Regression Examining Daily Associations Between Compliment Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.88	0.15	<.001	1.38	0.10	<.001
Within participants						
Compliments	0.06	0.08	.466	-0.05	0.07	.471
Day	-0.05	0.04	.252	-0.08	0.03	.013
Between participants						
Gender	-0.16	0.18	.358	0.06	0.09	.574
School	-0.06	0.09	.470	0.02	0.04	.552
Grade	-0.31	0.18	.074	0.07	0.08	.395

Note. B = unstandardized beta, *SE* = standard error.

Table D6

Results of a Multilevel Regression Examining Daily Associations Between Inclusion Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.87	0.15	<.001	1.38	0.10	<.001
Within participants						
Inclusion	0.13	0.10	.174	-0.09	0.09	.298
Day	-0.04	0.04	.292	-0.08	0.03	.014
Between participants						
Gender	-0.16	0.18	.374	0.05	0.09	.571
School	-0.07	0.09	.451	0.02	0.04	.553
Grade	-0.31	0.18	.077	0.07	0.08	.393

Note. B = unstandardized beta, *SE* = standard error.

Table D7

Results of a Multilevel Regression Examining Daily Associations Between Defending Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.90	0.57	<.001	1.35	0.15	<.001
Within participants						
Defending	-0.05	2.18	.982	0.14	0.29	.636
Day	-0.06	0.30	.842	-0.06	0.06	.297
Between participants						
Gender	-0.16	0.42	.697	0.05	0.10	.641
School	-0.07	0.28	.815	0.02	0.04	.523
Grade	-0.31	0.34	.361	0.07	0.08	.414

Note. B = unstandardized beta, *SE* = standard error.

Table D8

Results of a Multilevel Regression Examining Daily Associations Between Cooperating Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.90	0.15	<.001	1.36	0.09	<.001
Within participants						
Cooperating	-0.05	0.08	.570	0.05	0.06	.419
Day	-0.06	0.04	.094	-0.06	0.03	.015
Between participants						
Gender	-0.16	0.18	.368	0.05	0.09	.570
School	-0.06	0.09	.470	0.02	0.04	.536
Grade	-0.31	0.18	.074	0.07	0.08	.403

Note. *B* = unstandardized beta, *SE* = standard error.

Table D9

Results of a Multilevel Regression Examining Daily Associations Between Perceived Intention of Prosocial Events and Positive and Negative Affect

	Positive Affect			Negative Affect		
	B	*SE*	*p*	*B*	*SE*	*p*
Intercept	3.93	0.16	<.001	1.26	0.08	<.001
Within participants						
Perceived intention	-0.01	0.07	.834	0.08	0.03	.003
Prosocial treatment	-0.04	0.17	.811	0.14	0.19	.456
Day	-0.07	0.04	.119	-0.01	0.04	.770
Between participants						
Gender	-0.09	0.18	.613	0.06	0.09	.473
School	-0.05	0.09	.568	0.05	0.04	.995
Grade	-0.35	0.18	.046	0.12	0.09	.186

Note. *B* = unstandardized beta, *SE* = standard error.

Table D10

Results of a Multilevel Regression Examining Associations Between Peer-Nominated Reputations and Daily Prosocial Treatment

	Prosocial Treatment		
	B	*SE*	*p*
Intercept	0.38	0.08	<.001
Within participants			
Day	-0.10	0.01	<.001
Between participants			
Victimization	-0.01	0.04	.748
Prosocial behaviour	-0.11	0.07	.103
Acceptance	0.11	0.11	.322
Prosocial Treatment	-0.07	0.12	.546
Gender	0.25	0.10	.015
School	0.06	0.04	.152
Grade	0.13	0.08	.134

Note. B = unstandardized beta, *SE* = standard error.