JUSTUS-LIEBIG-
UNIVERSITÄT
GIESSEN

Fachbereich 06
Psychologie und Sportwissenschaft
35394 Gießen

Refining our understanding of parental conditional regard

Sarah Teresa Steffgen

October 2022

Synopsis of the cumulative dissertation

for the attainment of a doctoral degree in the Natural Science

Submitted to the Faculty of Psychology and Sport Science

Justus-Liebig University Giessen

First thesis reviewer: Prof. Dr. Joachim Stiensmeier-Pelster

Second thesis reviewer: Prof. Dr. Birgit Spinath

Acknowledgments

Before starting with the subject of parental conditional regard I wish to acknowledge everybody who accompanied me along the process of working on this dissertation with their intellectual and personal support. During this time I had various discussions with my supervisors and colleagues, as well as many conversations with friends or family which centered around the topic. Sometimes casual acquaintances would innocently ask me “What do you do for a living?” and after I explained the concept a bit, spontaneously confide personal experiences from their childhood or parenthood. I am grateful for everyone who shared their experiences with me. All these conversations made me aware of how this subject pervades the everyday experience of many people and how important it is to consider the experiential perspective to gain a deep understanding of this subject.

My special thanks go to my doctoral supervisor Joachim Stiensmeier-Pelster, who helped me develop as a scientist. He supported me in everything that I thought would take me further. I doing so, he allowed me to explore my own research ideas. I am grateful for all the engaging discussions at the coffee table and guidance whenever I got stuck in my thinking.

I want to thank Nantje Otterpohl for co-supervising me during this time, for sharing her knowledge of what I call the “Wissenschafts-Knigge” (scientific etiquette), and for encouraging me to bring my own ideas to the project.

I want to thank Prof. Dr. Birgit Spinath who dedicates her time for reviewing my thesis. I would also like to acknowledge the effort of Prof. Dr. Michaela Timberlake for being part of my dissertation committee.

Many thanks go to my collegues in my department for the discussion-rich, emotionally supportive, and fun coffee breaks that I could turn to at any time. Claudia Schöne, for challenging my theoretical arguments. Annika Greinert and Maike Trautner, for carefully proofreading and commenting on my work. Sabine Becker, for keeping my back with the organization. Alexander Göttker, Agnes Eckart, Katja Werle and Leo Schmidl, for the peer support over the years. All student workers for their active support in the project. Lara Beikirch and Jessika Schulz, for their company as colleagues in the initial phase.

Many other people have helped me along the way to writing this thesis, whom I would like to thank at this point: Malte Schwinger, for supervision and methodological guidance. All members of his department for being inspiring remote colleagues. Bart Soenens, for the opportunity to do my research internships with him and for guiding me in my writing skills. All members of his department for also being inspiring remote colleagues. Avi Assor, for being genuinely interested in my ideas.

I also want to express thanks to my friends. Leon, for his open ear to all my concerns, his deep interest, sensitivity and thoughtfulness he dedicated to our discussions on this subject. Kathi, for our stimulating exchange of ideas and her perspective from practice. Anna, for sharing her joy in science. Ann-Kathrin, for the relaxed folding and wrapping of our billion recruitment letters. To all the friends who accompanied me during this time and energized me.

Many thanks go to my parents and my brother, who lovingly supported me through all the ups and downs on the path I chose. I am grateful for their constant interest in my work and ideas.

Finally, I want to express my deepest thanks to all the participating children, students and parents who made this research possible. For their patience and honesty in filling out the questionnaires, and for any thoughts that may have come up along the way.

Contents

I. Synopsis

Refining our understanding of parental conditional regard

Parents as primary socialization agents introduce their children to family and societal rules, norms and values so that their children can integrate into the family and other social groups. Societies, and parents in particular, are therefore constantly faced with the challenge of how they should educate their children. The large number of parenting books about what strategies are best and most effective reflects the strong public interest in this topic. At the same time, approaches to parenting are subject to social change and change through discussion and advancements in psychology.

A commonly used socialization strategy currently under discussion in psychology is parental conditional regard. This strategy involves that parents provide their approval and affection contingent upon whether the child acts according to parental expectations (Assor et al., 2004). In terms of operant conditioning, conditional regard can be described as a strategy in which desired behavior of the child is reinforced and undesired behavior is punished. From a behavioristic perspective, this is a form of external control which increases the likelihood of the desired behavior, so that children will behave more and more congruent with family or societal norms and values. Beside a broad range of parenting books and media, psychological and psychotherapeutic interventions – especially the behavioral approaches within behavioral therapy – rely on the strategy of external reinforcement. Framed as one type of external control, conditional regard can thus be understood as an effective strategy for shaping children's behavior and helping them integrate adaptively into social groups.

A major concern about the use of parental approval as reinforcer was raised in psychology within humanistic and organismic theories (e.g., Rogers' client-centered therapy: Bozarth & Wilkins, 2001; Rogers, 1951, 1962; self-determination theory: Assor et al., 2004; Ryan & Deci, 2017). Theories and research suggest that external control in general may interfere with the organismic thriving and self-actualization tendency of the adolescent organism, in that reinforcement leads to a lower quality of motivation, interferes with a healthy development of self-esteem, and carries psychological costs (Deci & Ryan, 1995; Ryan & Deci, 2017). According to the abovementioned theories, reinforcement is especially detrimental when parental regard – that is, parental interest, approval, and attention toward the child – is used as a reinforcer (Assor et al., 2004; Bozarth & Wilkins, 2001; Rogers, 1962; Wilkins, 2000). Therefore, psychological research aimed to gain a better understanding of the concept of parental conditional regard and to elucidate its mechanisms of action and effects on child development.

This thesis follows up on this research thread and explores two pending issues. First, while there has been tremendous work on different facets of conditional regard in recent research, finding that they have different effects, the real-life consequences of this distinction on individuals has not yet been examined. Therefore, this thesis explores whether withdrawal of affection after failure (conditional negative regard) and increase of affection after success (conditional positive regard) are two sides of the same coin, such that children will always experience a certain amount of both, or whether they are two distinct stratgies, such that some children only experience the one or the other parental reaction. Studying this is crucial because it will help determine whether the strategies are indeed independent of each other as hypothesized and – if the latter is the case – whether they are on their own helpful or harmful reinforcement strategies. Since especially increasing affection in success situations might seem like a benign strategy, examining potential negative consequences of this strategy alone is particularly important. Second, it is not yet clear whether conditional regard is indeed a strategy that parents use to pursue their socialization goals (proactive) or whether conditional regard rather results from unintended parental reactions that deviate from parents' ideal to react (reactive). Therefore, this thesis explores the possibility of an anger-driven, impulsive form of conditional regard. Whether conditional regard results from proactive or reactive reasons will affect our definition and measurements of conditional regard and, ultimately, determine how interventions need to address conditional regard.

The rise of (parental) conditional regard in psychology

Considerations about unconditional versus conditional regard can be found more or less explicit in a broad range of theoretical reasoning of psychologists and psychotherapists since the early 20th century. The most explicit and influential contribution to the understanding of conditional regard as used in this dissertation, comes from Carl Rogers. In the 1950s, he expanded upon theoretical ideas from his doctoral student Stanley Standal (Standal, 1954; cited from Moon et al., 2001), and explicitly introduced unconditional positive regard as one of the key basic variables of the therapists' attitude within client-centered therapy (Bozarth & Wilkins, 2001; Rogers, 1951, 1957, 1959, 1962, 1983). In his work with clients, Rogers defined unconditional positive regard in reference to the parent-child relationship: "as parents regard their children" (translated from Rogers, 1983, p. 27). Rogers (Rogers, 1957, 1983) and later Coopersmith (1967) assumed in a similar vein that parental love is capable of appreciating and accepting the child as he or she is and that this love does not depend on whether the child behaves well or has certain qualities. Both theorists considered this unconditional regard a key basis to

children's true self-esteem and healthy development throughout the lifespan. In many cases, however, parents' expressions of appreciation do not reach this ideal of unconditional love and children perceive variations in parental regard, attention, and affection depending on whether they meet parental expectations (Assor et al., 2004). Parental conditional regard is assumed to interrupt children's healthy development.

In parallel to the crucial role for healthy development, client-centered therapists focused on the crucial role of unconditional positive regard in healing (Rogers, 1957). Therefore, client-centered therapists used their practical experiences and problems they encountered when putting unconditional positive regard into practice to advance and refine the understanding of it. For example, there has been a decades-long discussion about whether it is possible at all to provide unconditional positive regard, and about which behaviors, attitudes and feelings make the therapists' attitude depart from the ideal of unconditional positive regard (for an overview see Bozarth & Wilkins, 2001).

In parallel to these practical and theoretical considerations, the issue was taken up by researchers within self-determination theory (SDT) in the late 90s (e.g., Deci & Ryan, 1995; for an overview see Assor et al., 2004). SDT is an organismic theory that shares important theoretical assumptions with humanistic psychology in general (e.g. Maslow, 1980, 1981) and Rogers assumptions (e.g., Rogers, 1983), for example, the assumption of a fundamental tendency for self-actualization (organismic component in SDT; Deci & Ryan, 1993, 2000; Ryan & Deci, 2017). Therefore, it was not surprising that (un)conditional regard also became an important issue within SDT. This development was enriching for the advancement of the concept especially because SDT researchers took a methodologically and theoretically different approach. Client-centered therapy tradition richly informed the community through theoretical and practical reasoning, mostly using qualitative methods presented in theoretical essays and books (e.g., Bozarth & Wilkins, 2001). Empirical studies conducted within this tradition focused only on demonstrating the role of unconditional positive regard for therapy outcomes (for an overview see Watson & Steckley, 2001). SDT enabled researchers to advance theoretical assumptions using quantitative methods with modern scientific standards, while not being limited to the clinical setting. Studies mainly focused on conditional regard in the parent-child relationship (for an overview see Ryan & Deci, 2017). However, the framework allows to expand research to other important relationships, such as with romantic partners or siblings. This thesis will take an empirical approach from a SDT perspective to contribute to our understanding of conditional regard in the parent-child relationship.

How parental conditional regard operates

Looked at from the outside, parental conditional regard may seem like a helpful socialization strategy to educate a child insofar as it can be understood as a parenting tactic through which children learn to discriminate between desirable and undesirable behavior. Empirical research supports this assumption: conditional regard leads children to act according to parental expectations (Assor et al., 2004). However, conditional regard needs to be distinguished from behavioral control, a family of parenting behaviors in which parents monitor and regulate children's behavior for example by setting rules, but do not use parental approval as a reinforcer (Barber et al., 1994; Barber, 1996). A certain degree of behavioral control is necessary for the child to be able to successfully integrate in society and social groups. Conditional regard in contrast can be classified as psychologically controlling, meaning that by using conditional regard parents change children's inner psychological world (Barber, 1996). The distinction lies in the nature of the reinforcer used. Humanistic and organismic theories assume a basic psychological need for relatedness, i.e. the need for security in the relationship with others and for the feeling of being cared for and to belong (Rogers, 1957; Ryan & Deci, 2017; Standal, 1954). As a basic psychological need, relatedness is necessary for healthy thriving of the organism, whereas frustration of the need carries serious psychological costs (Deci & Ryan, 2000; Ryan & Deci, 2017). From early on children are oriented toward parental appreciation, attention, and regard because these are signs of supportive, positive interactions and attachment (Bowlby, 1969; Deci & Ryan, 2000; Dweck, 2017). Consequently, children depend on parental approval as a nurturing source of their need for relatedness, revealing that parental approval is completely different from other reinforcers. Rogers already stated that behavior results as an attempt to satisfy needs, and depends on how the organism perceived the need fulfillment in its environment (Rogers, 1951, S. 491). If children encounter unconditional positive regard they can develop a sense of relatedness and secure attachment, which is, in turn, the basis for healthy development, well-being, secure self-esteem, and the ability to build satisfactory relationships (Bowlby, 1969; Ryan & Deci, 2017). In contrast, if children encounter conditional regard, their need for relatedness is constantly at risk and children will be forced to adhere with expectations imposed by their parents to maintain relatedness. Consequently, children's behavior is guided by the desire for parental acceptance and regard. Striving for meeting up with parental standards, however, undermines children's basic psychological need for autonomy, the need to feel psychological freedom, to feel free in one's own actions and to pursue one's inherent tendencies and personal interests (Deci & Ryan, 2000; Rogers, 1959; Ryan & Deci, 2017). The possibility of fulfilling both basic psychological

needs – relatedness and autonomy – is considered crucial for healthy development in various theories like SDT (Ryan & Deci, 2017), attachment theory (Bowlby, 1969), system theory (see thrive for togetherness and individuality; Kluwer et al., 2020; Schnarch, 1997), or client-centered therapy (Rogers, 1959). Further, fulfilled basic psychological needs are necessary for the self-actualization tendency to unfold (Rogers, 1959; Ryan & Deci, 2017). Conditional regard is a prototypical parenting strategy for creating a steady tension between the fulfilment of the needs.

This steady risk of need frustration also disrupts children's internalization process. The term "internalization" refers to the process in which individuals internalize beliefs and values they encounter in their environment, i.e. values originating outside the person (dialectic component, SDT; Ryan, 1995; Ryan & Deci, 2017). Thus, although conditional regard may be used to introduce children to norms and values, it will lead children to internalize goals and values only because their parents desire them, but not accept them as truly valuable (introjection; Assor et al., 2004). As a result, behavioral regulation is less autonomous and, therefore, less flexible (Assor et al., 2004).

Ultimately, children learn to regard themselves in the same way as their parents did, resulting in self-acceptance that is also guided by conditions (Assor et al., 2014; Coopersmith, 1967). More specifically, through parental conditional regard children internalize the contingency between worth and behavior, and consequently develop contingent self-esteem. Within SDT research studies consistently found associations between conditional regard and contingent self-esteem (Curran, 2018; Israeli-Halevi et al., 2015; Wouters et al., 2018). Contingent self-esteem, in turn, ensures that individuals will act according to introjected values throughout their lives even when parents are no longer present. Therefore, conditional regard is assumed to leave individuals vulnerable across the life span (Assor et al., 2014; Coopersmith, 1967; Rogers, 1983; Ryan & Deci, 2017).

In summary, it seems at first glance that conditional regard has the potential to educate children, to introduce them to family and societal rules, and to produce behavior desired by parents. However, it comes at the expense of children's basic psychological needs, self-esteem development, and the quality of their behavioral regulation.

Advancements of the construct of conditional regard within SDT research

By exploring how conditional regard operates, SDT research was confronted with several empirical findings that led to advancements and refinements of the construct. The domain

specificity and distinction between conditional regard in success versus failure situations were two crucial advancements and important starting points for this thesis.

Domain specificity

One major advancement in the understanding of conditional regard was the domain specificity (e.g. Assor & Roth, 2005; Roth et al., 2009). Parents may use conditional regard in certain domains (e.g., school, sports, emotion control, or prosocial behavior) while not using it in other areas. Assessing conditional regard domain specifically led to a better prediction of domain specific outcomes (Assor et al., 2004; Roth et al., 2009). Research in educational psychology predominantly focused on achievement-oriented conditional regard and its consequences for children's learning and academic contingent self-esteem. It is important to investigate parental conditional regard in the academic domain for several reasons. First, in Germany and other countries with compulsory education, the everyday life of school-aged children and adolescents is shaped by school in terms of time and content, and especially in the adolescence academic success receives increased focus, making academics an influential domain for each individual child. Second, academic education is considered a core area for negotiation between parents and their children (Smetana et al., 2016), revealing the impact of issues in education even outside the school environment. Third, schools prepare children, among others, for later (work) life, making school important for children's later (socioeconomic) status in society and financial security (Kasser et al., 2007). These reasons make the expectation to perform well in school pervasive and may explain the increasing performance and evaluative pressure nowadays adolescents and their parents confront when it comes to school topics. This thesis will embed itself in this research context and focus on conditional regard that parents provide in the academic domain (*parental academic conditional regard*).

Success versus failure situations

One further important development in conceptualizing parental conditional regard was the differentiation between conditional regard in failure versus success situations. Empirical research has begun to contrast parents' withdrawal of affection in response to child failure to meet parental standards (*parental academic conditional negative regard*, PACNR) and parents' displays of increased affection in response to success (*parental academic conditional positive regard*, PACPR; Assor & Roth, 2005; Roth et al., 2009). This shifted the focus more to the operational level instead of considering conditional regard as a general parenting approach and investigating children's general feeling of being (un)conditionally regarded. Although the tradition of client-centered therapy suggests that all practices departing from unconditional

positive regard have the same result (Wilkins, 2000), PACNR and PACPR differ significantly in how they operate and how they relate to important outcomes.

From a SDT perspective, PACNR involves a direct frustration of the need for relatedness, which is absent in PACPR. As such, PACNR is a very obvious and detrimental form of conditional regard. The effects of parental love withdrawal have also been investigated within the large research thread of psychological control, a family of parenting behaviors that intrude upon the child's inner psychological world by love withdrawal, shame or guilt induction (Barber, 1996). Less attention, therefore, was been paid to the less harsh parenting of PACPR. Although also described as departing from unconditional positive regard in the Rogerian tradition, praise (in form of extra attention and regard) may be viewed and used as a benign and beneficial strategy. However, while conditional positive regard may superficially look like a need satisfying strategy, it is considered – just like PACNR – to pit relatedness and autonomy against each other, making both strategies harmful from a theoretical perspective.

Empirical findings support these theoretical considerations showing direct negative associations of conditional negative regard with self-esteem level (Otterpohl et al., 2017), depressive symptoms (Otterpohl et al., 2020; Wouters et al., 2018), and test anxiety (Otterpohl et al., 2019), and the same studies show indirect effects of conditional positive regard on maladaptive outcomes mediated by contingent self-esteem. The results consistently show that both facets of conditional regard are related to stronger contingency of self-esteem (Ching et al., 2021; Otterpohl et al., 2019; Otterpohl et al., 2020; Wouters et al., 2018). Together with the finding that parental conditional positive and negative regard correlate significantly ($.45 < r < .53$; Assor & Tal, 2012; Roth et al., 2009), these empirical findings underline the idea that both facets share the conditionality of providing regard as a significant, common component.

Conditional positive and negative regard as general parental approach or distinct strategies

The differentiation between PACPR and PACNR helps to explain the consequences of conditional regard in a more detailed manner. However, research to date has exclusively taken a variable-oriented approach, i.e., constructs are considered as separate entities and the relationships between them are examined (Bergman & Andersson, 2010). This limits our understanding of parental conditional regard because the substantial and empirical overlap of the two concepts rises the following question: Are PACNR and PACPR just two sides of the same coin, such that when parents adopt an attitude of conditional regard, this leads them to use either PACNR or PACPR only depending on whether success or failure occurs? Alternatively (and regardless of the underlying attitude of the parents), PACNR and PACPR might represent

specific and independent strategies, such that some parents may use only one of the two strategies. In the first case the distinction between PACPR and PACNR at the variable-level has little real-life consequences at the individual level because children are always (at least to a certain extend) confronted with both PACNR and PACPR. In the second case, however, PACNR and PACPR would indeed represent distinct socialization strategies. Further, if groups of children only report one of the strategies, we can investigate its isolated effect, which gives us additional hints on how the strategy operates. Examining this question is of particular interest in the case of the seemingly more benevolent strategy of PACPR, which several authors advise parents to use (e.g., Latham, 1994; Steinberg, 2004). If we find a group of individuals who reports only PACPR, this allows for a more rigorous test on whether PACPR alone is controlling. This issue cannot be addressed using variable-oriented approaches but requires a person-oriented approach, and was the starting point for Study A of this thesis.

Study A: Latent Profiles of Parental Academic Conditional Positive and Negative Regard

Study A of this thesis (Steffgen, Soenens, et al., 2022) aims to contribute to the understanding of conditional regard by examining whether the two facets occur independently from another at the within-person level (person-oriented approach), so that different groups of individuals report different within-person combinations of conditional positive and negative regard. Theoretically four profiles are possible: high (highPACR) and low (lowPACR) on both, high on PACPR and low on PACNR (onlyPACPR), or vice versa (onlyPACNR). This person-oriented approach allows us to examine which of the profiles emerge and to investigate the prevalence of such profiles. Finally, the study aims to investigate differences in individuals' adjustment between the groups considering a broad range of outcomes.

Method of Study A

We collected data from adolescents (Study 1, *N* = 3,891), university students (Study 2, *N* = 556), and parents of school-aged children (Study 3, *N* = 760). Adolescents reported on their current perception of PACPR and PACNR, university students and parents reported on their recollections of perceived PACPR and PACNR during their own schooling. In addition, participants reported on a broad range of outcome variables (basic need satisfaction in the parent-child relationship, self-esteem facets, self-concept, goal orientation, test anxiety and depressive symptoms).

We conducted confirmatory latent profile analyses (CLPA) using *Mplus* 8 (Muthén & Muthén, 1998–2018) to investigate whether each within-person combination of conditional regard can be identified in the data. Drawing on the theoretical ideas regarding the nature of profiles, we used equality and inequality restrictions to shape the four profiles in our analyses. We relied on the BCH-method (Bakk & Vermunt, 2016; named after Bolck, Croon, & Hagenaars, 2004) to investigate differences in outcomes across profiles.

Results of Study A

Number of Latent Profiles. CLPAs supported a three profile solution including highPACR, lowPACR, and onlyPACPR in all samples. The solution additionally including an onlyPACNR group showed a slightly better fit. However, the group was very small (0.7%–1.4%). We conducted additional exploratory latent profile analyses to further examine whether the onlyPACNR can be considered as a valid group. However, the profile did not emerge in those analyses. Therefore, we could not support the onlyPACNR profile in our samples. Profile prevalences were comparable across the three studies: the majority reported lowPACR (44.4%–61.4%), 14.5%–24.5% were assigned to highPACR, and 14.1%–31.3% to onlyPACPR. Estimated means and standard errors of PACPR and PACNR in the different profiles across the three studies are presented in Table 1.

Table 1. Estimated means and standard errors of PACPR and PACNR (Studies 1, 2, 3)

		highPACR	lowPACR	onlyPACPR
		M (SE)	*M (SE)*	*M (SE)*
Study 1	PACPR	3.22 (.02)	1.43 (.02)	3.22 (.02)
	PACNR	2.95 (.04)	1.21 (.01)	1.21 (.01)
Study 2	PACPR	3.03 (.04)	1.41 (.04)	3.03 (.04)
	PACNR	2.61 (.07)	1.13 (.02)	1.13 (.02)
Study 3	PACPR	3.14 (.04)	1.31 (.02)	3.14 (.04)
	PACNR	3.16 (.06)	1.29 (.02)	1.29 (.02)

Note. PACPR = parental academic conditional positive regard; PACNR = parental academic conditional negative regard; a 5-point Likert scale was used (1 = strongly disagree to 5 = strongly agree)

*** $p < .001$. ** $p < .01$. * $p < .05$.

Profile functionality. Study 1 demonstrated that individuals in the highPACR group score the least favorably on all outcomes. The onlyPACPR group scored in between the two other groups regarding contingent self-esteem. In addition, the onlyPACPR group differed from the lowPACR group in showing higher mastery, performance-approach, and performance-avoidance motivation, as well as higher satisfaction of the need for competence. Study 2 underlined the

central role of contingent self-esteem, with highPACR showing the highest scores, and onlyPACPR scoring in between the two other groups. Study 3 replicated the maladaptive outcome pattern for highPACR in comparison to lowPACR. Parents in the onlyPACPR group reported equally high contingent self-esteem and equally low self-esteem level as the highPACR, but reported as low depressive symptoms as lowPACR.

Discussion of Study A

A large amount of parents was perceived by their children as using PACPR without threatening with PACNR. In contrast, a group in which parents were perceived to provide only PACNR was too small and thus could not be identified as a valid group in our data. We still deem it possible that the onlyPACNR group may be identified in other samples, in which higher rates of conditional negative regard can be expected (Ng et al., 2007; Qin et al., 2008). Nevertheless, Study A argues against the assumption that conditional regard should be understood as a general parenting approach that will result in conditionally regarding behavior only depending on whether success or failure occurs. In contrast, PACNR and PACPR are better understood as specific and independent strategies because PACPR is widely used without PACNR.

In terms of functionality, both groups in which parents were perceived as applying at least one of the two strategies (highPACR and onlyPACPR) showed higher self-esteem contingencies compared to the lowPACR group. This stresses the idea that irrespective of whether parental regard increases after success or decreases after failure, the message of conditions of worth is conveyed. In this regard, one may agree with Wilkins (2000) assumption that any form of conditional regard has the same result. Yet, individuals in the highPACR group show a variety of negative developmental outcomes, such as anxiety and depression, which are not evident for children only perceiving PACPR, stressing the necessity to distinguish between the two strategies.

While the highPACR group showed the most maladaptive correlates, it is important to consider the onlyPACPR group in more detail due to its high prevalence (almost one in four individuals belong to this profile). Our results suggest that individuals in the onlyPACPR profile are highly engaged (high mastery and performance goal orientation), and do not report any direct hints for lower affective functioning (e.g., depressive symptoms). At first sight, our results seem to contradict findings from variable-oriented approaches, for example results from our recent study (Otterpohl et al., 2020), that suggest indirect effects of PACPR on depressive symptoms. In Study A, we argue that individuals in the onlyPACPR group may be able to adjust as long as they perform well and exert more effort to obtain success and thus parental regard. In doing

so this they might ensure that basic psychological needs are (at least on the short run and superficially) fulfilled. However, if failure reoccurs, these individuals might get vulnerable also due to their contingent self-esteem or performance goal orientation. We expect that individuals become inflexible in deactivating their goal intentions and overinvest in goals associated with obtaining parental regard. To support this hypothesis, it is necessary to examine the life course of these individuals.

Study B: The Process Linking Child-Invested Contingent Self-Esteem and Conditional Regard: The Roles of Anger and its Regulation

Contingent self-esteem emerged as the key outcome in children, university students, and parents in every profile receiving at least one of the conditionally regarding strategies (highPACR and onlyPACPR). Interestingly, contingent self-esteem is not only a key outcome, but is also considered as a central precursor of conditional regard. Early theoretical reasoning proposed that the way individuals accept themselves (i.e., conditionally or unconditionally) will affect their ability to be accepting of others (Lietaer, 1984; Rogers, 1951; Wilkins, 2000). Thus, there seems to be a cycle between contingent self-esteem and parental conditional regard that results in the conditionality of worth being reproduced over and over again in families and passed down through the generations. In a recent study we found support for this idea by showing the intergenerational continuity of conditional regard and the role of contingent self-esteem as potential mechanism of this process (Otterpohl et al., 2020). Considering the above described and in Study A shown negative effects of conditional regard on individuals' growth and thriving in life, it is important to ask how families can overcome this cycle of conditionality of worth. As a trait, contingent self-esteem is rather stable (Burwell & Shirk, 2006). As such, understanding the process of how parents' contingent self-esteem affects their use of conditional regard may help to identify components in this process that are more accessible for change. In addition, investigating antecedents of conditional regard will help to get a more advanced understanding of the concept itself.

While the idea that children internalize the contingent relation between self-worth and behavior through parental conditional regard is straight forward, it is less clear, how parental self-acceptance will result in conditional regard. Within client-centered therapy, three sources of conditional regard are described: one's own vulnerabilities, repercussions of the other's life on our own life, and intentions to facilitate change (Lietaer, 2001). As such, if children's academic achievements reflect on parent's own self-esteem, parents get vulnerable to use

conditional regard with their child. Grolnick (2003) describes that pressure from above, within or below will promote controlling parenting. If parent's own self-esteem is contingent and thus instable, parents will experience a pressure from within to push their child into high performance. Recent empirical research supports this reasoning by showing that parents whose self-esteem depends on children's achievements (*child-invested contingent self-esteem*, CCSE) use more controlling parenting behaviors (Ng et al., 2014; Wuyts et al., 2015). Interestingly, we found that maternal CCSE related to children's perception of PACNR, but not PACPR (Otterpohl et al., 2020). We argue that potential losses may have greater impact than the same amount of gains (Kahneman & Tversky, 1979). Therefore, particularly children's failures may affect parents' self-esteem and may make PACNR necessary as strategy to protect self-esteem. Similarly, it is argued that psychologically controlling parenting serves to protect parents' self-esteem against threats (Ng et al., 2014; Ng et al., 2019). Yet, it stays unclear how CCSE affects changes in parental affection toward the child.

The goal of Study B was thus to examine a possible mechanism in the respective association. Individuals high in academic contingent self-esteem were found to react with anger in situations of academic failure (Crocker et al., 2003; Zeigler-Hill et al., 2011), making anger a potential candidate. Anger likely functions as defensive self-esteem regulation strategy (Elison et al., 2014; Lazarus, 2001; Nathanson, 1992). For example, parents may blame the child for the failure to shift attention away from their flawed self. However, expressing anger toward the child will likely reduce parents' responsiveness and warmth toward the child (Di Giunta et al., 2020; Walling et al., 2007) – making their appreciation conditional. To this end, we examined parents' anger expression as a possible mediator. We expect that parents' anger will result in PACNR especially if parents are overwhelmed by their anger and express it in a dysregulated manner.

Methods of Study B

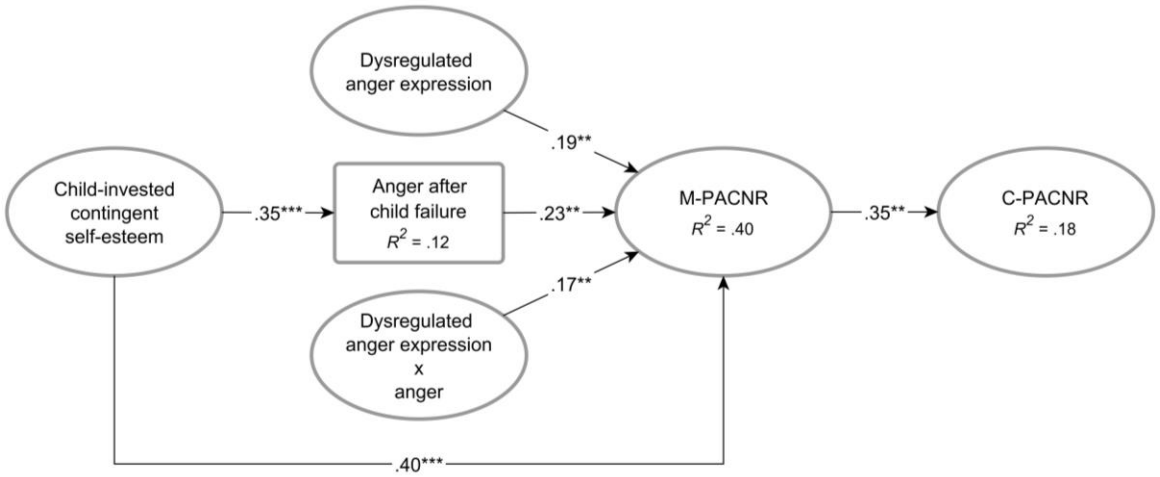
Study B (Steffgen, Otterpohl, et al., 2022) was a questionnaire-based cross-sectional study, involving 221 mother-adolescent dyads. We recruited 13- to 14-year-old adolescents and their mothers. 48.4% of the adolescents were female, mothers' were $M = 44.93$ years old ($SD = 4.82$). Mothers reported on their child-invested contingent self-esteem, explicit use of parental academic conditional negative regard and habitual dysregulated anger expression. In addition, they were instructed to imagine a situation in which their child receives a poor grade in school and reported how angry they would feel in this situation. Adolescents reported on perceived

maternal academic conditional negative regard. For statistical analyses, we conducted structural equation modeling using *Mplus* 8 (Muthén & Muthén, 1998–2018).

Results of Study B

The final moderated mediation model is depicted in Figure 1. We built the model in two steps. In the first step, a mediation model was calculated ($\chi^2(39) = 56.04$, CFI = .99, RMSEA = .04, SRMR = .03). Anger partially mediated the relation between child-invested contingent self-esteem and maternal report of conditional regard. Children's report of PACNR was indirectly related to CCSE via anger and maternal report of PACNR (β = .03, $p < .05$). Secondly, the moderation was added. The moderated meditation model showed mothers' dysregulated anger expression as moderator of the effects of anger. Simple slope analyses showed that anger only related positively to maternal use of PACNR when expressed as medium- to highly-dysregulated.

Figure 1. *Moderated mediation analysis (latent model)*



Note. Adapted from Steffgen, Otterpohl et al. (2022); coefficients shown are standardized path coefficients. C-PACNR = children's report of parental academic conditional negative regard; M-PACNR = mothers' report of parental academic conditional negative regard.

*** $p < .001$. ** $p < .01$. * $p < .05$.

Discussion of Study B

Our results suggest that conditional regard can result from impulsive anger in parents whose self-esteem is threatened by the child failure. These findings offer an explanation for parents' use of conditional regard beside their lack of knowledge about the detrimental nature of the parenting. This is interesting for several reasons. In terms of definition the results argue against the commonly used definition of conditional regard as a socialization strategy, which involves the idea that parents pursue socialization goals (see for example Assor et al., 2014; Assor et al., 2020; Curran et al., 2017). Instead, it might be necessary to distinguish between a proactive

use (involving socialization goals) and a reactive use (resulting as by-product of parents' attempt to regulate self-esteem and anger). Further, parents may be able to distinguish whether their actual behavior deviates from their ideal to react to failure (and thus deviates from their socialization intentions). If so, results offer implications for prevention. If parents use conditional regard proactively to pursue socialization goals, psychoeducation about the nature and costs of conditional negative regard may be effective for prevention. However, if parents act impulsively and deviate from their ideal, interventions that focus on their anger regulation may be necessary. Together with the findings from our recent study on the intergenerational continuity (Otterpohl et al., 2020), results suggest that helping parents to regulate anger may help to overcome the cycle of conditions of worth within families.

General discussion

Parents use different socialization strategies to educate their child and to transmit norms and values to the next generation. Parental academic conditional regard is one strategy to do so in the academic domain that is currently under discussion in psychology. This thesis added to our understanding of the nature of the construct of parental academic conditional regard and its functionality in several ways. The first main finding is that the different facets of conditional regard – parental academic conditional negative (PACNR) and positive (PACPR) regard – are not merely two sides of the same coin (Study A). Especially a vast amount of individuals were found to only perceive increased regard after success while not reporting love withdrawal after failure. Thus, at least PACPR is used as distinct strategy, suggesting that parental conditional regard is not merely a general parenting approach. In the discussion of conditional regard we need to be clear about the specific face of conditional regard, investigate the different profiles separately and explore the distinct mechanisms of action and antecedents of PACNR and PACPR. Further, the large amount of children that only report the superficially more benign form PACPR makes findings on their adjustment particularly important. Findings show that individuals who only perceive PACPR fare better than individuals that additionally receive PACNR, however, these individuals still show a hidden vulnerability in form of contingent self-esteem – although the more detrimental facet of love withdrawal is absent. Therefore, the second main finding is that PACPR on its own is psychologically controlling, even if the harsh component of love withdrawal is missing. In line with variable-oriented studies, this finding rejects the idea that PACPR is a positive socialization strategy that can be recommended without hesitation and stresses that contingent self-esteem is a key outcome variable when examining the conditionality of parental regard. Third, Study B added to the discussion by

suggesting that PACNR is not necessarily used intentionally, but happens to the parents in the heat of the moment (i.e., deviates from parents' ideal to react) if they have high child-invested contingent self-esteem and dysregulated anger expression. This rejects the idea that conditional regard always involves (explicit) parenting intentions.

These main findings have implications for our understanding, definition and measurement of conditional regard. They offer new routes for further research and advancements of the construct. Finally, the advancements of understanding have implication for the prevention of conditional regard.

Intentional use and reactive behavior

The question on whether parents intentionally use conditional regard to motivate their child is crucial because it also has important implications for the prevention of PACNR. Whereas findings of Study A are consistent with the literature on the maladaptive nature of PACNR, findings of Study B question the idea that PACNR is a socialization strategy that parents intentionally use to encourage children's engagement in schoolwork and to push the child into higher performance in school. This is because PACNR was related to parents' anger and dysregulated expression of it. As such, PACNR may not always have the function for parents to pursue their educational goals they have for their children but has more to do with their self-esteem and anger regulation. The finding that PACNR is associated with parents' dysregulated anger expression even suggests that PACNR might be classified as a form of reactive aggression. While proactive aggression involves intentional acts of harm to achieve certain goals, reactive aggression involves a response to perceived thread or provocation and emotionally dysregulated anger (e.g., Card & Little, 2006; Dodge & Coie, 1987; Turner & White, 2015). Understanding PACNR not as a strategy to pursue socialization goals but as an insidious form of aggression also makes sense in the light of the findings from Study A showing that children who perceive PACNR report such negative outcomes.

However, Study B only suggested a reactive form of PACNR. Up to date we have not yet gained any information on whether unintentional processes are involved in PACPR. A recent study described PACPR as a "well-intended strategy" (Otterpohl et al., 2019). As such, in the research literature there is an implicit assumption that (at least in the case of PACPR) parents have well-intended goals and try to achieve them using PACPR. This is reasonable because an increase in appreciation might be jugded as a positive parenting (see introduction). Given these considerations, it seems plausible that parents apply PACPR proactively to achieve their goals for their child. It is even plausible that PACPR is used more often proactively than PACNR,

because love withdrawal and punishment are generally less likely to be judged as positive parenting. Still, it is conceivable that PACPR can also results from reactive reasons. In Study B, we point out that considering self-conscious emotions may help to shed light on the emotional phenomenology of the person giving conditional regard and possible unintended reactions to failure. In parallel with our reasoning on contingent self-esteem and shame, parents who invested their self-esteem in their child's achievements (high CCSE) likely experience the self-conscious emotion of pride when their child succeeds. A large area of research investigating the functionality of pride distinguishes between different forms of pride (e.g., Miceli et al., 2017; Tracy & Robins, 2004). Whereas authentic pride involves an authentic feeling of effectiveness and pride about the process, hubristic pride involves feelings of superiority and self-aggrandizement (Tracy & Robins, 2004). It seems plausible that parents with CCSE feel hubristic pride due to their self-esteem boost when their child succeeds, which, in turn, might lead to more appreciating responses to the child. Just as shame and self-aggrandizement were found to be outcomes of PACNR and PACPR respectively (Assor & Tal, 2012), it is plausible that we can identify hybristic pride as antecedent of PACPR just as we found anger (as possible shame coping) to be associated with PACNR.

Understanding sources of PACPR will help to shed light on whether the distinction between proactive and reactive use also applies to PACPR. This is important considering of the high prevalence of children who perceive PACPR (almost one in four). At this point it needs to be highlighted that almost no study to date investigated antecedents of conditional positive regard. To the best of my knowledge, only grandmothers' use of PACPR was examined and associated with mothers' use of PACPR (Otterpohl et al., 2020) and children's contingent self-esteem related to PACNR and PACPR longitudinally (reciprocal effects are discussed below, Otterpohl et al., 2021). This gap in literature is surprising considering the hidden vulnerability PACPR relates to, but may be due to the positive image of PACPR as a motivational strategy.

Intergenerational Transmission

Thinking further, it will be interesting to examine whether different transitions between profiles occur in intergenerational transmission. Parents from the onlyPACPR group report high CCSE. If we assume that parents with high CCSE apply conditional regard in a reactive manner and therefore use both forms of conditional regard, one can speculate that parents using only PACPR may themselves apply PACNR and PACPR with their own children. This would be compatible to the finding that grandmothers' PACPR related to CCSE, which in turn related to mothers' PACNR (Otterpohl et al., 2020). This idea needs further investigation because it would

increase the relevance of PACPR by linking it to even more dysfunctional parenting in the next generation. Assor and his colleagues (2004) suggested that parents might feel internally compelled to use conditional regard as a strategy when they perceived conditional regard themselves during their childhood. In contrast, based on the findings and discussion from Study B it seems more likely that parents introject values and norms (represented by contingent self-esteem) and consequently use parental conditional regard reactively due to their contingent self-esteem and self-conscious emotions.

Reciprocal effects

As already mentioned, PACNR and PACPR were found to reciprocally relate to children's contingent self-esteem (Otterpohl et al., 2021). In the article we argue that children that derive self-esteem from academic achievements may demand praise when they succeed. Also, parents may recognize CSE in their children and thus experience that PACNR and PACPR are effective in their children. Further, it was found that conditional regard was related to shame (Assor & Tal, 2012; Smiley et al., 2020) and anger (Smiley et al., 2016) in children. Together with the finding from Study B that anger and self-esteem loss in parents relates to their use of conditional regard, it seems crucial to further investigate the emotional interplay in families. The idea of anger-shame spirals (Scheff, 1988) may provide an explanatory framework for the findings that shame and anger play a role as antecedent and outcome of conditional regard, as well as the finding of reciprocal effects of conditional regard and contingent self-esteem. According to Scheff, social rejection or withdrawal of important others can elicit chain reactions between shame and anger within individuals. Shame and anger affect each other resulting in spirals of the two. Further, these spirals can also occur between individuals, such that anger of one person can lead to shame in the other and so forth. Ultimately, these processes can result in explosions of emotions. Applied to conditional regard and contingent self-esteem, parents' withdrawal of affection may trigger anger-shame spirals. Alternatively, children high in CSE or parents high in CCSE experience shame and anger in failure situations, and the other party may also get involved in shame-anger spiral. For example, parents could respond with shame or anger to children's frustration or shame, leading them to withdraw regard. These considerations illustrate the importance of gathering more information on the causal ordering of variables, the interplay of conditional regard and self-conscious emotions and the mechanisms that underly the reciprocal effects. Online behavioral methods, such as experience sampling, longitudinal or experimental studies are needed for more rigorous testing.

Implications on Measurement

The above presented ideas have implications on the measurement of conditional regard. If we consider that conditional regard is best described by distinct strategies (PACPR and PACNR), rather than as a general parenting approach, our measures need to ask for conditionally regarding behavior in distinct situations of the academic domain (success and failure) rather than assessing a general orientation of conditional regard. By this, our research supports the development that the original measure by Assor et al. (2004), which was used in several publications of Avi Assor and Guy Roth and their colleagues (Moller et al., 2018; Roth, 2008; Roth & Assor, 2012) as well as by other research groups (Curran et al., 2017) for a long time, is mainly replaced by publications that differentiate between conditional positive and negative regard.

Further, the distinction of PACPR and PACNR in our person-oriented study raises questions about the generalizability of the findings in variable-oriented research. Although we did not find any hints for lower affective functioning in the onlyPACPR group, mediation models (like in our recent manuscript, Otterpohl et al., 2020) show indirect effects of PACPR on lower affective functioning. One explanation to reconcile these findings may be that the effects in the mediation models are only driven by the highPACR group. By using multigroup analyses future studies need to investigate whether the indirect effects hold for the highPACPR group and the onlyPACPR group. This is essential because it will help determine the quality of PACPR as parenting strategy. Yet, it is not trivial to do so due to statistical and practical reasons. First, rather big samples are necessary to validly divide the sample into the groups. Second, differences in group prevalence will make it difficult to recruit a large enough highPACR group required for multigroup analyses.

Another important aspect for measures is that items need to be clear about whether they involve conditional regard as a strategy involving socialization goals. Some items used in Study B for the parent report ask for proactive conditional regard (e.g. “If my child would not invest in his studies, I will try to change his behavior by showing him that his behavior makes me sad and unhappy”), while others do not involve parents’ intentions (e.g., “If my child does not invest in his/her studies, I give him/her less warmth and affection than I usually do”). This is also the case for items in other studies (e.g. Assor et al., 2020). The theoretical considerations from Study B suggest that it might be useful that the distinction between proactive and reactive conditional regard reflects in the measures. Scales that are sensitive to the difference of proactive and reactive use can help to explore the suggested distinction in more detail. For

example, we could explore whether proactive and reactive conditional regard can be differentiated at the factorial level, or whether we find different antecedents and outcomes. In this regard, another helpful option would be to ask parents for their ideal and actual parenting similar to the approach by Rhoades et al. (2017). Exporing the relevance of the distinction will improve our understanding of conditional regard and potentially benefit prevention (psychoeducation for proactive conditional regard and anger regulation for reactive PACNR, see discussion of Study B).

The distinction in measures seems especially relevant for parents' reports. However, children may also be able to report whether their parents use conditional regard to manipulate their behavior intentionally. Itzhaki and her colleagues (2018) argue that children perceive conditional positive regard as manipulating and thus not as a positive parenting. This would mean that proactively used conditional positive regard may have negative outcomes because children perceive the manipulating intention instead of a warm, authentic appreciation. This is in contrast to our reasoning in the paper of Study B that reactive conditional regard may result in a more chaotic and less predictabel parenting, which likely is more detrimental. Further studies that examine this idea are needed.

Practical implications

Finally, the advanced understanding of conditional regard also has practical implications. In the first place, by addressing parenting, we follow up on the tradition of "helping children by helping parents" (Bretherton, 1992, S. 760; Bowlby, 1940). Based on the findings and considerations presented here, three steps to prevent conditional regard and its harmful effects can be identified. First, conditional regard (also PACPR on its own) should not be recommended as a socialization strategy to pursue higher child engagement in schoolwork. In contrast, attention must be drawn to the hidden costs conditional regard relates to. Psychoeducation may be effective especially for those parents who apply conditional regard proactively to pursue academic goals that they have for their children. This is likely to include, in particular, parents of children in the onlyPACPR group. Second, if CCSE is the main driver of conditional regard and conditional regard happens out of reactive reasons, psychoeducation may not suffice. Thus, parental anger reactions after performance feedback need to be considered as indicator for the possible involvement of parental contingent self-esteem and shame. In this regard, practitioners should explore whether parents intend to use conditional regard to pursue socialization goals or whether it deviates from their ideal to react. A deviation may also be a good starting point for promoting motivation for change in the parent. Third,

interventions need to tackle the sources for reactive conditional regard, that is, contingent self-esteem and anger regulation. The idea that conditional negative regard can be understood as a reactive form of aggression implies that interventions to prevent aggression in families may also be helpful for less overt aggressive behavior like PACNR.

Beside interventions for parents who currently raise their children with conditional regard, interventions are needed for children who receive (or received) conditional regard. Psychoeducation about antecedents of conditional regard as well as the possibility of a reactive type of conditional regard could help children to learn that conditional regard may be an expression of parents' ways to regulate their self-esteem or anger, rather than having anything to do with themselves. In this way, children might be able to avert the negative consequences. A client-centered therapist described a therapeutic success in this respect as follows: "He [the client] could hear her [his mother] disparaging remarks as her own opinion spoken in hurt or anger without feeling worthless himself or taking them as evidence that she did not love him, or wished him harm" (Sanford, 2001, S. 67). This in turn can also benefit the next generation, when those individuals themselves become parents in the future.

Conclusion

This dissertation refined our understanding of parental conditional regard in several ways. First, Study A of this thesis supports the theoretical distinction between the different facets of parental academic conditional regard (PACPR and PACNR). The profile analysis confirmed the negative associations of conditional regard with developmental outcomes and elicited that even individuals who only perceive PACPR show a hidden vulnerability in form of a contingent self-esteem. Study B underlined that contingent self-esteem plays a key role not only for individuals who perceive conditional regard but also for those who provide conditional regard. The results argue in favor of a distinction between proactive and reactive forms of conditional regard. Taken together, the results provide a basis for a refined definition and measurement of conditional regard, as well as for practical implications and offer us guidance for future directions in the study of conditional regard.

References

Assor, A., Buhnick-Atzil, O., Rabinovitz-Magen, L., Auerbach, J., Kanat-Maymon, Y., Smiley, P., & Moed, A. (2020). Maternal prenatal conditional regard orientation and postnatal controlling behaviour as predictors of preschoolers' helpless coping with failure: A prospective study. *European Journal of Developmental Psychology*, *17*(6), 828–854. https://doi.org/10.1080/17405629.2020.1822162

Assor, A., Kanat-Maymon, Y., & Roth, G. (2014). Parental conditional regard: Psychological costs and antecedents. In N. Weinstein (Ed.), *Human motivation and interpersonal relationships* (pp. 215–237). Springer Netherlands. https://doi.org/10.1007/978-94-017-8542-6_10

Assor, A., & Roth, G. (2005). The harmful effects of parental conditional regard. *Scientific Annals of the Psychological Society of Nothern Greece*, *7*, 17–34.

Assor, A., Roth, G., & Deci, E. L. (2004). The emotional costs of parents' conditional regard: A self-determination theory analysis. *Journal of Personality*, *72*(1), 47–88. https://doi.org/10.1111/j.0022-3506.2004.00256.x

Assor, A., & Tal, K. (2012). When parents' affection depends on child's achievement: Parental conditional positive regard, self-aggrandizement, shame and coping in adolescents. *Journal of Adolescence*, *35*(2), 249–260. https://doi.org/10.1016/j.adolescence.2011.10.004

Bakk, Z., & Vermunt, J. K. (2016). Robustness of stepwise latent class modeling with continuous distal outcomes. *Structural Equation Modeling: A Multidisciplinary Journal*, *23*(1), 20–31. https://doi.org/10.1080/10705511.2014.955104

Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development*, *67*, 3296–3319. https://doi.org/10.1111/j.1467-8624.1996.tb01915.x

Barber, B. K., Olsen, J. E., & Shagle, S. C. (1994). Associations between parental psychological and behavioral control and youth internalized and externalized behaviors. *Child Development*, *65*(4), 1120–1136. https://doi.org/10.2307/1131309

Bergman, L. R., & Andersson, H. (2010). The person and the variable in developmental psychology. *Zeitschrift Für Psychologie / Journal of Psychology*, *218*(3), 155–165. https://doi.org/10.1027/0044-3409/a000025

Bolck, A., Croon, M., & Hagenaars, J. (2004). Estimating latent structure models with categorical variables: One-step versus three-step estimators. *Political Analysis*, *12*(1), 3–27. https://doi.org/10.1093/pan/mph001

Bowlby, J. (1940). The influence of early environment in the development of neurosis and neurotic character. *International Journal of Psycho-Analysis*, *21*, 1–25.

Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. Basic Books.

Bozarth, J., & Wilkins, P. (Eds.). (2001). *Rogers' Therapeutic Conditions*. *Rogers' Therapeutic Conditions Evolution, Theory and Practice Vol. 3: Unconditional Positive Regard*. PCCS Books. https://ebookcentral.proquest.com/lib/kxp/detail.action?docID=6350951

Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, *28*(5), 759–775. https://doi.org/10.1037/0012-1649.28.5.759

Burwell, R. A., & Shirk, S. R. (2006). Self processes in adolescent depression: The role of self-worth contingencies. *Journal of Research on Adolescence*, *16*(3), 479–490. https://doi.org/10.1111/j.1532-7795.2006.00503.x

Card, N. A., & Little, T. D. (2006). Proactive and reactive aggression in childhood and adolescence: A meta-analysis of differential relations with psychosocial adjustment. *International Journal of Behavioral Development*, *30*(5), 466–480. https://doi.org/10.1177/0165025406071904

Ching, B. H.-H., Wu, H. X., & Chen, T. T. (2021). Maternal achievement-oriented psychological control: Implications for adolescent academic contingent self-esteem and mathematics anxiety. *International Journal of Behavioral Development*, *45*(3), 193–203. https://doi.org/10.1177/0165025420981638

Coopersmith, J. (1967). *The antecedents of self-esteem*. W. H. Freeman.

Crocker, J., Karpinski, A., Quinn, D. M., & Chase, S. K. (2003). When grades determine self-worth: Consequences of contingent self-worth for male and female engineering and psychology majors. *Journal of Personality and Social Psychology*, *85*(3), 507–516. https://doi.org/10.1037/0022-3514.85.3.507

Curran, T. (2018). Parental conditional regard and the development of perfectionism in adolescent athletes: The mediating role of competence contingent self-worth. *Sport,*

Exercise, and Performance Psychology, *7*(3), 284–296. https://doi.org/10.1037/spy0000126

Curran, T., Hill, A. P., & Williams, L. J. (2017). The relationships between parental conditional regard and adolescents' self-critical and narcissistic perfectionism. *Personality and Individual Differences*, *109*(3), 17–22. https://doi.org/10.1016/j.paid.2016.12.035

Deci, E. L., Ryan, & R. M. (1993). Die Selbstbestimmungstheorie der Motivation und ihre Bedeutung für die Pädagogik. *Zeitschrift Für Pädagogik*, *39*(2), 223–238.

Deci, E. L., & Ryan, R. M. (1995). Human agency: The basis for true self-esteem. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 31–50). Plenum.

Deci, E. L., & Ryan, R. M (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Di Giunta, L., Rothenberg, W. A., Lunetti, C., Lansford, J. E., Pastorelli, C., Eisenberg, N., Thartori, E., Basili, E., Favini, A., Yotanyamaneewong, S., Peña Alampay, L., Al-Hassan, S. M., Bacchini, D., Bornstein, M. H., Chang, L., Deater-Deckard, K., Dodge, K. A., Oburu, P., Skinner, A. T., . . . Uribe Tirado, L. M. (2020). Longitudinal associations between mothers' and fathers' anger/irritability expressiveness, harsh parenting, and adolescents' socioemotional functioning in nine countries. *Developmental Psychology*, *56*(3), 458–474. https://doi.org/10.1037/dev0000849

Dodge, K. A., & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology*, *53*(6), 1146–1158. https://doi.org/10.1037/0022-3514.53.6.1146

Dweck, C. S. (2017). From needs to goals and representations: Foundations for a unified theory of motivation, personality, and development. *Psychological Review*, *124*(6), 689–719. https://doi.org/10.1037/rev0000082

Elison, J., Garofalo, C., & Velotti, P. (2014). Shame and aggression: Theoretical considerations. *Aggression and Violent Behavior*, *19*(4), 447–453. https://doi.org/10.1016/j.avb.2014.05.002

Grolnick, W. S. (2003). *The psychology of parental control: How well-meant parenting backfires*. L. Erlbaum Associates; Psychology Press. https://doi.org/10.4324/9781410606303

Israeli-Halevi, M., Assor, A., & Roth, G. (2015). Using maternal conditional positive regard to promote anxiety suppression in adolescents: A benign strategy? *Parenting*, *15*(3), 187–206. https://doi.org/10.1080/15295192.2015.1053324

Itzhaki, Y., Itzhaky, H., & Yablon, Y. B. (2018). The contribution of parental and societal conditional regard to adjustment of high school dropouts. *Journal of Adolescence*, *62*, 151–161. https://doi.org/10.1016/j.adolescence.2017.11.014

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk. *Econometrica*, *47*, 263–291. https://doi.org/10.1142/9789814417358_0006

Kasser, T., Cohn, S., Kanner, A. D., & Ryan, R. M (2007). Some costs of american corporate capitalism: A psychological exploration of value and goal conflicts. *Psychological Inquiry*, *18*(1), 1–22.

Kluwer, E. S., Karremans, J. C., Riedijk, L., & Knee, C. R. (2020). Autonomy in Relatedness: How Need Fulfillment Interacts in Close Relationships. *Personality & Social Psychology Bulletin*, *46*(4), 603–616. https://doi.org/10.1177/0146167219867964

Latham, G. I. (1994). *The power of positive parenting: A wonderful way to raise children*. P&T Ink.

Lazarus, R. S. (2001). Relational Meaning and Discrete Emotions. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Series in affective science. Appraisal processes in emotion: Theory, methods, research* (pp. 37–67). Oxford University Press.

Lietaer, G. (1984). Unconditional positive regard: A controversial basic attitude in client-centered therapy. In R. Levant & J. Shlien (Eds.), *Client-centered therapy and the person-centered approach: New directions in theory research, and practice* (pp. 41–58). Praeger.

Lietaer, G. (2001). Unconditional acceptance and positive regard. In J. Bozarth & P. Wilkins (Eds.), *Rogers' therapeutic conditions: Evolution, theory and practice, Vol. 3: Unconditional positive regard* (pp. 88–108). PCCS Books.

Maslow, A. H. (1980). *The farther reaches of human nature*. Penguin.

Maslow, A. H. (1981). *Motivation und Persönlichkeit: deutsche Ausgabe* (Vol. 17395). Rowohlt.

Miceli, M., Castelfranchi, C., & Pocobello, R. (2017). The ambiguity of pride. *Theory & Psychology*, *27*(4), 550–572. https://doi.org/10.1177/0959354317702542

Moller, A. C., Roth, G., Niemiec, C. P., Kanat-Maymon, Y., & Deci, E. L. (2018). Mediators of the associations between parents' conditional regard and the quality of their adult-children's peer-relationships. *Motivation and Emotion*, *5*(2), 68. https://doi.org/10.1007/s11031-018-9727-x

Moon, K., Rice, B., & Schneider, C. (2001). Stanley W. Standal and the need for positive regard. In J. Bozarth & P. Wilkins (Eds.), *Rogers' therapeutic conditions: Evolution, theory and practice, Vol. 3: Unconditional positive regard* (pp. 19–34). PCCS Books.

Nathanson, D. L. (1992). *Shame and pride*. Norton.

Ng, F. F.-Y., Pomerantz, E. M., & Deng, C. (2014). Why are Chinese mothers more controlling than American mothers? "My child is my report card". *Child Development*, *85*(1), 355–369. https://doi.org/10.1111/cdev.12102

Ng, F. F.-Y., Pomerantz, E. M., & Lam, S. (2007). European American and Chinese parents' responses to children's success and failure: Implications for children's responses. *Developmental Psychology*, *43*(5), 1239–1255. https://doi.org/10.1037/0012-1649.43.5.1239

Ng, F. F.-Y., Pomerantz, E. M., Lam, S., & Deng, C. (2019). The role of mothers' child-based worth in their affective responses to children's performance. *Child Development*, *90*(1), e165-e181. https://doi.org/10.1111/cdev.12881

Otterpohl, N., Bruch, S., Stiensmeier-Pelster, J., Steffgen, T., Schöne, C., & Schwinger, M. (2021). Clarifying the connection between parental conditional regard and contingent self-esteem: An examination of cross-lagged relations in early adolescence. *Journal of Personality*, *89*(5), 986–997. https://doi.org/10.1111/jopy.12631

Otterpohl, N., Keil, A. G., Assor, A., & Stiensmeier-Pelster, J. (2017). Erfassung von elterlicher bedingter Wertschätzung im Lern- und Leistungsbereich und im Bereich der Emotionsregulation. *Zeitschrift Für Entwicklungspsychologie Und Pädagogische Psychologie*, *49*(2), 98–111. https://doi.org/10.1026/0049-8637/a000172

Otterpohl, N., Lazar, R., & Stiensmeier-Pelster, J. (2019). The dark side of perceived positive regard: When parents' well-intended motivation strategies increase students' test anxiety. *Contemporary Educational Psychology*, *56*, 79–90. https://doi.org/10.1016/j.cedpsych.2018.11.002

Otterpohl, N., Steffgen, S. T., Stiensmeier-Pelster, J., Brenning, K., & Soenens, B. (2020). The intergenerational continuity of parental conditional regard and its role in mothers' and

adolescents' contingent self-esteem and depressive symptoms. *Social Development*, *29*(1), 143–158. https://doi.org/10.1111/sode.12391

Qin, D. B., Way, N., & Mukherjee, P. (2008). The other side of the model minority story: The familial and peer challenges faced by Chinese American adolescents. *Youth & Society*, *39*(4), 480–506. https://doi.org/10.1177/0044118X08314233

Rhoades, K. A., Grice, C., & Del Vecchio, T. (2017). Barriers to mothers' implementation of non-harsh discipline techniques: Anger, impulsivity, and situational demands. *Journal of Child and Family Studies*, *26*(11), 3179–3191. https://doi.org/10.1007/s10826-017-0801-x

Rogers, C. R. (1951). *Client-centered therapy*. The Riverside Press.

Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology*, *21*(2), 95–103. https://doi.org/10.1037/h0045357

Rogers, C. R. (1959). A theory of therapy, personality and interpersonal relationships as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A Study of a Science* (pp. 184–256). McGraw-Hill.

Rogers, C. R. (1962). The interpersonal relationship: The core of guidance. *Harvard Educational Review*, *32*(4), 416–429.

Rogers, C. R. (1983). *Therapeut und Klient: Grundlagen der Gesprächspsychotherapie*. Fischer-Taschenbuch.

Roth, G. (2008). Perceived parental conditional regard and autonomy support as predictors of young adults' self- versus other-oriented prosocial tendencies. *Journal of Personality*, *76*(3), 513–534. https://doi.org/10.1111/j.1467-6494.2008.00494.x

Roth, G., & Assor, A. (2012). The costs of parental pressure to express emotions: Conditional regard and autonomy support as predictors of emotion regulation and intimacy. *Journal of Adolescence*, *35*(4), 799–808. https://doi.org/10.1016/j.adolescence.2011.11.005

Roth, G., Assor, A., Niemiec, C. P., Deci, E. L., & Ryan, R. M (2009). The emotional and academic consequences of parental conditional regard: Comparing conditional positive regard, conditional negative regard, and autonomy support as parenting

practices. *Developmental Psychology*, *45*(4), 1119–1142. https://doi.org/10.1037/a0015272

Ryan, R. M (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, *63*(3), 397–427. https://doi.org/10.1111/j.1467-6494.1995.tb00501.x

Ryan, R. M., & Deci, E. L. (Eds.). (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.

Sanford, R. (2001). Unconditional positive regard: A misunderstood way of being. In J. Bozarth & P. Wilkins (Eds.), *Rogers' therapeutic conditions: Evolution, theory and practice, Vol. 3: Unconditional positive regard* (pp. 65–75). PCCS Books.

Scheff, T. J. (1988). Shame and conformity: The deference-emotion system. *American Sociological Review*, *53*(3), 395–406.

Schnarch, D. (1997). *Passionate marriage: Love, sex, and intimacy in emotionally committed relationships*. Norton.

Smetana, J. G., Daddis, C., & Chuang, S. S. (2016). "Clean your room!": A longitudinal investigation on adolescent-parent conflict and conflict resolution in middle-class African American families. *Journal of Adolescent Research*, *18*(6), 631–650. https://doi.org/10.1177/0743558403254781

Smiley, P. A., Buttitta, K. V., Chung, S. Y., Coffey, J. K., Wang, B. A., & Borelli, J. L. (2016). Anger in response to challenge: Children's emotion socialization predicts approach versus avoidance. *Motivation and Emotion*, *40*(6), 923–935. https://doi.org/10.1007/s11031-016-9583-5

Smiley, P. A., Rasmussen, H. F., Buttitta, K. V., Hecht, H. K., Scharlach, K. M., & Borelli, J. L. (2020). Parent control and child shame: Associations with children's task persistence and depressive symptoms in middle childhood. *Parenting*, *20*(4), 311–336. https://doi.org/10.1080/15295192.2019.1694837

Standal, S. W. (1954). *The need for positive regard: A contribution to client-centered theory*. Unpublished doctoral dissertation.

Steffgen, S. T., Otterpohl, N., Wessing, F., Schwinger, M., Assor, A., Kanat-Maymon, Y., Gueta, B. E., & Stiensmeier-Pelster, J. (2022). The process linking child-invested contingent self-esteem and conditional regard: The roles of maternal anger and its

regulation. *Journal of Child and Family Studies, 31*, 2412–2423. https://doi.org/10.1007/s10826-022-02316-y

Steffgen, S. T., Soenens, B., Otterpohl, N., Stiensmeier-Pelster, J., & Schwinger, M. (2022). Latent profiles of parental academic conditional positive and negative regard. *Parenting, 22*(4), 347–381. https://doi.org/10.1080/15295192.2021.2010501

Steinberg, L [L.]. (2004). *The 10 basic principles of good parenting*. Simon & Schuster.

Tracy, J. L., & Robins, R. W. (2004). Putting the self into self-conscious emotions: A theoretical model. *Psychological Inquiry*, *15*(2), 103–125.

Turner, K. A., & White, B. A. (2015). Contingent on contingencies: Connections between anger rumination, self-esteem, and aggression. *Personality and Individual Differences*, *82*, 199–202. https://doi.org/10.1016/j.paid.2015.03.023

Walling, B. R., Mills, R. S. L., & Freeman, W. S. (2007). Parenting cognitions associated with the use of psychological control. *Journal of Child and Family Studies*, *16*(5), 642–659. https://doi.org/10.1007/s10826-006-9113-2

Watson, J. C., & Steckley, P. (2001). Potentiating growth: An examination of the research on unconditional positive regard. In J. Bozarth & P. Wilkins (Eds.), *Rogers' therapeutic conditions: Evolution, theory and practice, Vol. 3: Unconditional positive regard* (pp. 180–197). PCCS Books.

Wilkins, P. (2000). Unconditional positive regard reconsidered. *British Journal of Guidance & Counselling*, *28*(1), 23–36. https://doi.org/10.1080/030698800109592

Wouters, S., Colpin, H., Luyckx, K., & Verschueren, K. (2018). Explaining the relationship between parenting and internalizing symptoms: The role of self-esteem level and contingency. *Journal of Child and Family Studies*, *27*(10), 3402–3412. https://doi.org/10.1007/s10826-018-1167-4

Wuyts, D., Vansteenkiste, M., Soenens, B., & Assor, A. (2015). An examination of the dynamics involved in parental child-invested contingent self-esteem. *Parenting*, *15*(2), 55–74. https://doi.org/10.1080/15295192.2015.1020135

Zeigler-Hill, V., Besser, A., & King, K. (2011). Contingent self-esteem and anticipated reactions to interpersonal rejection and achievement failure. *Journal of Social and Clinical Psychology*, *30*(10), 1069–1096.

II. Publications

List of Publications

Steffgen, S. T., Soenens, B., Otterpohl, N., Stiensmeier-Pelster, J., & Schwinger, M. (2022). Latent profiles of parental academic conditional positive and negative regard. *Parenting, 22*(4), 347–381. https://doi.org/10.1080/15295192.2021.2010501

Steffgen, S. T., Otterpohl, N., Wessing, F., Schwinger, M., Assor, A., Kanat-Maymon, Y., Gueta, B. E., & Stiensmeier-Pelster, J. (2022). The process linking child-invested contingent self-esteem and conditional regard: The roles of maternal anger and its regulation. *Journal of Child and Family Studies, 31*, 2412–2423. https://doi.org/10.1007/s10826-022-02316-y

Otterpohl, N., **Steffgen, S. T.**, & Stiensmeier-Pelster, J. (2021). *KWKJ: Inventar zur Erfassung elterlicher konditionaler Wertschätzung.* Hogrefe.

Otterpohl, N., Bruch, S., Stiensmeier-Pelster, J., **Steffgen, T.**, Schöne, C., & Schwinger, M. (2021). Clarifying the connection between parental conditional regard and contingent self-esteem: An examination of cross-lagged relations in early adolescence. *Journal of Personality, 89*(5), 986–997. https://doi.org/10.1111/jopy.12631

Otterpohl, N.[1], **Steffgen, S. T.**[1], Stiensmeier-Pelster, J., Brenning, K., & Soenens, B. (2020). The intergenerational continuity of parental conditional regard and its role in mothers' and adolescents' contingent self-esteem and depressive symptoms. *Social Development, 29*(1), 143–158. https://doi.org/10.1111/sode.12391

[1] Nantje Otterpohl and Sarah Teresa Steffgen contributed equally to this publication and should be considered co-first authors.

Study A

Steffgen, S. T., Soenens, B., Otterpohl, N., Stiensmeier-Pelster, J., & Schwinger, M. (2022). Latent profiles of parental academic conditional positive and negative regard. *Parenting, 22*(4), 347–381.

PARENTING
2022, VOL. 22, NO. 4, 347–381
https://doi.org/10.1080/15295192.2021.2010501

Routledge
Taylor & Francis Group

Latent Profiles of Parental Academic Conditional Positive and Negative Regard

Sarah Teresa Steffgen, Bart Soenens, Nantje Otterpohl, Joachim Stiensmeier-Pelster, and Malte Schwinger

SYNOPSIS

Objective. Parental academic conditional regard is a socialization strategy in which parents' displays of appreciation increase (conditional positive regard; PACPR) or decrease (conditional negative regard; PACNR) depending on the children's academic achievement. Little is known about how adolescents perceive combinations of conditional positive and negative regard and how within-person combinations of them relate to developmental outcomes. ***Design.*** This study uses a person-oriented approach to examine within-person combinations of PACPR and PACNR and their different associations with individuals' motivation and adjustment. Three different samples reported on perceived PACPR and PACNR: adolescent students (N = 3,891), university freshmen (N = 556), and parents (N = 760). We conducted confirmatory latent profile analyses and investigated associations between profiles and outcome measures (basic need satisfaction, self-esteem level and contingency, ability self-concept, achievement goal orientation, test anxiety, and depressive symptoms). ***Results.*** The results supported a 3-class solution in all samples: low (44.4%–61.4%) or high (14.5%–24.5%) on both, and only high on PACPR (14.1%–31.3%). Groups reporting overall high levels of conditional regard scored the least favorably on all outcomes. Individuals with only high scores on PACPR differed from those with overall low scores on conditional regard primarily in terms of higher contingent self-esteem. ***Conclusions.*** The two dimensions of conditional regard are distinct. Although combination of the two dimensions is associated with individuals' general poor adjustment, the presence of PACPR alone is related to a fragile sense of self-esteem. Implications for future research are discussed.

INTRODUCTION

Parental conditional regard is characteristic of parents whose displays of love and affection depend on the child's ability to meet parent-imposed standards (Assor, Roth, & Deci, 2004; Coopersmith, 1967; Rogers, 1962). With an orientation of conditional regard, parents can either withdraw affection in response to their children's failure (conditional negative regard) or increase affection in response to children's success (conditional positive regard; Assor & Roth, 2005; Roth, Assor, Niemiec, Deci, & Ryan, 2009). These two facets of conditional regard are differentially related to different aspects of children's development (Assor, Kanat-Maymon, & Roth, 2014; Roth et al., 2009). To

Supplemental data for this article can be accessed on the publisher's website

date, it is unknown how combinations of them co-occur within individuals and how these within-person combinations relate to developmental outcomes. Therefore, we aimed to identify within-person combinations of conditional regard in situations of failure versus success in school and examine how these combinations relate to individuals' school-specific adjustment and general psychological functioning. An examination of these questions is important because it allows us to determine whether the two dimensions of conditional regard are truly distinct (rather than two sides of the same coin). In addition, a person-oriented approach provides insights into the interplay between the two dimensions of conditional regard with respect to how they relate to important outcomes.

Parental Conditional Regard in the Academic Domain

Academic achievement is a core area for parent–child disagreements (Smetana, Daddis, & Chuang, 2016). Parents' involvement in children's school work plays an important role in families' daily lives and has an impact on children's learning motivation (Barger, Kim, Kuncel, & Pomerantz, 2019; Grolnick & Slowiaczek, 1994; Pomerantz, Moorman, Litwack, & Litwack, 2007). An *autonomy-supportive parental style* of school involvement, where parents display a sincere interest in the child's perspective on school work and offer choices on how to deal with school work, benefits children's motivation and learning (Froiland, 2011; Katz, Kaplan, & Buzukashvily, 2011; Li, Yao, Liu, & Chen, 2019; Viljaranta et al., 2018). In contrast, a more *controlling parental type* of involvement, where parents pressure their children to meet prescribed standards, diminishes motivation and hampers learning (Silinskas & Kikas, 2019).

One specific form of controlling parental involvement is parental conditional regard, which means that parents let their love and appreciation depend on the child's achievement of particular standards for performance (Assor et al., 2004). Conditional regard can take two forms (Assor & Roth, 2005; Roth et al., 2009). The most widely studied form of conditional regard is parental academic conditional negative regard (PACNR). This parenting practice includes withdrawing appreciation, esteem, and interest in the face of failure in school. In contrast, parental academic conditional positive regard (PACPR) is a seemingly more benign form of control. It includes showing more appreciation, esteem, and interest in the face of success in academics.

From a behaviorist perspective, conditional regard may be seen as an effective socialization strategy that increases the likelihood of the respective behavior (Aronfreed, 1968; Gewirtz & Peláez-Nogueras, 1991). In contrast, from a self-determination theory (SDT) perspective, both PACNR and PACPR are considered autonomy-suppressing and need thwarting strategies. When parents withdraw their love in the face of failure (as in PACNR), the

sense of secure attachment to the caregiver and thus the need for relatedness (i.e., the need to feel cared for and to belong) is directly threatened. Furthermore, the child receives direct negative feedback on his or her behavior or performance, which is likely to threaten the child's need for competence, that is the need to experience a sense of mastery and effectiveness. The need thwarting effect of PACPR is less straightforward because this strategy only includes a surplus in appreciation and caring, which, at first sight, appears to support the need for relatedness. However, conditional positive regard makes children feel compelled to engage in an activity to gain more parental approval. As such, both in the case of conditional negative and positive regard, children feel forced to choose between seeking parental approval and staying true to their personal preferences and interests, thereby creating a tension between the need for relatedness and the need for autonomy, that is the need to feel free in one's own actions (Assor et al., 2004; Cohen, Moed, Shoshani, Roth, & Kanat-Maymon, 2020; Ryan & Deci, 2017). In turn, this tension between needs is considered harmful to children's development.

Developmental Outcomes of Parental Conditional Regard

From a theoretical point of view, it can be argued that PACNR involves a direct and rather harsh threat to basic psychological needs, whereas PACPR includes a more indirect and insidious threat. Although initial research has not differentiated between conditional negative and positive regard, studies have begun to address the effects of one of the strategies separately or simultaneously using variable-oriented approaches, such as regression analysis or structural equation modeling. Here, we overview associations between the two conditional regard strategies and outcomes specifically in the academic domain and in the domain of psychological functioning more generally.

Quality of Relationships

Because of its controlling nature, conditional regard is likely to affect the quality of the parent–child relationship and other relationships (Assor et al., 2014). When experiencing conditional negative regard for expressing fear, children report more resentment toward the parent (Roth et al., 2009). Conditional negative regard is related to lower autonomy and relatedness satisfaction in a couples relationship, whereas conditional positive regard is only related to lower autonomy satisfaction (Kanat-Maymon, Roth, Assor, & Raizer, 2016). In a diary study, conditional positive regard was negatively associated with relationship satisfaction at the between-person level but positively at the daily (within-person) level (Kanat-Maymon, Argaman, & Roth, 2017). The authors suggested that conditional positive regard may satisfy the need for relatedness in the short run but pressure individuals to meet their partner's expectations in the long run. We additionally suggest that individuals

may sacrifice behavior of personal interest to pursue these expectations. When accumulating throughout time, the seemingly benign practice of conditional positive regard then begins to exert a detrimental effect on close relationships. Thus, PACNR likely frustrates all basic needs in relationships, but PACPR may mainly be linked to a frustrated need for autonomy.

Self-Esteem

Conditional negative regard directly relates to lower levels of self-esteem (Otterpohl, Keil, Assor, & Stiensmeier-Pelster, 2017; Wouters, Colpin, Luyckx, & Verschueren, 2018), which supports the idea that a withdrawal or lack of parental interest and affection involves a direct threat to a person's sense of worth. This effect may persist throughout the lifespan. Adults reported lower general self-esteem when they experienced conditional regard during childhood (Assor et al., 2004). Furthermore, through experiencing conditional negative and positive regard, children introject the contingent relationship between school performance and their worth, which leads to contingent self-esteem (Ryan & Deci, 2017). Conditional positive and negative regard are associated with contingent self-esteem (Curran, 2018; Israeli-Halevi, Assor, & Roth, 2015; Wouters et al., 2018). In turn, contingent self-esteem mediates the effects of conditional regard on affective outcomes, such as depressive symptoms (Wouters et al., 2018).

Academic Self-Concept

Conditional regard involves strong performance feedback, which is likely to affect a child's academic ability self-concept. However, this association has not yet been investigated. The skill-development approach assumes that one's successes and failures shape mental representations of one's own abilities (Helmke & van Aken, 1995; Niepel, Brunner, & Preckel, 2014). Conditional regard is likely to make experiences of success and failure visible and highly salient. Therefore, conditional regard may foster increases (PACPR) or decreases (PACNR) in ability self-concept. However, as beliefs about competence may fluctuate based on the current performance, conditional regard is likely to make children concerned about whether they do well according to other people's standards. Exposed to conditional regard, children's evaluation of their ability to develop skills and successfully meet challenges in life may be less stable over time and less clearly defined (Campbell et al., 1996).

Goal Orientation

Academic conditional regard predicted students' avoidance of academic challenge via feelings of shame and engagement in self-derogation (Assor & Tal, 2012). These results support the idea that students' mastery orientation is undermined under conditional regard. Furthermore, from a behaviorist perspective PACPR is likely to reinforce striving for good grades and the validation of competence (performance-approach goals),

whereas PACNR is likely to foster hiding bad grades and lack of knowledge (performance-avoidance goals; Gewirtz & Peláez-Nogueras, 1991). Indirect evidence for this assumption was obtained in a study showing that PACPR was associated with an inner pressure to succeed and grade-focused engagement and that PACNR was related to a lack of engagement, as reported by a teacher (Roth et al., 2009). In summary, when parents' appreciation varies depending on the child's achievements, the child likely prefers a performance orientation instead of a mastery orientation. PACNR appears to be related to an avoidance orientation, but PACPR may be linked to an approach orientation.

Test Anxiety

Conditional regard is likely to influence children's affective functioning in school. When anticipating losses in the desired parental love depending on one's achievements, it is plausible that children become anxious about failing on a test. According to the control-value theory of achievement emotions, PACNR makes failure subjectively harmful (Pekrun, 2006). Results not completely under the child's control will promote anxiety. Furthermore, a fragile sense of self-worth directly associated with both forms of conditional regard is likely to make children feel emotional disaffection during learning and anxious about achievement (Covington, 1984; Crocker & Park, 2004; Van der Kaap-Deeder et al., 2016). Therefore, PACNR should be related to heightened test anxiety, and PACPR should at least show moderate associations.

Depressive Symptoms

Finally, because conditional regard thwarts basic psychological needs, and because psychological need frustration comes with an emotional cost, conditional regard is assumed to be associated with lower psychological well-being in general and with internalizing symptoms in particular (Ryan & Deci, 2017; Van Petegem, Antonietti, Eira Nunes, Kins, & Soenens, 2020). In addition, contingent self-esteem puts children at risk for depressive symptoms because self-esteem varies contingent on external events and thus becomes unstable (Burwell & Shirk, 2006; Schöne, Tandler, & Stiensmeier-Pelster, 2015). Conditional negative regard is directly related to depressive symptoms, whereas the effects of conditional positive regard are fully mediated by contingent self-esteem (Wouters et al., 2018). It can be expected that both forms of conditional regard are related to depressive symptoms, but effects appear to be more direct and therefore stronger for PACNR.

Importance of a Person-Oriented Approach

To the best of our knowledge, all current studies of conditional regard have adopted a variable-oriented approach. When controlling for the respective other strategy, PACNR and PACPR differ somewhat in their psychological mechanisms and their impact on psychological functioning. However, the two strategies are conceptually closely linked and share about 22–28% common variance ($.45 < r < .53$; Assor & Tal, 2012; Roth et al., 2009). The overlap between the two dimensions raises issues that cannot be addressed using a variable-oriented approach but require a person-oriented approach to investigate within-person combinations of PACNR and PACPR. Specifically, a person-oriented approach is useful from both a substantive and a statistical point of view.

Substantively, a person-oriented approach allows one to test the assumption that the two dimensions of conditional regard are truly distinct. By identifying profiles of individuals, it is indeed possible to examine whether at least some of these profiles reflect a unique role for either PACNR or PACPR. If a person-oriented approach resulted in only two profiles, with some individuals scoring high and others scoring low on the two dimensions of conditional regard, then both dimensions would always co-occur to a certain extent at the individual level. In this case, PACNR and PACPR would reflect two sides of the same coin, with parents showing their love either unconditionally or conditionally. The distinction between the two dimensions at the variable level would then have little real-life value for individuals. If, instead, at least one profile would emerge with uniquely elevated scores on only one dimension (e.g., PACPR but not PACNR), the distinction between the two dimensions would be more meaningful. In this case, PACNR and PACPR would represent specific and distinct socialization strategies. Theoretically, four different profiles are possible, which reflect each combination of the two dimensions (high on both, low on both, high on PACPR but low on PACNR, and vice versa). A person-oriented approach allows for an examination of the question of whether each of the four profiles exists and whether profiles relate differently to an individual's motivation and adjustment.

Statistically, one may wonder whether it is appropriate to simply ignore the variance shared between PACNR and PACPR, as is typically done in the variable-centered approach. When both dimensions of conditional regard are entered simultaneously in a variable-oriented approach, the variance shared between the two dimensions is set aside and only the unique parts of the variance are considered in the analysis. However, excluding the shared variance from the analysis may change the meaning of the constructs examined. If PACPR is stripped from the variance it has in common with PACNR, does it then still reflect a conditionally approving parental orientation? Accordingly, unique scores for PACPR (stripped from PACNR) may result

in an underestimation of the detrimental consequences associated with this form of conditional regard. A person-oriented approach avoids this problem because it does not pit the two dimensions against each other; instead, it identifies within-person combinations of the dimensions so that isolated or interactional effects at the person level can be explored.

As such, a person-oriented approach may allow for a more accurate test of the unique roles of PACNR and PACPR in child development. This is particularly important for PACPR because this dimension of conditional regard is seemingly beneficial and is considered effective in promoting desired behavior from a behaviorist point of view (Aronfreed, 1968; Frost, 2005; Gewirtz & Peláez-Nogueras, 1991; McGraw, 2004). If PACPR is itself harmless or beneficial, individuals who only report elevated scores on PACPR (but not on PACNR) should be comparable to (or perhaps do even better than) individuals low in the two dimensions of conditional regard. If, instead, PACPR is detrimental to development (as assumed in SDT), the psychological adjustment of individuals uniquely high on PACPR should at least be in between the adjustment of individuals high on both dimensions and individuals experiencing no conditional regard at all.

Research Questions

The first goal of this study was to identify within-person combinations of PACNR and PACPR using a person-oriented approach. The person-oriented approach allows the investigation of the nature of PACNR and PACPR profiles and sheds light on their prevalence. Second, we aimed to investigate profile functionality. A comparison of differences between profiles in terms of various outcomes allows us to extend conclusions on the distinct functionality of the two parenting behaviors and their isolated or interactional effects at the person level. SDT suggests that both PACNR and PACPR are uniquely detrimental to development. We expected that individuals who score high on the two dimensions of conditional regard, should display the most unfavorable outcomes. In contrast, individuals who score low on both dimensions should display more favorable outcomes. We expected that if we can identify groups with elevated scores for either PACNR or PACPR, these individuals should score in between the groups scoring low and high on both dimensions. More specifically, individuals with elevated scores only in PACPR should show lower adjustment in developmental outcomes that were found to be associated with PACPR in variable-oriented studies, likewise for PACNR.

To investigate our research questions, we collected data from three of the most widely studied populations in academics: adolescent students (Study 1), university students (Study 2), and parents of school-aged children (Study 3). This approach allowed us to explore profiles in different populations and investigate the profile functionality in a very broad manner. Data collection

took place between 2016 and 2018. Ethical guidelines of the American Psychological Association (APA) and the German Association of Psychologists (DGPs) were followed in the study.

STUDY 1: ADOLESCENT STUDENTS

Adolescent students represent the population that is most affected by school-related parenting behavior. To investigate the adjustment of students in different profiles, we included a broad selection of variables. We examined basic psychological need satisfaction in the parent–child relationship, aspects of self-worth (self-esteem level and contingency), cognitive self-evaluations (ability self-concept), learning motivation (goal orientation), and domain-specific (test anxiety) and more general (depressive symptoms) indicators of affective functioning.

METHOD OF STUDY 1

Participants and Procedure

The participants were 3,891 adolescent students aged 9 to 19 years with a mean age of 13.13 years (SD = 1.73). Of the adolescents, 49.96% were women. Schools from seven different federal states in Germany were contacted via principals, 22 of whom agreed to participate. We invited all students from fifth to tenth grades to participate in the study. The parents provided active informed consent for their children. Participation was voluntary, and participants did not receive payment. The response rate was 69.5%. The sample included all different tracks within the secondary school system: low track schools (Sekundarschule, 21.3% of the sample), middle track schools (Realschule, 19.7% of the sample), and high track schools (Gymnasium, 58.9% of the sample). In all, 16.2% of the adolescents were in the fifth grade, 16.1% in the sixth, 21.8% in the seventh, 21.3% in the eighth, 12.6% in the ninth, and 12.0% in the tenth grade. Trained student workers administered questionnaires in class. We used pseudonymization to match the data of the adolescent students with data from their parents who were asked to participate in an additional survey (see Study 3).

Measures

To explore a broad range of different outcomes while not overburdening students with an excessively long survey, subsamples provided ratings of different combinations of outcome variables. Hence, sample sizes vary for the different outcome variables (for the exact composition of the total sample and sizes of subsamples, see Supplementary Table S1).

Parental Academic Conditional Regard

We used the German short version (Otterpohl, Steffgen, Stiensmeier-Pelster, Brenning, & Soenens, 2020) of the *Parental Conditional Regard Scale* (Assor et al., 2004) to measure the extent to which individuals perceive parental academic conditional regard. Adolescents indicated their perception of changes in parental regard following good grades (PACPR: e.g., "When I get a good grade in school, I notice that my mother is much warmer toward me than she usually is.") or bad grades (PACNR, e.g., "When I get a bad grade at school, I notice that my mother shows less affection for me than usual."). Six items each for PACPR and PACNR were deployed using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Adolescents were instructed to report on their primary caregiver, defined as the person they spend most of their time with. Children reported on their mother in 92.3% of the cases, on their father in 6.5% of the cases, and on another caregiver (e.g., grandparents or foster parents) in 1.2% of the cases. The original scale showed good reliability, a clear factorial structure with two intercorrelated scales, and convincing convergent validity with related constructs (e.g., internal compulsion, and grade focused engagement; Roth et al., 2009). Previous studies have shown good reliability of the German scale (Otterpohl, Lazar, & Stiensmeier-Pelster, 2019; Otterpohl et al., 2020). Cronbach's alphas in the present sample were .89 for PACNR and .93 for PACPR.

Basic Need Satisfaction in the Parent–Child Relationship

Satisfaction of basic needs was measured using the *Basic Need Satisfaction in Relationship Scale* (La Guardia, Ryan, Couchman, & Deci, 2000). The scale measures relationship-specific satisfaction of needs for autonomy (e.g., "When I am with my mother, I feel free to be who I am."), relatedness (e.g., "When I am with my mother, I feel loved and cared about."), and competence (e.g., "When I am with my mother, I feel very capable and effective."). The scale contains three items for each need, and a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) was used. Cronbach's alphas in the present sample were .60 for autonomy, .72 for relatedness, and .77 for competence (n = 661).

Self-Esteem

We used two subscales of the German *Inventory of Self-esteem for Children and Adolescents* (Schöne & Stiensmeier-Pelster, 2016). Ten items measure self-esteem level (e.g., "My opinion about myself is very positive."), and 12 items measure self-esteem contingency in the academic domain (e.g., "I somehow feel worthier if I receive a good grade.") using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Cronbach's alphas in the present sample were .87 for self-esteem level and .89 for self-esteem contingency (n = 1496).

Academic Ability Self-Concept

We administered one scale of the German *Academic Self-concept Scales* to assess academic ability self-concept (Schöne et al., 2012). Five items asked adolescent students to rate their subjective capabilities for academics on a 5-point Likert scale (e.g., "In school, many tasks are 1 = *hard*/5 = *easy* for me."). Cronbach's alpha in the present sample was α = .87 (n = 818).

Goal Orientation

We measured students' achievement goals using the German *Scales for the Assessment of Learning and Performance Motivation* (Spinath, Stiensmeier-Pelster, Schöne, & Dickhäuser, 2012). The scale assesses mastery orientation (8 items; e.g., "In school, it is important for me to learn as much as possible."), performance-approach orientation (7 items; e.g., "In school, it is important to me that others think I am smart."), and performance-avoidance orientation (8 items; e.g., "In school, it is important to me not to give wrong answers to questions of the teacher.") using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Cronbach's alphas in the present sample were .78 for mastery orientation, .82 for performance-approach orientation, and .85 for performance-avoidance orientation (n = 1111).

Test Anxiety

The 15-item German short form of the *Test Anxiety Inventory* (Spielberger & Vagg, 1995; Wacker, Jaunzeme, & Jaksztat, 2008) was used to measure students' experience of specific symptoms of anxiety before, during, and after tests in school on the four subscales *Worry, Emotionality, Interference*, and *Lack of confidence*. Adolescent students rated the symptom frequency of occurrence on a 4-point Likert scale ranging from 1 (*almost never*) to 4 (*almost always*) (e.g., "During tests I find myself thinking about the consequences of failing."). Cronbach's alpha in the present sample was .89 (n = 1424).

Depressive Symptoms

We measured students' depressive symptoms using the German *Inventory of Depression for Children and Adolescents* (Stiensmeier-Pelster, Braune-Krickau, Schürmann, & Duda, 2014). The questionnaire was based on the Children's Depression Inventory (CDI) developed by Kovacs (1985). It contains 29 items that tap into different depressive symptoms. Adolescents chose the most fitting of three statements that indicate different levels of the respective depressive symptoms (e.g., "I felt miserable *rarely*/*often*/*all the time*."). Higher scores indicate higher levels of depressive symptoms. Cronbach's alpha in the present sample was .89 (n = 1880).

Confirmatory Latent Profile Analysis

We conducted confirmatory latent profile analyses (CLPA) using M*plus* 8 (Muthen & Muthén, 1998–2018) to examine whether groups of adolescent students with high PACPR/high PACNR, low PACPR/low PACNR, high PACPR/low PACNR, and low PACPR/high PACNR could be identified in the present sample. Intraclass correlations of all study variables indicated that only very small amounts of variance (1.6–6.8%) could be attributed to the classroom level. Lee (2000) proposed that an amount of variance less than 10% can be considered negligible. Because most of the intraclass correlations in Study 1 fell below .05, the nested structure of the data was not considered in the analysis. In most applications of LPA, researchers do not attempt to explicitly test theories on underlying groups in their substantive area, but rather allow the data to suggest the number and nature of such groups (exploratory LPA). In Study 1, however, we draw on substantive theoretical ideas regarding the characteristics of latent groups with different PACNR/PACPR profiles. Akin to confirmatory factor analysis, such conceptual ideas can be explicitly tested by expressing them through a set of parameter restrictions (Finch & Bronk, 2011). Using the confirmatory approach permitted a direct examination of the four qualitatively different groups, whereas an exploratory approach may also include profiles that differ only in quantitative terms (e.g., medium PACPR/medium PACNR). Three types of parameter constraints can be used in CLPA modeling: (1) equality restrictions, (2) deterministic restrictions, and (3) inequality restrictions. Here, to explore how many hypothesized subgroups could be identified in the present sample, we used a set of equality and inequality constraints that expressed the presumed ordering of the PACPR and PACNR means in the respective latent classes.

Overall, we specified and compared the fit of four different CLPA solutions, which represent two, three, and four latent classes, respectively. In the two-class model, we used constraints to specify the subgroups with high PACPR/high PACNR and low PACPR/low PACNR. We tested two three-class models and added constraints to build a third latent class with a high PACPR/low PACNR profile and vice versa. In the four-class model, further constraints allowed us to specify subgroups with all four possible combinations of PACPR and PACNR (see Supplementary Material for the M*plus* syntax for all CLPA models).

The classification of latent classes was based on the observable response patterns of individuals across the two conditional regard scales (Marsh, Lüdtke, Trautwein, & Morin, 2009; Nylund, Asparouhov, & Muthén, 2007). The affiliation of each person to the respective latent class and the sizes of the respective classes were calculated as model parameters. In the model specification, the default settings recommended in M*plus* were used so that (1) the

mean values and variances of the class indicators were freely estimated, (2) the variances of the class indicators between the classes were kept constant, and (3) the covariances between the indicators within the classes were fixed at 0. The different CLPA solutions were compared in terms of relative statistical fit (Nylund et al., 2007) and the interpretability of the profile structure (Marsh et al., 2009). Based on recommendations by Nylund et al. (2007), we preferred solutions with the lowest Bayesian information criterion (BIC) and sample-size adjusted Bayesian information criterion (SABIC) values, and highest log-likelihood values (LL). Nylund et al. (2007) also recommend the bootstrapped likelihood ratio test (BLRT). However, BLRT requires one latent class without parameter restrictions (Asparouhov & Muthén, 2012), which is why we could not use this indicator in Study 1. With respect to our specific research question regarding the prevalence of various PACPR/PACNR combinations, we also focused on the size of the latent classes. Next, classification accuracy was checked. An entropy near 1 indicates a statistically reliable solution (Marsh et al., 2009). Finally, we checked the averaged probabilities throughout the participants for the most likely class membership in each latent class. High probabilities that participants belonging to a given class are correctly categorized indicate a high reliability of classification.

In the next step, the identified profiles were related to different correlates. There are different ways on how the effects of latent classes on such "distal outcomes" can be estimated validly. The class-specific mean values of a distal outcome variable can be determined using either a one-step or three-step approach. With the one-step approach, the distal outcome is incorporated into the LPA model as an additional indicator and then estimated as usual. However, the main disadvantage of this approach is that fairly strong assumptions must be made regarding the distribution of the distal outcome within the latent classes. Violating these assumptions can distort the original LPA model completely. Because of these and similar problems, researchers often prefer the three-step approach, where they first build the LPA model without the distal outcomes, determine the class membership probabilities, and then examine relations between class membership and distal outcomes. A known drawback of this approach is that the parameter estimates obtained in the third step may be incorrect because of the measurement error when assigning individuals to the latent classes in step 1. Several solutions have been proposed to reduce this potential bias, including an optimized version of the so-called "class bias." The BCH method (Bakk & Vermunt, 2016; named after Bolck, Croon, & Hagenaars, 2004), in which an ANOVA weighted by the inverse classification error probabilities is calculated, has proven to be the most valid estimation method to date (Bakk & Vermunt, 2016; Dziak, Bray, Zhang, Zhang, & Lanza, 2016). In Study 1, we therefore relied on the BCH method so that the respective correlates were included in the CLPA models as "auxiliary variables" (Marsh et al., 2009; see Supplementary Material for the M*plus* syntax).

We conducted the latent profile analysis and BCH method using the total sample to ensure that the allocation of individuals to the different profiles was based on all available information. However, this approach does not allow us to estimate on how many participants the estimations for distal outcomes in each profile rely. Therefore, we replicated the latent profile solution for each subsample, giving us the opportunity, first, to conduct an internal replication of our profile solution and, second, to estimate the number of participants in each profile that reported on the respective outcomes.

RESULTS OF STUDY 1

Number of Latent Profiles

Table 1 displays the fit indices and latent class frequencies for the different CLPA solutions, and Table 2 shows the class-specific means and standard errors (see Supplementary Table S2 for descriptive statistics of all study variables). Adding the high PACPR/low PACNR group as a third class increased the log-likelihood value and decreased BIC and SABIC values. Adding the low PACPR/high PACNR group, however, increased BIC and SABIC. The fit improved slightly for the four-class solution compared to the three-class solution including a high PACPR/low PACNR. However, the subgroup of adolescent students that was assigned to the fourth latent class representing the low PACPR/high PACNR profile was very small (1.4%). On advice of the reviewers, we conducted an additional series of exploratory latent profile analyses (see Supplementary Table S3). The results supported low PACPR/low PACNR, high PACPR/high PACNR, and high PACPR/low PACNR groups. Several profiles emerged that differed in quantitative (but not qualitative ways) along the continuum between low PACPR/low PACNR and high PACPR/high PACNR. However, no low PACPR/high PACNR group

Table 1. Confirmatory latent profile analysis fit indices and latent class frequencies.

	N_{Sample}	$N_{Classes}$	Latent class frequencies (%)	LL	BIC	SABIC	Entropy
Study 1	3891	2	14, 86	−8681.4	17428.9	17403.5	.95
		3 (PACNR)	14, 86, 0	−8680.7	17444.0	17412.2	.95
		3 (PACPR)	**15, 58, 27**	**−8406.7**	**16896.1**	**16864.3**	**.84**
		4	13, 58, 27, 1	−8325.6	16750.4	16712.2	.88
Study 2	556	2	25, 75	−1122.5	2295.6	2270.2	.92
		3 (PACNR)	25, 75, 0	−1122.5	2308.2	2276.5	.95
		3 (PACPR)	**24, 44, 31**	**−1056.2**	**2175.5**	**2143.8**	**.86**
		4	24, 45, 30, 1	−1049.2	2174.2	2136.1	.89
Study 3	760	2	26, 74	−1781.8	3616.6	3591.2	.92
		3 (PACNR)	25, 74, 1	−1778.9	3624.2	3592.4	.93
		3 (PACPR)	**25, 61, 14**	**−1699.4**	**3465.1**	**3433.3**	**.90**
		4	24, 61, 14, 1	−1677.9	3435.5	3397.4	.93

Bold values represent the final model chosen. PACPR = parental academic conditional positive regard; PACNR = parental academic conditional negative regard. Two 3 class solutions are modeled including PACNR (low PACPR/high PACNR) or PACPR (high PACPR/low PACNR) next to high PACPR/high PACNR and low PACPR/low PACNR. LL = log-likelihood; BIC = Bayesian information criterion; SABIC = sample-size adjusted BIC.

Table 2. Estimated means and standard errors of PACPR, PACNR, and outcome variables (Study 1).

	highPACR *M (SE)*	lowPACR *M (SE)*	onlyPACPR *M (SE)*	χ^2	p
Conditional Positive Regard	3.22 (.02)	1.43 (.02)	3.22 (.02)		
Conditional Negative Regard	2.95 (.04)	1.21 (.01)	1.21 (.01)		
Need for Autonomy	-0.89^{b} (.14)	0.14^{a} (.05)	0.09^{a} (.07)	46.66	<.001
Need for Relatedness	-0.99^{b} (.17)	0.12^{a} (.05)	0.18^{a} (.06)	43.24	<.001
Need for Competence	-0.88^{c} (.13)	0.04^{b} (.05)	0.28^{a} (.07)	62.22	<.001
Self-esteem Level	-0.43^{b} (.07)	0.08^{a} (.04)	0.09^{a} (.06)	43.88	<.001
Self-esteem Contingency	0.58^{a} (.06)	-0.25^{c} (.04)	0.16^{b} (.05)	145.04	<.001
Ability Self-concept	-0.50^{b} (.11)	0.06^{a} (.05)	0.08^{a} (.07)	24.73	<.001
Mastery Goals	-0.36^{b} (.11)	-0.01^{a} (.04)	0.14^{a} (.06)	15.72	<.001
Performance-approach Goals	0.12^{a} (.10)	-0.18^{b} (.04)	0.28^{a} (.05)	40.99	<.001
Performance-avoidance Goals	0.56^{a} (.10)	-0.25^{c} (.04)	0.25^{b} (.06)	92.41	<.001
Test Anxiety	0.45^{a} (.07)	-0.12^{b} (.04)	-0.05^{b} (.06)	57.88	<.001
Depressive Symptoms	0.73^{a} (.08)	-0.09^{b} (.03)	-0.14^{b} (.05)	95.26	<.001

PACPR = parental academic conditional positive regard; PACNR = parental academic conditional negative regard. highPACR = high PACPR/high PACNR; lowPACR = low PACPR/low PACNR; onlyPACPR = high PACPR/low PACNR. The outcome variables were *z*-standardized. The means within a row with the same superscripts are not significantly different at $p < .05$.

emerged, with this finding further informing the decision to reject the four-class solution. Therefore, we chose the three-class solution including a subgroup of students high in PACPR and low in PACNR as the final solution. The classification probabilities that participants were categorized correctly were higher than .85, which indicated good reliability of the classification. Moreover, these results were replicated in all subsamples (see Supplementary Table S4).

The largest group of adolescent students (58.1%) was assigned to the low PACPR/low PACNR profile (lowPACR), followed by the high PACPR/low PACNR profile (onlyPACPR), in which 27.3% of the adolescents were classified. In total, 14.5% of the adolescents showed a high PACPR/high PACNR profile (highPACR, see Table 1). Latent class frequencies for the three classes were comparable throughout the subsamples (see Supplementary Table S4). An inspection of the class-specific means of PACPR and PACNR revealed that the parameter constraints implemented in the CLPA models successfully shaped the theoretically expected profiles (see Table 2). The four-class solution yielded a slightly better fit. Therefore, we provide results for this solution in the supplementary for interested readers (see Supplementary Table S5).

Latent Profile Outcomes

Using the BCH approach, we examined whether adolescent students in the three latent profiles differed in the outcome variables. The results revealed a rather clear and differentiated pattern for the three latent classes (see Table 2). Adolescent students with a lowPACR profile showed the most adaptive configuration of outcomes, that is the relatively highest values in

basic need satisfaction, self-esteem level, ability self-concept, and mastery goals as well as the lowest values in self-esteem contingency, performance-approach goals, performance-avoidance goals, test anxiety, and depressive symptoms. Adolescent students in the onlyPACPR profile differed from the lowPACR group in reporting a higher satisfaction of the need for competence, higher self-esteem contingency, and higher scores on performance-approach and performance-avoidance goals. The subgroup of students in the highPACR profile (high PACPR/high PACNR) revealed a remarkably maladaptive outcome pattern compared to the lowPACR and onlyPACPR groups. Specifically, these adolescent students scored relatively lowest on basic need satisfaction, self-esteem level and ability self-concept, highest on self-esteem contingency and depressive symptoms, and lowest on mastery goals but highest on performance-approach and performance-avoidance goals.

DISCUSSION OF STUDY 1

As expected, the majority (58.1%) of adolescent students reported having received only low levels of both conditionally regarding strategies. This result is in line with the findings of variable-oriented studies that show low mean scores on conditional regard scales (Assor & Tal, 2012; Roth et al., 2009). An additional 14.5% of adolescent students reported high levels of both strategies, which indicated that the majority of parents were perceived as either using or not using conditional regard as a socialization strategy. Still, more than a quarter of the adolescents (27.3%) perceived their parents as using the seemingly benevolent strategy of PACPR without threatening with love withdrawal, which supported the idea that PACPR and PACNR should be treated as specific and distinct controlling strategies. The rather high prevalence of this profile emphasizes the importance of investigating the functionality of this parenting profile.

The results reveal a rather clear and expected pattern for adolescent students who perceive high levels of both dimensions of conditional regard. First, when children perceive overall high (in contrast to low) levels of conditional regard, they also experience less basic need satisfaction in the respective parent–child relationship, which supports the idea that conditional regard relates to an impaired parent–child relationship (Cohen et al., 2020; Kanat-Maymon et al., 2016). In line with the literature, children in this group also showed lower self-esteem levels and higher self-esteem contingency, leaving them vulnerable to situations when achievement cannot be guaranteed or drops (Wouters et al., 2018). Our results provide the first direct evidence that children who perceive overall high levels of conditional regard prefer performance goals and are less mastery oriented. At the same time, the children believed that their competence was rather low. These results suggest that performance is more salient in the learning process for children who perceive conditional regard, while children

are more insecure whether success can be achieved. Based on previous studies, it can be expected that this constellation of factors will be associated with deficits in learning quality, subsequent performance (Spinath & Stiensmeier-Pelster, 2003), and test anxiety (Pekrun, 2006). In line with this deduction, children who perceive overall high levels of conditional regard report more anxiety about failing in school. Moreover, associations with the child's affective functioning are not only limited to the school context but are also manifested in elevated scores of general depressive symptoms.

Meaningful differences emerged between the onlyPACPR and lowPACR group. In line with our hypotheses, our results suggest that adolescent students in the onlyPACPR group are highly motivated to engage in school tasks by showing a higher performance-approach and equal mastery orientation compared to the lowPACR group. This constellation of outcomes is likely to make children appear more active and engaged (Van der Kaap-Deeder et al., 2016). If parents experience this kind of activation in their children when using PACPR, this could explain the popularity of this socialization strategy among parents and parenting books. However, we argue that the possible benefits are short-lived. Students in this profile also display elevated levels of contingent self-esteem, which indicates that their motivation and engagement are driven by a fragile sense of self-worth. Based on the literature on contingent self-esteem, we assume that adolescent students in the onlyPACPR group are likely to switch from mastery orientation to performance-approach orientation as soon as an evaluation is anticipated (Van der Kaap-Deeder et al., 2016). This may indeed lead to higher performance outcomes if success is assured (Spinath & Stiensmeier-Pelster, 2003). Because of their rather high ability self-concept, these students are also likely to expect success when first failures occur and then increase engagement. However, when failure recurs and success in validating competence does not seem to be attainable, they may switch to a performance-avoidance orientation and to self-protecting strategies, which may explain their elevated scores in performance-avoidance goals. This idea is supported by a prospective study that demonstrated the role of parental academic conditional regard in children's helpless coping with failure in a difficult performance task (Assor et al., 2020). Thus, in situations with difficult performance tasks, learning quality will be hampered because these children mainly aim to gain regard and secure their self-esteem.

STUDY 2: UNIVERSITY FRESHMEN

Study 2 aimed to replicate the profile solution found in Study 1 in a sample of university freshmen. Adolescents live with their parents, but university students in Germany generally move out to study so parenting is more distal to them. However, the results of Study 1 showed that parenting during schooling is related to affective and cognitive self-evaluations, as well as goal orientation,

variables that have been found to be relatively stable (Anusic & Schimmack, 2016; Arens & Watermann, 2015; Burwell & Shirk, 2006; Helmke & van Aken, 1995; Kuster, Orth, & Meier, 2012; Pulkka & Niemivirta, 2013). Thus, we assumed that conditional regard would still be associated with important outcomes in university students.

METHOD OF STUDY 2

Participants and Procedure

Participants were 556 university students (74.3% women; M_{age} = 22.14 years, SD_{age} = 4.44), who studied teaching. Participants were recruited via e-mail (n = 180), seminars (n = 135), or lectures (n = 241) on the introduction to psychology for teaching students. Only students from the lecture sample reported the outcome variables.

Measures

For each measure (except for contingent self-esteem), we used the same items as in Study 1 but adjusted to the university context.

Parental Academic Conditional Regard

University students reported retrospectively on their mothers' conditional regard during their own schooling (PACPR: "When I got a good grade at school, I noticed that my mother was much warmer toward me than she usually was."; PACNR: "When I got a bad grade at school, I noticed that my mother showed less affection for me than usual."). Cronbach's alphas in the present sample were .93 for PACNR and .92 for PACPR.

Self-Esteem

The items assessed students' contingency on their competence (e.g., "I feel inferior when others notice that I am not good at something."; 8 items), performance (e.g., "How valuable I feel is strongly influenced by how others judge my performance."; 2 items), and working attitude (e.g., "My self-esteem is very much dependent on how disciplined I work on a thing."; 6 items). A 5-point Likert scale was used ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alphas in the present sample were .84 and .88 for self-esteem level and self-esteem contingency, respectively.

Academic Ability Self-Concept

Cronbach's alpha in the present sample was .85.

Goal Orientation

Cronbach's alphas in the present sample were .84 for mastery orientation, .81 for performance-approach orientation, and .91 for performance-avoidance orientation.

RESULTS OF STUDY 2

Number of Latent Profiles

The statistical plan of analysis was identical to that of Study 1. The fit indices and latent class frequencies for the different CLPA solutions are displayed in Table 1, and the class-specific means and standard errors are displayed in Table 3 (see Supplementary Table S6 for descriptive statistics of all study variables). Adding the high PACPR/low PACNR group increased the log-likelihood value, BIC, and SABIC values decreased. BIC and SABIC increased when the onlyPACNR group was added as the third group. Compared to the three-class model, including high PACPR/low PACNR, decreases in BIC and SABIC values were only small when the fourth group was added. Additionally, the class frequency in the fourth class was very small (0.7%). In accordance with Study 1, these results supported the three-class solution with the onlyPACPR group as the third group. The classification probabilities that participants were categorized correctly were higher than .91, which indicated excellent reliability of the classification.

The largest group of university students (44.4%) was allocated to the low PACPR/low PACNR profile (lowPACR, see Table 1). In total, 31.3% of the university students were classified into the high PACPR/low PACNR profile (onlyPACPR), followed by the high PACPR/high PACNR profile (highPACR), in which 24.3% of the university students were classified. An inspection of the class-specific means of PACPR and PACNR revealed that the parameter constraints implemented in the CLPA models successfully shaped the theoretically expected profiles (see Table 3).

Table 3. Estimated means and standard errors of PACPR, PACNR, and outcome variables (Study 2).

	highPACR *M (SE)*	lowPACR *M (SE)*	onlyPACPR *M (SE)*	χ^2	*p*
Conditional Positive Regard	3.03 (.04)	1.41 (.04)	3.03 (.04)		
Conditional Negative Regard	2.61 (.07)	1.13 (.02)	1.13 (.02)		
Self-esteem Level	−0.17 (.14)	0.09 (.10)	−0.05 (.12)	2.37	.306
Self-esteem Contingency	0.39^{a} (.14)	-0.14^{b} (.09)	$0.00^{a,b}$ (.14)	9.65	.008
Ability Self-concept	−0.10 (.12)	0.02 (.10)	0.02 (.15)	0.65	.722
Mastery Goals	−0.00 (.14)	−0.07 (.10)	0.12 (.12)	1.30	.521
Performance-approach Goals	0.25 (.16)	−0.15 (.10)	0.11 (.12)	5.36	.069
Performance-avoidance Goals	0.51^{a} (.16)	-0.10^{b} (.09)	-0.15^{b} (.13)	12.66	.002

PACPR = parental academic conditional positive regard; PACNR = parental academic conditional negative regard. highPACR = high PACPR/high PACNR; lowPACR = low PACPR/low PACNR; onlyPACPR = high PACPR/low PACNR. The outcome variables were *z*-standardized. The means within a row with the same superscripts are not significantly different at $p < .05$.

Latent Profile Outcomes

As in Study 1, we used the BCH approach to examine the differences between profiles in several outcome variables. The results show that the lowPACR group displayed a more favorable pattern of outcomes than the highPACR group by reporting lower contingent self-esteem and lower performance-approach and performance-avoidance goal orientation. The onlyPACPR group was in between the highPACR and lowPACR groups concerning contingent self-esteem but did not differ significantly from the other groups. The onlyPACPR group differed from the highPACR group only by showing less performance-avoidance goal orientation. The results revealed no significant differences between the groups for self-esteem level, ability self-concept, and mastery goals.

DISCUSSION OF STUDY 2

The results obtained from the sample of university students replicated the results from the adolescent sample in Study 1 on the number and nature of profiles. However, relatively more university students were allocated to the highPACR profile and fewer to the lowPACR profile. A possible explanation for the difference between the two samples may be the difference in sample representativeness in terms of educational level because university students are highly selective. Parental performance expectations influence educational choices in secondary schools (Neuenschwander, Fräulin, Jüttler, & Schumann, 2019). Conditional regard may signal parents' expectations of achievement and the value of academic education, which leads children to prefer university education over nonacademic education. This hypothesis should be tested using longitudinal studies that follow up on adolescents at the transition from school to university.

In line with the literature and with findings of Study 1, overall high levels of conditional regard in high school years related to higher contingent self-esteem and to a performance-avoidance goal orientation. This finding suggests that experiences of conditional regard during high school years are related to problematic developmental outcomes even after the transition to university. Almost one in three students reported experiencing only the seemingly benevolent parenting practice of PACPR. Our findings contradict the idea that PACPR is beneficial in promoting students' learning and instead support the role of self-esteem contingency as a central developmental outcome associated with PACPR.

In contrast to Study 1, the groups did not differ with respect to self-esteem level, ability self-concept, mastery goal orientation, and performance-approach goal orientation. These findings suggest that parenting is already more distal for college students than for school-age children who still live with

their parents. However, the sample size was also smaller than that of the adolescent sample, resulting in larger standard errors, which made it less probable to identify small effects.

It should be noted that the measure of conditional regard was retrospective and that this measure can be biased by university students' current self-esteem and motivation. For instance, university students with more fragile self-worth may have more negative memories of their parents, even when their parents did not actually engage in more dysfunctional practices in adolescence.

STUDY 3: PARENTS OF ADOLESCENT STUDENTS

Study 3 aimed to investigate profiles in parents of schoolchildren. This sample differs from adolescents and university freshmen in two important aspects. First, using adults' recollections of conditional regard in their high school years, there was a larger time gap between the report and the actual parenting behavior than that in Study 2. Second, the parents were no longer in the position of being a learner. Instead, when it comes to academics, their focus may have shifted to their child's school performance. Thus, this sample allows us to investigate associations from recollections of conditional regard and individuals' functioning throughout their lifetime and up to parenthood. Therefore, we addressed parent-focused variables (self-esteem level and depressive symptoms) and outcomes specific to current parent–child relationships (child-invested contingent self-esteem and parenting sense of competence).

Because self-esteem appears to play a key role in how conditional regard may exert lasting effects, adults' current self-esteem may still be associated with conditional regard. To provide first hints for this hypothesis, mothers' recollections of grandmaternal use of conditional regard were found to be associated with lowered self-esteem levels (Assor et al., 2004). However, PACNR and PACPR were not differentiated in that study. Parallel to findings on conditional regard and self-esteem (Curran, 2018; Israeli-Halevi et al., 2015; Ryan & Deci, 2017; Wouters et al., 2018), we expected that, while PACNR should be related to lowered self-esteem levels, both forms of conditional regard should relate to contingent self-esteem, even in adulthood. As the child's achievements may have moved to the foreground, we assumed that this contingency may manifest in parents hinging their self-esteem on their child's achievements (child-invested contingent self-esteem; Ng et al., 2014). Next, parents develop a self-concept about their ability to manage parenting tasks (Coleman & Karraker, 1997; Egberts, Prinzie, Deković, de Haan, & van Den Akker, 2015). According to our line of argumentation for ability self-concept, we assumed that PACNR is likely to make parents' own failures more salient, while PACPR should increase the salience of successes. On the assumption of the skill-development approach (e.g., Helmke & van Aken, 1995), this

attentional focus is likely to influence the evaluation of one's abilities also in terms of parenting competences. However, as with ability self-concept, we assume that both conditional regard strategies lead to implicit insecurity about competences. Parents may be worried that their children may not meet expectations, resulting in concerns and fluctuations in their evaluation of their own competence as a parent. Finally, we expected to replicate the findings from Study 1 on depressive symptoms. This finding would underscore the association between parenting and affective functioning throughout life.

METHOD OF STUDY 3

Participants and Procedure

The adult sample consisted of parents from children who were included in Study 1. Seven (31.8%) schools from three different federal states participated in the parent survey. Schools were chosen for convenience and by considering all the different school tracks. Children from these schools received envelopes with questionnaires for their parents. Parents were invited to complete the survey at home and to return the sealed envelopes to the school via their children. A total of 760 parents participated, and the response rate was 65.7%.

Participants' ages ranged between 28 and 60 years, with a mean age of 45.0 years (SD = 5.06), and 88.7% were women. This high participation of mothers corresponds to the finding of Study 1, where 92.3% of the adolescents indicated their mother as the main caregiver. For education, 0.8% had no school leaving qualification, 5.2% attended the lowest track of school, 24.0% attended the middle track, and 57.4% attended the highest track. A comparison with data from the Federal Statistical Office of Germany, which indicated that from individuals aged between 25 and 60, 40.2% graduated from the highest track and 21.7% from the lowest (Statistisches Bundesamt [Destatis], 2020), revealed that mothers who graduated from the highest track were overrepresented, and mothers who graduated from the lowest track were underrepresented in the present sample.

Measures

The parent dataset consisted of two subsamples that provided reports on self-esteem facets and depressive symptoms, or parenting sense of competence.

Parental Academic Conditional Regard

We used the same scales as in Study 2 to measure participants' retrospective perception of parental conditional regard. Cronbach's alphas in the present sample were .96 for PACNR and .97 for PACPR.

Self-Esteem

The self-esteem level was measured using the same items as in Studies 1 and 2. The Cronbach's alpha was .84 in the current sample. Parents' child-invested contingent self-esteem was measured using the German translation (Otterpohl et al., 2020) of the scale *Child-based Worth* developed by Eaton and Pomerantz (2004; quoted from Ng et al., 2014). The scale consists of 15 items using a 7-point scale ranging from 1 (*very much disagree*) to 7 (*very much agree*). The items asked for the extent to which parents hinge their self-esteem on their child's success (e.g., "When my child succeeds, I feel good about myself."; 4 items), failure (e.g., "My child's failures can make me feel ashamed."; 6 items), and achievement in general (e.g., "How I feel about myself does not depend on what my child does."; 5 items). Cronbach's alpha in the present sample was .88 (n = 240).

Parenting Sense of Competence

A German translation of the *Parenting Sense of Competence Scale* was used to measure parents' ability self-concept on their parenting (Johnston & Mash, 1989). We used the efficacy subscale that contains seven judgments on parenting abilities and effectiveness (e.g., "I honestly believe I have all the skills necessary to be a good mother/father to my child.") using a 6-point scale, ranging from 1 (*very much disagree*) to 6 (*very much agree*). Cronbach's alpha in the present sample was .71 (n = 517).

Depressive Symptoms

We measured parents' depressive symptoms during the last two weeks using the German version of the revised edition of the *Beck Depression Inventory* (Hautzinger, Bailer, Worall, & Keller, 2009). Parents rated each of the 21 depressive symptoms (e.g., depressed mood, lack of interest) by choosing the most appropriate of 4 statements describing different severity (0 = *not present* to 3 = *severe*) of the respective symptoms. Cronbach's alpha in the present sample was .91 (n = 240).

RESULTS OF STUDY 3

Number of Latent Profiles

We conducted the same set of CLPA as in Studies 1 and 2. The fit indices and latent class frequencies for the different CLPA solutions are shown in Table 1, and the class-specific means and standard errors are shown in Table 4 (see Supplementary Table S7 for descriptive statistics of all study variables). In accordance with the results of Studies 1 and 2, our analyses supported the three-class solution with high PACPR/low PACNR as the third group. Including low PACPR/high PACNR as the third group diminished the fit.

Again, the four-class solution only showed a slightly better fit compared to the three-class solution including high PACPR/low PACNR and class frequency in the low PACPR/high PACNR class was very small (1.2%).

A very large group of parents (61.4%) was allocated to the low PACPR/low PACNR profile (lowPACR; see Table 1). In contrast to Studies 1 and 2, the second largest group was the high PACPR/high PACNR profile (highPACR), in which 24.5% of the parents were classified. Fewer parents (14.1%) were allocated to the high PACPR/low PACNR profile (onlyPACPR). The classification probabilities were higher than .86, which indicated good classification reliability. An inspection of the class-specific means of PACPR and PACNR revealed that the parameter constraints implemented in the CLPA models successfully shaped the theoretically expected profiles (see Table 4).

Latent Profile Outcomes

The highPACR group scored less favorably than the lowPACR group on all outcomes by showing lower self-esteem level, higher self-esteem contingency, lower parenting sense of competence, and higher depressive symptoms. The onlyPACPR group did not differ from the highPACR group on self-esteem level and contingency, thereby scoring less favorably than the lowPACR group. The onlyPACPR group did not differ from the lowPACR group on parenting sense of competence and depressive symptoms.

DISCUSSION OF STUDY 3

As in Studies 1 and 2, the fit indices supported the three-profile solution. More parents (85.9%) than adolescent students (72.6%) or university students (68.7%) perceived either high or low levels of both strategies. It is possible that this result depicts a shift in reports away from specific parenting behaviors to a more general feeling of having been unconditionally or conditionally loved. However, a profile with a unique role for PACPR still emerged.

Table 4. Estimated means and standard errors of PACPR, PACNR, and outcome variables (Study 3).

	highPACR *M (SE)*	lowPACR *M (SE)*	onlyPACPR *M (SE)*	χ^2	*p*
Conditional Positive Regard	3.14 (.04)	1.31 (.02)	3.14 (.04)		
Conditional Negative Regard	3.16 (.06)	1.29 (.02)	1.29 (.02)		
Self-esteem Level	-0.48^{b} (.17)	0.25^{a} (.07)	-0.28^{b} (.18)	20.75	<.001
Child-invested Contingent Self-esteem	0.28^{a} (.13)	-0.27^{b} (.08)	0.62^{a} (.17)	29.32	<.001
Parenting Sense of Competence	-0.24^{b} (.08)	0.09^{a} (.06)	0.21^{a} (.12)	12.85	.002
Depressive Symptoms	0.52^{a} (.20)	-0.16^{b} (.07)	-0.01^{b} (.16)	10.73	.005

PACPR = parental academic conditional positive regard; PACNR = parental academic conditional negative regard. highPACR = high PACPR/high PACNR; lowPACR = low PACPR/low PACNR; onlyPACPR = high PACPR/low PACNR. The outcome variables were *z*-standardized. The means within a row with the same superscripts are not significantly different at $p < .05$.

Parents reporting high levels of both dimensions of conditional regard (highPACR) in contrast to low levels (lowPACR) show clear and expected maladaptive functioning on all outcomes investigated. These findings are in line with the literature and results of Study 1. Conditional regard may be a precursor of lifelong vulnerability. This reasoning is congruent with early hypotheses by Rogers, who assumed that children who experienced conditional regard during childhood never got to know the feeling of acceptance and will feel "dumb, insufficient, and inferior throughout their life" (Rogers, 1983, p. 220).

Overall, and in line with Studies 1 and 2, adjustment of parents high in PACPR fell in between the two other groups. However, we found a strong association between onlyPACPR and an unfavorable adjustment in the domain of self-esteem, which matches the literature (Assor et al., 2004). This finding implies that individuals who perceive only high PACPR during adolescence display a fragile and unstable sense of self-worth even later in life, potentially putting them at risk for long-term vulnerability (Kernis, 2003; Ryan & Brown, 2003; Ryan & Deci, 2017).

GENERAL DISCUSSION

This study investigated within-person combinations of perceived parental academic conditional positive and negative regard and their functionality in three different populations: adolescent students, university students, and parents of school-age children. Confirmatory latent profile analysis supported three of the four theoretically possible profiles of conditional positive regard and conditional negative regard in all samples: high on both (highPACR), low on both (lowPACR), and high on PACPR but low on PACNR (onlyPACPR). Overall, educational and psychological adjustment was the poorest in the highPACR group and highest in the lowPACR group. Adjustment of the onlyPACPR group fell in between and differed with regard to self-esteem contingency from the lowPACR group.

Prevalence of the profiles was comparable across studies. The lowPACR profile was the most common. The prevalences of the onlyPACPR and highPACR groups followed in size with slight differences between studies. The sample size of a fourth class (low PACPR/high PACNR) was too small to be considered as a valid group in our samples. Nevertheless, from a theoretical point of view, it is still possible that this group may be identified with a higher prevalence in other samples. For example, other cultural groups may show a higher prevalence of this profile characterized by elevated conditional negative regard only; for example, Chinese (vs. European American) children report that their parents react in a failure-oriented way to performance (Ng, Pomerantz, & Lam, 2007) and react harshly when they fail, but they do not react positively when they succeed (Qin, Way, & Et Mukherjee, 2008). In

addition, because conditional negative regard is linked to negative developmental outcomes such as low self-esteem and depression (Otterpohl et al., 2017; Wouters et al., 2018), it is likely more prevalent in families who receive parental counseling or mental health treatment.

Functionality of Parental Conditional Regard Profiles

The results of all three studies are in line with the assumption that the experience of PACNR is accompanied by clear dysfunctional correlates. As proposed in self-determination and attachment theory, love withdrawal is detrimental to development because it constitutes a direct threat to basic psychological needs and attachment (Bowlby, 1969; Deci & Ryan, 2000). In this respect, all three studies support that individuals reporting high PACNR show unfavorable developmental outcomes and replicate findings from variable-oriented studies for various outcomes (e.g., Assor & Tal, 2012; Roth et al., 2009; Wouters et al., 2018).

The results for individuals who only experience high PACPR are of particular interest because the functionality of this practice is judged differently by behaviorist theories and SDT (Gewirtz & Peláez-Nogueras, 1991; Ryan & Deci, 2017). In general, individuals who experience only PACPR report a less maladaptive pattern of outcomes than individuals who additionally perceive PACNR. Nevertheless, individuals in the onlyPACPR group fare worse than individuals experiencing generally low levels of conditional regard. Adolescents in the onlyPACPR profile can be described as highly involved and motivated (high mastery orientation, high performance-approach, and high performance-avoidance orientation). At the same time, they do not report general negative consequences for psychological health (no lowered ability self-concept and no heightened test anxiety or depressive symptoms); however, they display a brittle sense of worth. This insecure type of self-esteem was also observed in university students, where the onlyPACPR group scored in between the highPACR and lowPACR groups in contingent self-esteem. The onlyPACPR parent group showed equally high levels of contingent self-esteem as the highPACR group. Even in the absence of conditional negative regard, conditional positive regard shows, if any, associations with detrimental outcomes. This finding is noteworthy considering that more than one in four adolescents and university students and 14.1% of the parents belong to the onlyPACPR group.

Although this fragile and conditional type of self-esteem may have some positive short-term effects on engagement, contingent self-esteem may increase the risk of maladjustment over time, particularly in interaction with negative life events. Indeed, people who experience only PACPR and display contingent self-esteem may adjust well as long as they perform well and receive positive feedback because basic needs can at least be superficially

satisfied. However, they may become vulnerable to ill-being and poor adjustment when facing setbacks (e.g., poor grades) or negative feedback. We assume that in these situations, individuals will not be flexible in their striving to obtain approval but are "overcommitted" to their goal of academic achievement and, therefore, have problems deactivating their goal intentions (Hallsten, Josephson, & Torgén, 2005; Kudielka, Känel, Gander, & Fischer, 2004). Therefore, their striving may become excessive, potentially resulting in overinvestment and difficulties relaxing and calming down, while the expected approval remains missing (Hallsten et al., 2005). Individuals may also prefer behavior in the relatedness-relevant domain to behavior in domains of personal interest, thereby hindering the individual's growth tendencies that are inherent in intrinsic activity (Ryan & Deci, 2017). We propose that individuals who only experience PACPR may be prone to workaholism (working compulsively and excessively), and burnout symptoms, such as emotional exhaustion, are more likely to occur because of the effort–reward imbalance (Siegrist et al., 2004; Van Wijhe, Peeters, & Schaufeli, 2014). Future studies should examine the interplay between PACPR, contingent self-esteem, and negative life events or hassles in predicting adjustment and achievement in the academic context and across the life span.

In addition to the possibility that PACPR increases the risk of maladjustment when facing setbacks, one may wonder about the quality of individual engagement when they experience conditional positive regard and have contingent self-esteem. Parallel to findings on contingent self-esteem and in line with results from Study 1, individuals who only experience PACPR are likely to show higher autonomous and controlled motivation at the same time (Van der Kaap-Deeder et al., 2016). Individuals high in contingent self-esteem may enjoy learning until an evaluation is anticipated because evaluation may pose a potential threat. Consequently, they switch to a more controlled form of motivation regulation. In comparison to adolescent students who are mainly mastery-oriented, adolescent students who additionally endorse performance goals report similar vigor, dedication, and absorption, but at the same time report more exhaustion and cynicism during schoolwork (Tuominen-Soini, Salmela-Aro, & Niemivirta, 2012). Thus, the motivational constellation found for individuals who only experience PACPR is likely associated with lower learning quality (Spinath & Stiensmeier-Pelster, 2003), lower affective functioning in learning (Tuominen-Soini et al., 2012; Van der Kaap-Deeder et al., 2016), and constant concerns on performance outcomes (Tuominen-Soini et al., 2012).

Strengths, Limitations, and Future Directions

Overall, this study has several strengths. It includes three large samples from different populations, which allowed us to replicate findings and investigate functionality in a very broad manner. Using a person-oriented approach

enabled us to provide evidence for the real-life value of the distinction between conditional negative and positive regard and their differential associations with individuals' general and educational adjustment. These findings have potential applied value because the identification of conditional regard profiles in school counseling may help to identify the antecedents of academic striving, lower learning quality, or emotional disaffection.

This study has several limitations as well. First, the cross-sectional and single-informant design restrict conclusions and did not allow us to disentangle possible causal mechanisms of action, which is important because the relation between parenting and children's adjustment is inherently reciprocal (Otterpohl & Wild, 2015; Soenens, Luyckx, Vansteenkiste, Duriez, & Goossens, 2008). In addition, the use of self-report measures may have led to an overestimation of associations between conditional regard and outcomes. For example, participants with higher contingent self-esteem may project a conditionally approving attitude toward their parents, even when their parents do not actually engage in conditionally regarding practices. It is also possible that individuals who feel close and loyal toward their parents respond in more socially desirable ways to questions about parenting, particularly in the case of the obviously unfavorable form of conditional negative regard. This social desirability may have led to an overestimation of the onlyPACPR group in size and an underestimation of the prevalence of the highPACR and even the onlyPACNR profiles. In general, longitudinal research is needed to test profile stability and cross-lagged effects. By using multiple informants for parenting measures, future studies could strengthen findings regarding the reliability of profiles and profile functionality.

We deliberately chose to identify profiles only on the basis of PACNR and PACPR, without including other parenting dimensions. This analysis focusing only on the two dimensions of conditional regard is an important first step to determine whether these dimensions are distinct. Having established distinct profiles of conditional regard, future research can now add other parenting dimensions to the analysis of these profiles, such as parental warmth, autonomy support, and structure. Although conditional regard is considered an autonomy-suppressing parental strategy, it is possible that some parents combine the use of conditional regard with episodes of autonomy-support, resulting in a profile combining high conditional regard with autonomy-support. Perhaps this combination occurs more often with PACPR than with PACNR because in PACPR important components of intrusiveness are not evident, which makes it appear less harmful. Parents may combine an autonomy-supportive parenting style with occasional praise that conveys the message of PACPR. Similarly, some parents may combine high levels of conditional regard with parental warmth. Studies taking a variable-oriented approach have shown that this combination can be detrimental to children's development (e.g., Aunola & Nurmi, 2005; Kanat-Maymon & Assor, 2010;

Wouters, Doumen, Germeijs, Colpin, & Verschueren, 2013). Rather than buffering against the maladaptive effects of controlling parenting, high levels of parental warmth have been found to exacerbate effects of parental control, presumably because children get caught in a loyalty conflict with parents who are highly involved and warm yet pressuring. Whereas some parents may combine high levels of conditional regard with high levels of structure (i.e., clear communication of rules) in an attempt to enforce rules through pressuring means, other parents may be high on conditional regard but low on structure. These parents may use conditional regard in a more unpredictable fashion, resulting in a pressuring and at the same time chaotic parenting style with detrimental repercussions for children's adjustment (Rodríguez-Meirinhos et al., 2020).

Our results reveal robust associations between the two dimensions of parental conditional regard and contingent self-esteem. Although they report the same amount of contingent self-esteem, individuals who only perceive high levels of PACPR clearly differ in their affective functioning from individuals who perceive high levels of both strategies. Only experiencing heightened regard in the face of success may specifically foster self-esteem increases following success, whereas PACNR may mainly impact decreases in self-esteem following failure (Li et al., 2019).

IMPLICATIONS FOR THEORY AND PRACTICE

The present studies are the first to apply a person-oriented approach to research on the two dimensions of parental conditional regard. The findings underscore the theoretical distinction between conditional positive and negative regard. In addition to profiles characterized by overall low and overall high levels of conditional regard, quite a few people reported high levels of conditional positive regard only. As such, these two dimensions are not merely two sides of the same coin, and it is important to examine their specific and differential effects on individuals' general and school-specific adjustments. The results also inform practice in so far as the person-oriented approach allows for single case conclusions. People experiencing overall high levels of conditional regard displayed the least favorable motivational and affective outcomes. Compared to people experiencing overall low levels of conditional regard, people experiencing only high levels of conditional positive regard displayed signs of vulnerability in the form of contingent self-esteem. This fragile type of self-esteem may increase individuals' risk of displaying ill-being in the long run, particularly when confronted with setbacks, challenges, and failures. As such, future longitudinal studies should do well to examine the long-term sequelae of the profiles identified herein.

Acknowledgments

We wish to thank Anastasia Byler for native-speaker advice. Portions of these findings were presented as a poster at the 7th International Self-Determination Theory Conference, Amsterdam, Netherlands. Parts of the data have been reported by Otterpohl et al. (2019) and Otterpohl et al. (2020).

ADDRESSES AND AFFILIATIONS

Sarah Teresa Steffgen,

Department of Educational Psychology, Justus Liebig University Giessen, Germany. Email: sarah.t.steffgen@psychol.uni-giessen.de.

Bart Soenens is at Ghent University.

Nantje Otterpohl and Malte Schwinger are at Philipps University of Marburg, and Joachim Stiensmeier-Pelster is at Justus Liebig University Giessen.

ARTICLE INFORMATION

Conflict of interest disclosures

Each author signed a form for disclosure of potential conflicts of interest. No authors reported any financial or other conflicts of interest in relation to the work described.

Ethical principles

The authors affirm having followed professional ethical guidelines in preparing this work. These guidelines include obtaining informed consent from human participants, maintaining ethical treatment and respect for the rights of human or animal participants, and ensuring the privacy of participants and their data, such as ensuring that individual participants cannot be identified in reported results or from publicly available original or archival data.

Funding

This work was supported by Grant 396850149 from the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) to the third and last authors.

Role of the funders/sponsors

None of the funders or sponsors of this research had any role in the design and conduct of the study; collection, management, analysis, and interpretation of data; preparation, review, or approval of the manuscript; or decision to submit the manuscript for publication.

ORCID

Sarah Teresa Steffgen http://orcid.org/0000-0003-4965-8156
Bart Soenens http://orcid.org/0000-0003-1581-3656
Nantje Otterpohl http://orcid.org/0000-0002-9463-5554
Malte Schwinger http://orcid.org/0000-0002-3413-5662

REFERENCES

Anusic, I., & Schimmack, U. (2016). Stability and change of personality traits, self-esteem, and well-being: Introducing the meta-analytic stability and change model of retest correlations. *Journal of Personality and Social Psychology*, *110*(5), 766–781. doi:10.1037/pspp0000066

Arens, A. K., & Watermann, R. (2015). How an early transition to high-ability secondary schools affects students' academic self-concept: Contrast effects, assimilation effects, and differential stability. *Learning and Individual Differences*, *37*, 64–71. doi:10.1016/j.lindif.2014.11.007

Aronfreed, J. (1968). *Conduct and conscience: The socialization of internalized control over behavior*. New York; London: Academic Press.

Asparouhov, T., & Muthén, B. (2012, May 22). Using Mplus TECH11 and TECH14 to test the number of latent classes. *Mplus Web Notes, 14*. Retrieved from http://www.statmodel.com/examples/webnotes/webnote14.pdf

Assor, A., Buhnick-Atzil, O., Rabinovitz-Magen, L., Auerbach, J., Kanat-Maymon, Y., Smiley, P., & Moed, A. (2020). Maternal prenatal conditional regard orientation and postnatal controlling behaviour as predictors of preschoolers' helpless coping with failure: A prospective study. *European Journal of Developmental Psychology*, *17*(6), 828–854. doi:10.1080/17405629.2020.1822162

Assor, A., Kanat-Maymon, Y., & Roth, G. (2014). Parental conditional regard: Psychological costs and antecedents. In N. Weinstein (Ed.), *Human motivation and interpersonal relationships* (pp. 215–237). Springer Netherlands. doi:10.1007/978-94-017-8542-6_10

Assor, A., Roth, G., & Deci, E. L. (2004). The emotional costs of parents' conditional regard: A self-determination theory analysis. *Journal of Personality*, *72*(1), 47–88. doi:10.1111/j.0022-3506.2004.00256.x

Assor, A., & Roth, G. (2005). The harmful effects of parental conditional regard. *Scientific Annals of the Psychological Society of Northern Greece*, *7*, 17–34.

Assor, A., & Tal, K. (2012). When parents' affection depends on child's achievement: Parental conditional positive regard, self-aggrandizement, shame and coping in adolescents. *Journal of Adolescence*, *35*(2), 249–260. doi:10.1016/j.adolescence.2011.10.004

Aunola, K., & Nurmi, J.-E. (2005). The role of parenting styles in children's problem behavior. *Child Development*, *76*(6), 1144–1159. doi:10.1111/j.1467-8624.2005.00840.x-i1

Bakk, Z., & Vermunt, J. K. (2016). Robustness of stepwise latent class modeling with continuous distal outcomes. *Structural Equation Modeling: A Multidisciplinary Journal*, *23*(1), 20–31. doi:10.1080/10705511.2014.955104

Barger, M. M., Kim, E. M., Kuncel, N. R., & Pomerantz, E. M. (2019). The relation between parents' involvement in children's schooling and children's adjustment: A meta-analysis. *Psychological Bulletin*, *145*(9), 855–890. doi:10.1037/bul0000201

Bolck, A., Croon, M., & Hagenaars, J. (2004). Estimating latent structure models with categorical variables: One-step versus three-step estimators. *Political Analysis*, *12*(1), 3–27. doi:10.1093/pan/mph001

Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.

Burwell, R. A., & Shirk, S. R. (2006). Self processes in adolescent depression: The role of self-worth contingencies. *Journal of Research on Adolescence*, *16*(3), 479–490. doi:10.1111/j.1532-7795.2006.00503.x

Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavalee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*, *70*(1), 141–156. doi:10.1037/0022-3514.70.1.141

Cohen, R., Moed, A., Shoshani, A., Roth, G., & Kanat-Maymon, Y. (2020). Teachers' conditional regard and students' need satisfaction and agentic engagement: A multilevel motivation mediation model. *Journal of Youth and Adolescence*, *49*(4), 790–803. doi:10.1007/s10964-019-01114-y

Coleman, P. K., & Karraker, K. H. (1997). Self-efficacy and parenting quality: Findings and future applications. *Developmental Review*, *18*(1), 47–85. doi:10.1006/drev.1997.0448

Coopersmith, J. (1967). *The antecedents of self-esteem*. San Francisco: W. H. Freeman.

Covington, M. V. (1984). The self-worth theory of achievement motivation: Findings and implications. *The Elementary School Journal*, *85*(1), 4–20. doi:10.1086/461388

Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin*, *130*(3), 392–414. doi:10.1037/0033-2909.130.3.392

Curran, T. (2018). Parental conditional regard and the development of perfectionism in adolescent athletes: The mediating role of competence contingent self-worth. *Sport, Exercise, and Performance Psychology*, *7*(3), 284–296. doi:10.1037/spy0000126

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuit: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. doi:10.1207/S15327965PLI1104_01

Dziak, J. J., Bray, B. C., Zhang, J., Zhang, M., & Lanza, S. T. (2016). Comparing the performance of improved classify-analyze approaches for distal outcomes in latent profile analysis. *Methodology: European Journal of Research Methods for the Behavioral & Social Sciences*, *12*(4), 107–116. doi:10.1027/1614-2241/a000114

Eaton, M. M., & Pomerantz, E. M. (2004). *Parental Contingent Self-Worth Scale*. Urbana–Champaign: University of Illinois.

Egberts, M. R., Prinzie, P., Deković, M., de Haan, A. D., & van Den Akker, A. L. (2015). The prospective relationship between child personality and perceived parenting: Mediation by parental sense of competence. *Personality and Individual Differences*, *77*, 193–198. doi:10.1016/j.paid.2014.12.046

Finch, W. H., & Bronk, K. C. (2011). Conducting Confirmatory Latent Class Analysis Using Mplus. *Structural Equation Modeling: A Multidisciplinary Journal*, *18*(1), 132–151. doi:10.1080/10705511.2011.532732

Froiland, J. M. (2011). Parental autonomy support and student learning goals: A preliminary examination of an intrinsic motivation intervention. *Child & Youth Care Forum*, *40*(2), 135–149. doi:10.1007/s10566-010-9126-2

Frost, J. (2005). *Supernanny: How to get the best from your children*. New York: Hyperion.

Gewirtz, J. L., & Peláez-Nogueras, M. (1991). Proximal mechanisms underlying the acquesition of moral behavior patterns. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development: Volume 1: Theory* (pp. 153–182). Lawrence Erlbaum Associates.

Grolnick, W. S., & Slowiaczek, M. L. (1994). Parents' involvement in children's schooling: A multidimensional conceptualization and motivational model. *Child Development*, *65*(1), 237–252. doi:10.2307/1131378

Hallsten, L., Josephson, M., & Torgén, M. (2005). *Performance-based self-esteem: A driving force in burnout processes and its assessment. Arbete och hälsa: Vol. 4*. Arbetslivsinstitutet.

Hautzinger, M., Bailer, M., Worall, H., & Keller, F. (2009). *Beck depressions-inventar, 2. Aufl. (BDI-II)*. Frankfurt a. M: Pearson.

Helmke, A., & van Aken, M. A. G. (1995). The causal ordering of academic achievement and self-concept of ability during elementary school: A longitudinal study. *Journal of Educational Psychology*, *87*(4), 624–637. doi:10.1037/0022-0663.87.4.624

Israeli-Halevi, M., Assor, A., & Roth, G. (2015). Using maternal conditional positive regard to promote anxiety suppression in adolescents: A benign strategy? *Parenting*, *15*(3), 187–206. doi:10.1080/15295192.2015.1053324

Johnston, C., & Mash, E. J. (1989). A measure of parenting satisfaction and efficacy. *Journal of Clinical Child Psychology*, *18*(2), 167–175. doi:10.1207/s15374424jccp1802_8

Kanat-Maymon, M., & Assor, A. (2010). Perceived maternal control and responsiveness to distress as predictors of young adults' empathic responses. *Personality & Social Psychology Bulletin*, *36*(1), 33–46. doi:10.1177/0146167209347381

Kanat-Maymon, Y., Argaman, Y., & Roth, G. (2017). The association between conditional regard and relationship quality: A daily diary study. *Personal Relationships*, *24*(1), 27–35. doi:10.1111/pere.12164

Kanat-Maymon, Y., Roth, G., Assor, A., & Raizer, A. (2016). Controlled by love: The harmful relational consequences of perceived conditional positive regard. *Journal of Personality*, *84*(4), 446–460. doi:10.1111/jopy.12171

Katz, I., Kaplan, A., & Buzukashvily, T. (2011). The role of parents' motivation in students' autonomous motivation for doing homework. *Learning and Individual Differences*, *21*(4), 376–386. https://doi.org/10.1016/j.lindif.2011.04.001

Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry*, *14*(1), 1–26. doi:10.1207/S15327965PLI1401_01

Kovacs, M. (1985). The children's depression inventroy (CDI). *Psychopharmacology Bulletin*, *21*(4), 995–999.

Kudielka, B. M., Känel, R. V., Gander, M.-L., & Fischer, J. E. (2004). Effort-reward imbalance, overcommitment and sleep in a working population. *Work and Stress*, *18*(2), 167–178. doi:10.1080/02678370410001731785

Kuster, F., Orth, U., & Meier, L. L. (2012). Rumination mediates the prospective effect of low self-esteem on depression: A five-wave longitudinal study. *Personality & Social Psychology Bulletin*, *38*(6), 747–759. doi:10.1177/0146167212437250

La Guardia, J. G., Ryan, R. M., Couchman, C. E., & Deci, E. L. (2000). Within-person variation in security of attachment: A self-determination theory perspective on attachment, need fulfillment, and well-being. *Journal of Personality and Social Psychology*, *79*(3), 367–384. doi:10.1037//0022-3514.79.3.367

Lee, V. E. (2000). Using hierarchical linear modeling to study social contexts: The case of school effects. *Educational Psychologist*, *35*(2), 125–141. doi:10.1207/S15326985EP3502_6

Li, R., Yao, M., Liu, H., & Chen, Y. (2019). Chinese parental involvement and adolescent learning motivation and subjective well-being: More is not always better. *Journal of Happiness Studies*, *7*(4), 47. doi:10.1007/s10902-019-00192-w

Marsh, H. W., Lüdtke, O., Trautwein, U. Y., & Morin, A. J. S. (2009). Classical latent profile analysis of academic self-concept dimensions: Synergy of person- and variable-centered approaches to theoretical models of self-concept. *Structural Equation Modeling: A Multidisciplinary Journal*, *16*(2), 191–225. doi:10.1080/10705510902751010

McGraw, P. C. (2004). *Family first: Your step-by-step plan for creating a phenomenal family*. New York: Free Press.

Muthen, L., & Muthén, B. O. (1998–2018). *Mplus user's guide* (8th ed.). Los Angeles, CA: Muthén & Muthén.

Neuenschwander, M. P., Fräulin, J., Jüttler, A., & Schumann, S. (2019). Gymnasium oder Berufsausbildung: Vorhersage der Bildungsentscheidung im Anschluss an die Sekundarstufe I durch Leistungen und Eltern- und Lehrpersonenerwartungen in Deutsch und Mathematik in der Schweizer Primarschule. *Zeitschrift Für Soziologie Der Erziehung Und Sozialisation*, *38* (4), 361–379. doi:10.3262/ZSE1804361

Ng, F. F.-Y., Pomerantz, E. M., & Deng, C. (2014). Why are Chinese mothers more controlling than American mothers? "My child is my report card". Child development, 85(1), 355–369. doi::10.1111/cdev.12102

Ng, F. F.-Y., Pomerantz, E. M., & Lam, S.-F. (2007). European American and Chinese parents' responses to children's success and failure: Implications for children's responses. *Developmental Psychology*, *43*(5), 1239–1255. doi:10.1037/0012-1649.43.5.1239

Niepel, C., Brunner, M., & Preckel, F. (2014). The longitudinal interplay of students' academic self-concepts and achievements within and across domains: Replicating and extending the reciprocal internal/external frame of reference model. *Journal of Educational Psychology*, *106* (4), 1170–1191. doi:10.1037/a0036307

Nylund, K. L., Asparouhov, T. Y., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A monte carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal*, *14*(4), 535–569. doi:10.1080/10705510701575396

Otterpohl, N., Keil, A. G., Assor, A., & Stiensmeier-Pelster, J. (2017). Erfassung von elterlicher bedingter Wertschätzung im Lern- und Leistungsbereich und im Bereich der Emotionsregulation. *Zeitschrift Für Entwicklungspsychologie Und Pädagogische Psychologie*, *49*(2), 98–111. doi:10.1026/0049-8637/a000172

Otterpohl, N., Lazar, R., & Stiensmeier-Pelster, J. (2019). The dark side of perceived positive regard: When parents' well-intended motivation strategies increase students' test anxiety. *Contemporary Educational Psychology*, *56*, 79–90. doi:10.1016/j.cedpsych.2018.11.002

Otterpohl, N., Steffgen, S. T., Stiensmeier-Pelster, J., Brenning, K., & Soenens, B. (2020). The intergenerational continuity of parental conditional regard and its role in mothers' and adolescents' contingent self-esteem and depressive symptoms. *Social Development*, *29*(1), 143–158. doi:10.1111/sode.12391

Otterpohl, N., & Wild, E. (2015). Cross-lagged relations among parenting, children's emotion regulation, and psychosocial adjustment in early adolescence. *Journal of Clinical Child and Adolescent Psychology*, *44*(1), 93–108. doi:10.1080/15374416.2013.862802

Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, *18*(4), 315–341. doi:10.1007/s10648-006-9029-9

Pomerantz, E. M., Moorman, E. A., Litwack, S. D., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research*, *77*(3), 373–410. doi:10.3102/003465430305567

Pulkka, A.-T., & Niemivirta, M. (2013). Adult students' achievement goal orientations and evaluations of the learning environment: A person-centred longitudinal analysis. *Educational Research and Evaluation*, *19*(4), 297–322. doi:10.1080/13803611.2013.767741

Qin, D. B., Way, N., & Et Mukherjee, P. (2008). The other side of the model minority story: The familial and peer challenges faced by Chinese American adolescents. *Youth & Society*, *39*(4), 480–506. doi:10.1177/0044118X08314233

Rodríguez-Meirinhos, A., Vansteenkiste, M., Soenens, B., Oliva, A., Brenning, K., & Antolín-Suárez, L. (2020). When is parental monitoring effective? A person-centered analysis of the role of autonomy-supportive and psychologically controlling parenting in referred and non-referred adolescents. *Journal of Youth and Adolescence*, *49*(1), 352–368. doi:10.1007/s10964-019-01151-7

Rogers, C. R. (1962). The interpersonal relationship: The core of guidance. *Harvard Educational Review*, *32*(4), 416–429.

Rogers, C. (1983). *Therapeut und Klient: Grundlagen der Gesprächspsychotherapie*. Frankfurt a. M: Fischer–Taschenbuch.

Roth, G., Assor, A., Niemiec, C. P., Deci, E. L., & Ryan, R. M. (2009). The emotional and academic consequences of parental conditional regard: Comparing conditional positive regard, conditional negative regard, and autonomy support as parenting practices. *Developmental Psychology*, *45*(4), 1119–1142. doi:10.1037/a0015272

Ryan, R. M., & Brown, K. W. (2003). Why we don't need self-esteem: On fundamental needs, contingent love, and mindfulness. *Psychological Inquiry*, *14*(1), 71–76. doi:10.1207/S15327965PLI1401_02

Ryan, R. M., and Deci, E. L. (Eds.). (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York: Guilford Press.

Schöne, C., Dickhäuser, O., Spinath, B., & Stiensmeier-Pelster, J. (2012). *SESSKO: Skalen zur Erfassung des schulischen Selbstkonzepts: 2., überarbeitete und neu normierte Auflage*. Göttingen: Hogrefe.

Schöne, C., & Stiensmeier-Pelster, J. (2016). *SEKJ: Selbstwertinventar für Kinder und Jugendliche*. Hogrefe.

Schöne, C., Tandler, S. S., & Stiensmeier-Pelster, J. (2015). Contingent self-esteem and vulnerability to depression: Academic contingent self-esteem predicts depressive symptoms in students. *Frontiers in Psychology*, *6*, 1573. doi:10.3389/fpsyg.2015.01573

Siegrist, J., Starke, D., Chandola, T., Godin, I., Marmot, M., Niedhammer, I., & Peter, R. (2004). The measurement of effort–reward imbalance at work: European comparisons. *Social Science & Medicine*, *58*(8), 1483–1499. doi:10.1016/S0277-9536(03)00351-4

Silinskas, G., & Kikas, E. (2019). Parental involvement in math homework: Links to children's performance and motivation. *Scandinavian Journal of Educational Research*, *63*(1), 17–37. doi:10.1080/00313831.2017.1324901

Smetana, J. G., Daddis, C., & Chuang, S. S. (2016). "Clean your room!": A longitudinal investigation on adolescent-parent conflict and conflict resolution in middle-class African American families. *Journal of Adolescent Research*, *18*(6), 631–650. doi:10.1177/0743558403254781

Soenens, B., Luyckx, K., Vansteenkiste, M., Duriez, B., & Goossens, L. (2008). Clarifying the link between parental psychological control and adolescents' depressive symptoms: Reciprocal versus unidirectional models. *Merrill-Palmer Quarterly*, *54*(4), 411–444. doi:10.1353/mpq.0.0005

Spielberger, C. D., & Vagg, P. R. (Eds.). (1995). *Test anxiety: Theory, assessment, and treatment*. Washington: Taylor & Francis.

Spinath, B., Stiensmeier-Pelster, J., Schöne, C., & Dickhäuser, O. (2012). *SELLMO: Skalen zur Erfassung der Lern- und Leistungsmotivation: 2., überarbeitete und neu normierte Auflage*. Göttingen: Hogrefe.

Spinath, B., & Stiensmeier-Pelster, J. (2003). Goal orientation and achievement: The role of ability self-concept and failure perception. *Learning and Instruction*, *13*(4), 403–422. doi:10.1016/S0959-4752(02)00014-2

Statistisches Bundesamt [Destatis]. (2020, March 2). *Bildungsstand: Verteilung der Bevölkerung in Deutschland nach Altersgruppen und höchstem Schulabschluss*. https://de.statista.com/statistik/daten/studie/197269/umfrage/allgemeiner-bildungsstand-der-bevoelkerung-in-deutschland-nach-dem-alter/

Stiensmeier-Pelster, J., Braune-Krickau, M., Schürmann, M., & Duda, K. (2014). *DIKJ: Depressionsinventar für Kinder und Jugendliche. 3., überarbeitete und neu normierte Auflage*. Göttingen: Hogrefe.

Tuominen-Soini, H., Salmela-Aro, K., & Niemivirta, M. (2012). Achievement goal orientations and academic well-being across the transition to upper secondary education. *Learning and Individual Differences*, *22*(3), 290–305. doi:10.1016/j.lindif.2012.01.002

Van der Kaap-Deeder, J., Wouters, S., Verschueren, K., Briers, V., Deeren, B., & Vansteenkiste, M. (2016). The pursuit of self-esteem and its motivational implications. *Psychologica Belgica*, *56*(2), 143–168. doi:10.5334/pb.277

Van Petegem, S., Antonietti, J.-P., Eira Nunes, C., Kins, E., & Soenens, B. (2020). The relationship between maternal overprotection, adolescent internalizing and externalizing problems, and psychological need frustration: A multi-informant study using response surface analysis. *Journal of Youth and Adolescence*, *49*(1), 162–177. doi:10.1007/s10964-019-01126-8

Van Wijhe, C. I., Peeters, M. C. W., & Schaufeli, W. B. (2014). Enough is enough: Cognitive antecedents of workaholism and its aftermath. *Human Resource Management*, *53*(1), 157–177. doi:10.1002/hrm.21573

Viljaranta, J., Silinskas, G., Lerkkanen, M.-K., Hirvonen, R., Pakarinen, E., Poikkeus, A.-M., & Nurmi, J.-E. (2018). Maternal homework assistance and children's task-persistent behavior in elementary school. *Learning and Instruction*, *56*, 54–63. doi:10.1016/j.learninstruc.2018.04.005

Wacker, A., Jaunzeme, J., & Jaksztat, S. (2008). Eine Kurzform des Prüfungsängstlichkeitsinventars TAI-G. *Zeitschrift Für Pädagogische Psychologie*, *22*(1), 73–81. doi:10.1024/1010-0652.22.1.73

Wouters, S., Colpin, H., Luyckx, K., & Verschueren, K. (2018). Explaining the relationship between parenting and internalizing symptoms: The role of self-esteem level and contingency. *Journal of Child and Family Studies*, *27*(10), 3402–3412. doi:10.1007/s10826-018-1167-4

Wouters, S., Doumen, S., Germeijs, V., Colpin, H., & Verschueren, K. (2013). Contingencies of self-worth in early adolescence: The antecedent role of perceived parenting. *Social Development*, *22*(2), 242–258. doi:10.1111/sode.12010

Study B

Steffgen, S. T., Otterpohl, N., Wessing, F., Schwinger, M., Assor, A., Kanat-Maymon, Y., Gueta, B. E., & Stiensmeier-Pelster, J. (2022). The process linking child-invested contingent self-esteem and conditional regard: The roles of maternal anger and its regulation. *Journal of Child and Family Studies, 31*, 2412–2423.

Journal of Child and Family Studies (2022) 31:2412–2423
https://doi.org/10.1007/s10826-022-02316-y

ORIGINAL PAPER

The Process Linking Child-Invested Contingent Self-Esteem and Conditional Regard: The Roles of Maternal Anger and its Regulation

Sarah Teresa Steffgen[1] · Nantje Otterpohl[2] · Franziska Wessing[1] · Malte Schwinger[2] · Avi Assor[3] · Yaniv Kanat-Maymon[4] · Bat El Gueta[3] · Joachim Stiensmeier-Pelster[1]

Accepted: 6 April 2022 / Published online: 27 April 2022

Abstract

Parents whose self-esteem is contingent on their children's achievements tend to exert more control over their children by displaying decreased affection and regard after failure in school (parental academic conditional negative regard). The current study examined parental anger and dysregulated anger expression as possible mechanisms in the respective association. In total, 221 mothers reported their child-invested contingent self-esteem, habitual dysregulated anger expression, anticipated anger after child failure, and their explicit use of conditional negative regard; their 12- to 14-year-old adolescent children reported perceived conditional negative regard. The moderated mediation analysis revealed that anger after child failure partially mediated the effect of child-invested contingent self-esteem on maternal explicit use of conditional negative regard, which, in turn, predicted adolescents' perception of conditional negative regard. The effect of anger was moderated by dysregulated anger expression, and anger was only positively related to conditional negative regard when expressed as medium- to highly-dysregulated. The results support our hypotheses and provide an explanation for parental application of conditional negative regard apart from socialization goals or a lack of knowledge about its suboptimal nature. Furthermore, our results underscore the importance of parents' self-esteem concerns and strategies for anger regulation. We discuss the practical implications of an anger-driven, reactive type of conditional regard.

Keywords Parental conditional regard · Contingent self-esteem · Anger · Emotion regulation · Academic achievement

Highlights

- Mothers whose self-esteem depends on their child's performance use more achievement-oriented conditional negative regard.
- Mothers' anger following failure mediated the relation between their contingent self-esteem and use of conditional regard.
- Mothers' dysregulated anger expression exacerbated the positive association between anger and conditional regard.
- Mothers' contingent self-esteem indirectly related to both mothers' and children's reports of conditional regard.
- Mothers' use of conditional negative regard may result from mothers' unfavorable regulation of self-esteem loss and anger.

How parents react to their children's failures in school plays a significant role in children's coping with academic tasks. An increasing body of research has identified variation in parents' affection toward their child as a key component in parents' responses (Assor et al., 2004; Ng et al., 2014; Roth et al., 2009). A specific type of reaction involving a decrease in parental affection, esteem, and regard in situations of child failure is termed parental academic conditional negative regard (PACNR; Assor et al., 2004). The literature suggests that parents may use this tactic to

✉ Sarah Teresa Steffgen
Sarah.T.Steffgen@psychol.uni-giessen.de

[1] Department of Educational Psychology, Justus Liebig University Giessen, Giessen, Germany

[2] Department of Educational Psychology, Philipps University of Marburg, Marburg, Germany

[3] Department of Education, Ben-Gurion University, Beersheba, Israel

[4] School of Psychology, Interdisciplinary Center Herzliya, Herzliya, Israel

punish poor performance and decrease the likelihood of future failure. However, PACNR needs to be distinguished from simple punishment. While these reactions can focus on the child's behavior, such as effort (see process feedback; Kamins & Dweck, 1999, p. 835), conditional negative regard explicitly focuses on the characteristics of the child (see person feedback; Kamins & Dweck, 1999, p. 835). Owing to the various costs associated with PACNR, research has focused on its antecedents. Parents' tendency to hinge their own self-esteem on their children's achievements (child-invested contingent self-esteem [CCSE]) was identified as a key precursor (Ng et al., 2014; Otterpohl et al., 2020), so that parental self-esteem fluctuates with child performance. Although the association between PACNR and parents' CCSE is well established, it remains unclear how fluctuations in parental self-esteem shape variations in their affection toward their child. Unraveling this mechanism is important to gain a clearer picture of PACNR and its origins, which is necessary for more precise and effective prevention. In the current study, we addressed this gap in the literature by investigating parental anger and anger expressions as possible underlying mechanisms in respective association.

Parental Conditional Regard in the Academic Domain

Children face a variety of minor and major failures during their school years. How they deal with setbacks is influenced by their parents' reaction in such situations. For example, parents may display a sincere interest in the child's perspective, accept negative emotions in the child, and offer choices on how to deal with schoolwork. These reactions support children's basic psychological needs, which benefits their learning behavior (see autonomy support; Joussemet et al., 2008). In contrast, when parents adapt a more controlling type of parenting, their reactions frustrate their children's basic psychological needs and impair learning. One specific form of control is PACNR, in which parents' affection, esteem, and regard decrease when children do not meet parental expectations (Assor et al., 2004; Roth et al., 2009). From a behaviorist perspective, negative feedback in the form of decreased affection may be effective in decreasing the likelihood of further failure. However, self-determination theory (SDT) emphasizes that this person-focused disappointment frustrates children's needs (Assor et al., 2020; Deci & Ryan, 2000). A withdrawal of parental appreciation frustrates children's need for relatedness, the need to belong and be cared for. Furthermore, PACNR entraps children in a dilemma where they can either live up to parental expectations to avoid a decrease in parental regard, or remain true to their own values and interests (Assor et al., 2004; Assor et al., 2020). This dilemma creates tension between children's need for relatedness and the need for autonomy, that is, the need to feel free in one's actions (Assor et al., 2020; Deci & Ryan, 2000). The dissatisfaction parents may feel with children's results or learning behavior is distinct from PACNR because these reactions can be accompanied by empathetic caring and support for the child to deal with the failure situation. In contrast, conditional negative regard communicates the deficiency of the child as a person, fostering low and contingent self-esteem in children (Curran, 2018; Otterpohl et al., 2021; Wouters et al., 2018). The detrimental effects of PACNR are evident in various other domains, including motivational and emotional adjustment in school, parent-child relationships, and general well-being (Otterpohl et al., 2019; Perrone et al., 2016; Roth et al., 2009; Roth et al., 2009). These findings are important, as approximately one out of seven children experiences PACNR (Steffgen et al., 2022).

Parents' Child-Invested Contingent Self-Esteem and Conditional Regard

Previous research revealed that parents' CCSE is a key and robust precursor of achievement-oriented psychological control (Ng et al., 2014; Wuyts et al., 2015) and PACNR in particular (Otterpohl et al., 2020). Parents with CCSE base their self-esteem on their children's achievements, such that the children's failures threaten their own self-esteem (Ng et al., 2014). Thus, PACNR seems to result from parents' self-esteem concerns. A proposed mechanism is that parents hold performance standards for their children and punish poor performance using PACNR in an attempt to prevent future failures and the accompanying self-esteem threat (Assor et al., 2014; Ng et al., 2014; Wuyts et al., 2015). This is plausible and congruent with the finding that parents with high CCSE are perceived to promote extrinsic goals in their children (Soenens et al., 2015). Therefore, PACNR is widely understood as a parenting tactic to pursue socialization goals related to academic achievement (Assor et al., 2004; Assor et al., 2014; Assor et al., 2020; Curran et al., 2017).

From an SDT perspective, parents' self-esteem concerns indicate deprived basic psychological needs on the part of the parents themselves (Ryan & Brown, 2003). If their child fails in school, parents high in CCSE may be concerned about whether they will still be valuable in the eyes of others. As such, children's failures threaten their need for relatedness. Additionally, when parents strive for compliance with the internalized standard of being the parent of a successful child, the need for autonomy becomes frustrated. Finally, failing to meet their own expectations would frustrate parents' need for competence, that is, the

need to experience a sense of mastery and effectiveness. Research demonstrates that need frustration in parents hinders them from supporting their children's needs, making them act in a psychologically controlling manner (Mabbe et al., 2018; Van der Kaap-Deeder et al., 2019). If parents' own needs are not met, parents lack the psychological availability, capacity, and energy to be responsive to the child's perspective and feelings. In investigating parents' reactions to failure, an experimental study found that mothers displayed lower warmth (e.g., less smiling, laughing, and talking in a warm tone) toward the child after a failure, and this effect was more pronounced in mothers high in CCSE (Ng et al., 2019). In the current study, we argue that these variations in affection after a failure may not necessarily involve socialization goals, but rather are side effects of parents' coping with their self-esteem concerns and underlying need frustration.

Self-Esteem Threats and Anger

The threat to self-esteem and basic psychological needs has affective consequences; for example, anger is likely to arise as a reaction to threatened self-esteem. Several studies found that failure feedback elicits more negative affect — anger in particular — when individuals base their self-esteem on academic achievement (Crocker et al., 2003; Zeigler-Hill et al., 2011). These findings suggest that parents high in CCSE likely experience anger in situations where their children fail in school. This is plausible for several reasons. First, children's failures intervene with parents' needs and self-esteem goals, and it is theorized that anger arises when an external event hinders goal pursuit (Berkowitz & Harmon-Jones, 2004). Anger involves an active approach motivation and narrows attention with a focus on anger-eliciting stimuli (Gable et al., 2015), thereby promoting short-term and self-focused goals (Elison et al., 2014). Moreover, anger can function as a defensive regulation strategy when self-esteem is threatened, and the accompanying feelings of shame and deficiency arise (Elison et al., 2014; Lazarus, 2001; Nathanson, 1992). Blaming the person responsible for the failure — the child — shifts the cause of the failure away from a flaw in the parents' self and replaces the feeling of shame with anger. This helps preserve self-esteem rather than decrease it (Lazarus, 2001). Finally, while child performance feedback has a high subjective value for parents' needs and self-esteem, the parent has no direct control of the performance outcome. Anger helps the parent energize their behavior to regain control over the need frustrating and self-esteem threatening situations (Elison et al., 2014).

In turn, this angry state likely hinders parents from being psychologically available and responsive toward their children. Parents who report getting instantly angry use more scolding or yelling, as well as physical punishment, in their interaction with the child (Di Giunta et al., 2020). Consistent with this, research shows that parents who react more angrily to hurtful messages from their child report more love withdrawal (Walling et al., 2007). Mills et al. (2007) demonstrated that parents were more likely to use shame induction, love withdrawal, or person-focused criticism when they were prone to experiencing shame. This association was mediated by parents' negative approach toward the child, which included the parents angrily reacting to the hurtful messages of the child. As such, it seems likely that parents' anger in response to the children's failures depicts one mechanism by which parents' self-esteem fluctuations shape their use of PACNR.

Anger Expression and Conditional Regard

How parents express their anger is shaped by their way of dealing with emotions (Gross, 1998). Self-determination theory posits different forms of emotion regulation styles based on the quality and depth of emotion processing (Roth et al., 2019). Within this framework, integrative regulation is contrasted with emotion dysregulation. Integrative regulation is considered the most adaptive emotion regulation style, in which individuals experience anger with a non-judgmental attitude and explore its informational value for the self. As such, integrative regulation allows parents to deal flexibly with the need thwarting situation and to act according to their typical parenting style instead of adopting short-term and self-focused goals. However, if some components of integrative emotion processing are missing, the individuals are not able to manage emotions well and are easily overwhelmed by them, resulting in involuntary emotional outbursts (Roth et al., 2009; Ryan & Deci, 2006). Emotion dysregulation, characterized by a lack of control over emotion and attention, affects interpersonal relationships and parenting (Brenning et al., 2020; Crandall et al., 2015; Sarıtaş et al., 2013). Difficulties in emotion regulation relate to greater rejection and less warmth in interaction with the child (Sarıtaş et al., 2013), as well as ineffective discipline strategies and harsh parenting (Crandall et al., 2015).

Taken together, it seems plausible that difficulties in emotion regulation can worsen things, particularly in parents who are vulnerable to experiencing anger after child failure because of their CCSE. Anger after a child's misbehavior is related to parents using harsher discipline strategies than they personally would have liked (Rhoades et al., 2017). The discrepancy between parents' ideal of how they want to respond to a child's misbehavior and their actual use of harsh discipline strategies is stronger in parents who tend to act impulsively without thinking, suggesting an interplay

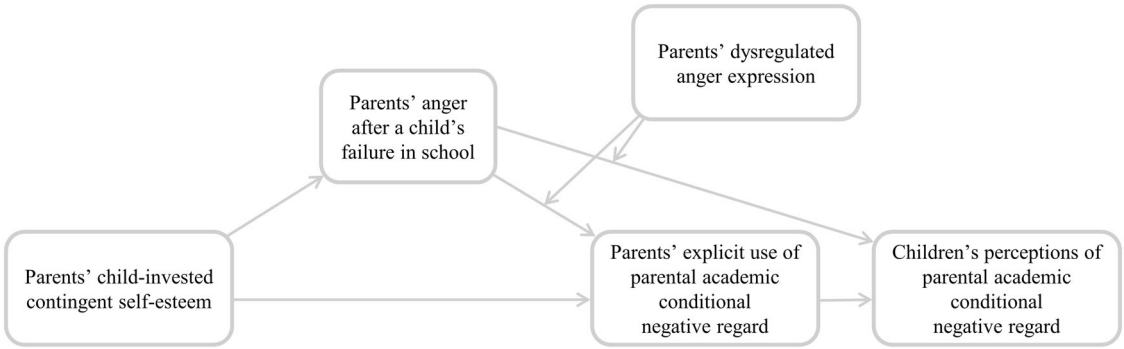


Fig. 1 Hypothesized conceptual model

between anger experience and anger expression in situations of misconduct. If parents express their anger in a dysregulated way, they may act impulsively instead of congruently with their intended parenting and long-term socialization goals; for example, parents may use dismissive remarks and criticize the child. In addition, more insidious anger responses are likely to occur; for example, parents might smile and laugh less, speak in a less warm tone, and ignore or turn away from the child. Overall, anger may serve parents' short-term attempts to restore self-esteem, while simultaneously dysregulated anger expression may carry various costs for the child, the parent-child relationship, and the parents' own long-term goals (Elison et al., 2014).

Research Questions and Hypotheses

Building on the existing literature, we examined the question of whether parents' anger in response to children's academic failures represents an underlying mechanism for how parents' CCSE shapes their use of conditional negative regard. Furthermore, we aimed to explore the exacerbating role of maladaptive anger regulation. The hypothesized conceptual model is shown in Fig. 1.

In the first step, we hypothesized that anger mediates the relationship between CCSE and PACNR. Besides using PACNR as an explicit parenting tactic to pressure the child into high performance, the threat to parents' self-esteem may elicit anger, and this anger reaction may decrease parental affection toward the child. Parents' and adolescents' reports of PACNR are only weakly correlated ($r = 0.28$; Israeli-Halevi et al., 2015), which makes it important to consider both perspectives for statistical and substantive reasons. Statistically, considering parents and their children as informants, we avoid a single informant bias. Substantively, whereas the parents' perspective involves their explicit use of parenting, children report on their perceptions or representations of whether parental love is conditional or unconditional (Israeli-Halevi et al., 2015). Empirical findings indicate that parents' explicit use of PACNR shapes children's perceptions of parental regard (Israeli-Halevi et al., 2015); however, the low correlation between reports suggests other possible sources. We presume it possible that some parents' angry expressions may be perceived as love withdrawal by the child, even if the parents themselves are not aware of (and do not even aim at) disapproving of the child. For example, parents may withdraw from their child to avoid derogatory remarks and criticism by losing their temper, yet the child gets the impression that the parent does not support them in the failure situation. Ultimately, children's perceptions of parenting relate to their well-being (Mabbe et al., 2016). Thus, considering children's perspectives allows us to investigate the significance of our findings for children's development. In the second step, we hypothesized that parents' difficulties in emotion regulation (here, dysregulated anger expression) moderate the effects of parental anger on conditional negative regard. If parents are still in control of their emotions, they may remain true to their typical parenting. However, if overwhelmed by anger, decreased appreciation in the parent-child interaction is more likely to occur.

Method

Recruitment and Procedure

The participants were 13- to 14-year-old adolescents and their mothers. The data were collected as part of a larger project funded by the German Research Foundation (Deutsche Forschungsgemeinschaft [DFG]). We contacted the families by letter via residents' registration offices to participate in the online survey. By this, we invited all families in nine districts of Germany who had adolescent children aged 13 to 14 years. Of these families, all who had at least two children could participate (69.0%; Statistisches Bundesamt, [Destatis] 2020a) because the project required data from at least one parent and two children. For

participation, family members needed to fill in questionnaires online. The duration of the questionnaires was about 50–70 min for children and about 30 min for parents. Participation was voluntary, parents provided active informed consent, and every family received 50 euros as compensation. The data of family members were matched using pseudonymized codes. All mother-adolescent dyads were used in the current investigation. The response rate was 12.6% ($n = 184$). We also invited families of 8th graders who participated in a school survey of the project. All participating pupils received a letter with information and access to an online survey for all family members. The response rate for mother-adolescent dyads was 11.8% ($n = 37$).

Participants

In total, 221 mother-adolescent dyads participated, composed of 107 mother-daughter dyads and 114 mother-son dyads. The adolescents' age ranged between 13 (34.4%) and 14 (58.4%) years, with the exception of 2.8% deviating, with an age of 12 or 15 years. Among the adolescents, 1.8% attended the lowest track, 7.7% attended the middle track, and 57.9% attended the highest track of the German school system; 32.6% attended a school without tracking (integrated schools). A comparison with data from the Federal Statistical Office of Germany revealed that adolescents from the highest track (50.1%) and integrated schools (23.6%) were overrepresented, and adolescents from the lowest (8.2%) and middle track (18.1%) were underrepresented (Statistisches Bundesamt [Destatis], 2019).

The mothers' average age was 45 years ($M = 44.93$, $SD = 4.82$), and their ages ranged between 32 and 58 years. Of these, 81.9% were married and lived with their spouse, 11.3% were divorced or lived separated from their spouse, 5.0% were unmarried, and 1.8% widowed. Among the mothers, 6.3% reported that they graduated from the lowest track of the German school system, 26.7% from the middle track, and 65.2% from the highest track. Compared with data from the Federal Statistical Office of Germany on parents of schoolchildren, mothers who graduated from the lowest track were underrepresented (17.3%), and mothers who graduated from the highest track were overrepresented (43.5%; Statistisches Bundesamt [Destatis], 2020b).

Measures

Child-invested contingent self-esteem

We used the German translation (Otterpohl et al., 2020) of the scale *child-based worth* by (Eaton and Pomerantz 2004; quoted from Ng et al., 2014) to measure mothers' CCSE. Mothers rated the extent to which their self-esteem depended on the achievements of their child in general (e.g., "How I feel about myself as a person does not depend on what my child does."; five items), successes (e.g., "If my child is successful, I feel good about myself."; four items) or failures (e.g., "My child's failures can make me feel ashamed."; six items). A 7-point scale from 1 (very much disagree) to 7 (very much agree) was used, with higher scores indicating a stronger contingency. Convergent validity of the original scale has been demonstrated, and exploratory factor analyses replicated the expected one-factor solution for the original and German translations (Ng et al., 2014; Otterpohl et al., 2020; Wuyts et al., 2015). Cronbach's alpha in this study was 0.90.

Parental academic conditional negative regard

The German translation (Otterpohl et al., 2017) of the Parental Conditional Regard Scale (Assor et al., 2004) was used to measure PACNR. To capture the perspectives of both adolescents and mothers, two versions were applied. Adolescents were asked to evaluate how they perceived affection and appreciation after performing poorly at school or studying (e.g., "I think that if I fail in a test my mom would show me less affection and caring."). The scale included nine items. Correspondingly, mothers were asked about their explicit use of PACNR (e.g., "If my child does not make an effort for school, I make him feel that he should be ashamed."). The scale included 10 items. Mothers and adolescents rated the items on a scale from 1 (very much disagree) to 7 (very much agree); high values on the scales indicated high PACNR. The psychometric quality and validity of the original scale and the German translation have been demonstrated in numerous studies (Assor et al., 2004; Assor & Tal, 2012; Otterpohl et al., 2017; Roth Assor et al., 2009). Cronbach's alpha for the two versions (mothers and adolescents) in the current study were 0.91 and 0.95, respectively.

Anger

We used three items from Roth et al. (2009) to measure mothers' habitual dysregulated anger expression. Items asked for different aspects of dysregulated expression in situations mothers experience anger (e.g., "When I'm angry, I feel I have little control over my behavior."). We used a 7-point scale ranging from 1 (not true at all) to 7 (absolutely true). Higher scores indicated that mothers expressed anger in a rather dysregulated manner. Empirical findings show good reliability and construct validity of the original scale and the German translation (Otterpohl et al., 2017; Roth et al., 2009). Cronbach's alpha in this study was 0.80.

We than assessed how angry mothers would feel in situations of child failure. Therefore, mothers were

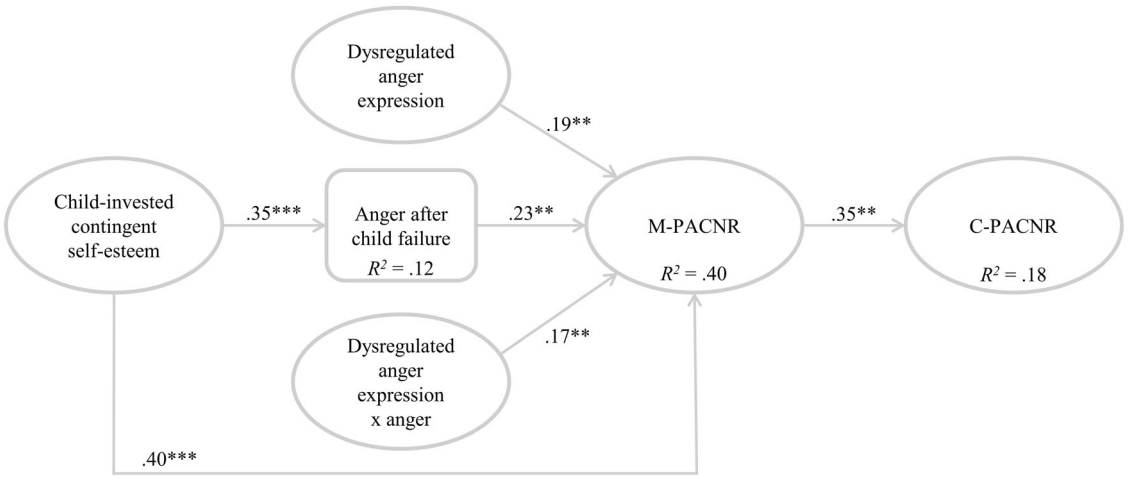


Fig. 2 Moderated mediation analysis (latent model). Note. Coefficients shown are standardized path coefficients. C-PACNR Child's report of parental academic conditional negative regard, M-PACNR Mother's report of parental academic conditional negative regard. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

instructed to imagine that their child had received a poor grade at school. Then they rated their extent of anger on a 7-point scale ranging from 1 (very calm and peaceful) to 7 (very angry). We used a single item to measure anger (German "wütend") to assess parents' emotional response as closely as possible alongside the items of dysregulated expression.

Plan of Analysis

Before testing the hypotheses, the potential confounding effects of the background variables were examined. To this end, a MANCOVA was conducted with all study variables as dependent variables. Adolescents' gender, school track, mean school grades (mathematics, English, and German), and family structure (intact vs. non-intact) were entered as fixed factors, and mothers' age and level of education (as indicator of mothers' socioeconomic status) as covariates. Results revealed multivariate effects of adolescents' gender (Wilk's Lambda = 0.93, $F(5196) = 2.96$, $p = 0.01$), with boys reporting higher scores in PACNR ($d = 0.48$). In all subsequent analyses, we controlled for the effect of adolescents' gender on adolescents' report of PACNR as a significant background variable.

To test our hypotheses, we first conducted a mediation analysis and included a moderation term in the next step (see Fig. 2 for our final model). We used structural equation modeling with latent variables in Mplus 8 (Muthén & Muthén, 1998–2017). A priori power analysis with an anticipated medium effect size of 0.3, a desired power level of 0.8, a model consisting of 4 latent and 13 manifest variables, and a probability level of 0.05 revealed a minimum sample size of $N = 166$ mother-adolescent dyads. The online survey ensured, that participants did not omit items, consequently there was no missing data. Robust maximum-likelihood estimation with Huber-White standard errors (MLR estimation) was applied. To evaluate model fit, chi-square statistic (χ^2), the comparative fit index (CFI), the root-mean square error of approximation (RMSEA), and the standardized root-mean-square residual (SRMR) were taken into consideration. As recommended, we used the following cut-off values to evaluate good model fit in MLR estimation: chi-square should be as small as possible, RMSEA < 0.06, CFI > 0.90, and SRMR < 0.08 (Muthén, 2012).

We used latent variables to reduce the error variance in the model. To build latent variables, we created three parcels per latent factor, resulting in parcels of three to five items. This benefits the model in such a way that parcels are more likely to be related to the latent variable, are less contaminated by methodological effects or wording of individual items, and are more likely to meet the assumption of normality (Marsh et al., 1998). Parcels were created using the item-to-construct balance approach (Little et al., 2002). First, a 1-component principal component analysis was conducted for the variables CCSE, mothers' (M-PACNR), and children's (C-PACNR) reports of PACNR. The items with the highest and lowest factor loadings were added to the first parcel, the items with the second highest and second lowest factor loadings were added to the second parcel, and so on. This procedure was repeated until the items were evenly distributed across the three parcels. Dysregulated anger expression was measured using three items; therefore, items served as indicators for the latent variable. The item for anger after child failure was added as a manifest variable.

In testing the moderation, we centered the manifest variable involved in forming the interaction term as recommended (Muthén et al., 2016; Muthén, 2017, July 19). Therefore,

Table 1 Means, standard deviations, internal consistency, and correlations (Spearman-Rho) among the study variables

	M (*SD*)	α	(1)	(2)	(3)	(4)	(5)
(1) C-PACNR	1.82 (1.27)	0.95	–				
(2) M-PACNR	2.12 (1.17)	0.91	0.37***	–			
(3) CCSE	2.76 (1.09)	0.90	0.27***	0.44***	–		
(4) Anger after child failure	3.82 (1.03)	–	0.21*	0.41***	0.31***	–	
(5) Dysregulated anger expression	3.46 (1.65)	0.80	0.14*	0.33***	0.28**	0.24***	–

C-PACNR Child's report of parental academic conditional negative regard, *M-PACNR* Mother's report of parental academic conditional negative regard, *CCSE* Child-invested contingent self-esteem

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

anger after child failure was mean-centered. The Mplus command XWITH was used to include the interaction terms in the models (Klein & Moosbrugger, 2000). A drawback of the method implemented in Mplus is that there are no conventional fit indices (e.g., RMSEA) available. Therefore, the fit of the model without the interaction term, but including the main effect of the moderator variable was evaluated as recommended by Asparouhov & Muthén (2021).

Results

Table 1 shows the intercorrelations of the study variables as well as the mean values, standard deviations, and internal consistencies of the scales. All study variables reported by the mothers showed positive small- to medium-sized intercorrelations. The correlation between adolescents' and mothers' reports on maternal use of the PACNR was medium. CCSE, anger, and dysregulated anger expression correlated higher with mothers' than with adolescents' reports on PACNR.

Moderated Mediation Analysis

The measurement model of all study variables in the form of a confirmatory factor analysis indicated good model fit ($\chi^2(48) = 80.10$, CFI = 0.98, RMSEA = 0.06, SRMR = 0.04), with all factor loadings $\lambda > 0.78$, except for one item of dysregulated anger expression ($\lambda = 0.61$). Based on this measurement model, we built our structural equation model in two steps, according to our hypotheses. First, we tested our mediation assumption by including CCSE, M-PACNR, and C-PACNR, adding anger as a mediator. In the next step, we tested the moderating effect of dysregulated anger expression. The final model is depicted in Fig. 2.

In the mediation model, we first included a path from maternal use of PACNR (M-PACNR) on child perception of PACNR (C-PACNR). We further specified paths from CCSE to both reports of PACNR. Finally, we added anger as a mediator between CCSE and both reports of PACNR. The model showed a good fit: $\chi^2(39) = 56.04$, CFI = 0.99, RMSEA = 0.04, SRMR = 0.03. Explanation of variance was significant for anger ($R^2 = 0.13$, $p < 0.01$), M-PACNR ($R^2 = 0.34$, $p < 0.001$), and C-PACNR ($R^2 = 0.20$, $p < 0.001$). We found CCSE predicting M-PACNR ($\beta = 0.46$, $p < 0.001$), which, in turn, predicted C-PACNR ($\beta = 0.28$, $p < 0.001$). CCSE did not directly predict C-PACNR. In addition, CCSE predicted anger after child failure ($\beta = 0.36$, $p < 0.001$), which in turn predicted M-PACNR ($\beta = 0.23$, $p < 0.001$). We used bootstrapping with 1000 samples to test indirect effects. The indirect effects of CCSE on C-PACNR via M-PACNR ($\beta = 0.17$, $p < 0.01$), and via anger and M-PACNR ($\beta = 0.03$, $p < 0.05$) were significant. To test for partial mediation, we constrained the direct paths of CCSE to M-PACNR and C-PACNR to zero. This constraint significantly reduced the model fit ($\Delta SBS - \chi^2(2) = 39.07$, $p < 0.001$). Next, the direct path between CCSE and M-PACNR was larger ($\beta = 0.54$, $p < 0.001$) when excluding the mediator from the model. This supports the hypothesis of partial mediation. Leaving out non-significant paths of CCSE and anger on C-PACNR did not significantly reduce model fit ($\Delta SBS - \chi^2(2) = 2.06$, $p = 0.36$). Therefore, we used the reduced model for moderation testing.

In the moderation model, we added dysregulated anger expression as a predictor of M-PACNR. Given that the model including the main effect of dysregulated anger expression fitted the data well ($\chi^2(72) = 109.88$, CFI = 0.98, RMSEA = 0.05, SRMR = 0.05), the interaction term of M-PACNR and anger was added (Fig. 2). Explanation of variance was significant for anger ($R^2 = 0.12$, $p < 0.01$), M-PACNR ($R^2 = 0.40$, $p < 0.001$), and C-PACNR ($R^2 = 0.18$, $p < 0.001$). The main effect of dysregulated anger expression ($\beta = 0.19$, $p < 0.01$) and the interaction with anger ($\beta = 0.17$, $p < 0.01$) on M-PACNR was significant. To further explore the interaction, we calculated simple slopes for mean, high, and low values (M ± 1 SD) of dysregulated anger expression. Anger was significantly associated with M-PACNR for high ($b = 0.41$, $p < 0.001$) and mean ($b = 0.24$, $p < 0.001$) dysregulated anger expression. The slope for low dysregulated anger expression was not significant ($b = 0.06$, $p = 0.39$). The slopes for

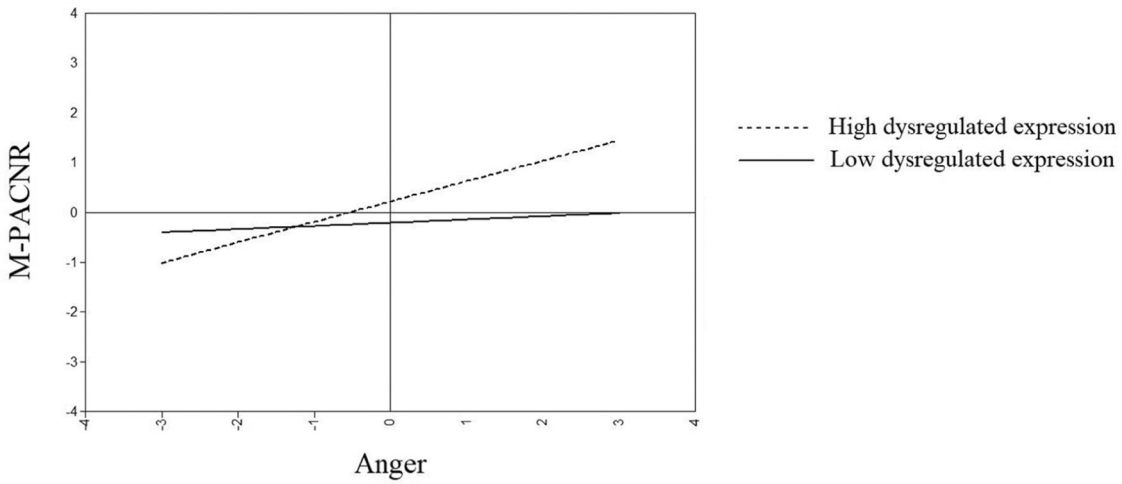


Fig. 3 Interaction (simple slopes) between maternal anger after child failure and dysregulated anger expression in the prediction of parental academic conditional negative regard. Note. M-PACNR Mother's report of parental academic conditional negative regard. Anger and M-PACNR are mean-centered

high and low dysregulated anger expression are shown in Fig. 3.

Discussion

The present study aimed to investigate a possible mechanism in the association between parents' CCSE and the use of conditional negative regard. Parents' anger responses to children's failures mediated the respective association. In addition, we showed that anger was more strongly associated with conditional negative regard in parents who expressed their anger in a dysregulated manner. Our findings suggest that the association between anger and PACNR may be significantly buffered if parents are in control of their anger. Finally, parents' use of conditional regard was related to children's perception of being conditionally regarded, highlighting the importance of our findings for the parent-child relationship and, ultimately, children's well-being. Taken together, our results support the idea that parents' use of conditional negative regard may not always be the product of a well-intended socialization strategy. Rather, conditional regard behavior that stems from a prompt and impulsive anger reaction to child failure in parents, whose self-esteem depends on the performance outcome, seems to exist. This is an interesting finding as it offers a possible explanation for parental engagement in conditional negative regard, apart from a lack of knowledge, that PACNR is a suboptimal strategy that carries psychological costs and ultimately misses the parents' goal of promoting school engagement. This might have important implications for understanding and defining conditional regard and prevention strategies.

The literature mostly defines conditional regard as a socialization strategy, including the idea that parents (consciously or unconsciously) pursue a long-term socialization goal with their parenting (Assor et al., 2014; Assor et al., 2020; Curran et al., 2017). In terms of operant conditioning, parents may use conditional negative regard to punish low performance, for example, to enhance the child's school engagement. Our results suggest a second route to conditional regard. In addition to a proactive route that involves goal-oriented use, there might be a reactive type of conditional negative regard, driven by impulsive anger. This reactive type seems to be a by-product of parents' attempts to regulate their self-esteem, and their underlying need frustration. In our study, mothers were able to recognize and report the depreciating behavior associated with their dysregulated anger. Thus, parents may be aware of not only the *if* but also the *why* of their conditional negative regard. We presume it possible that parents may be able to distinguish whether they use conditional regard as a socialization strategy to promote achievement or disregard their child because they are overwhelmed by anger. Rhoades et al., (2017) suggested that parents may at least be able to report on the discrepancy between their intention to use conditional regard (ideal response) and their actual use of PACNR. A recent prospective study found that the orientation to use conditional regard in expectant mothers and their actual observed conditional regard with their toddlers had low correlation ($r = 0.30$; Assor et al., 2020), suggesting various factors other than intentional use of conditional regard to determine their actual behavior.

Anger partially mediated the relationship between CCSE and PACNR. Therefore, we consider it worthwhile to broaden the view of other possible responses to self-esteem

threats that may function as mediators. Notably, our results are highly congruent with findings from an extensive body of research that investigates shame and has recognized that anger (e.g., Tangney et al, 1992) and aggression (e.g., Elison et al., 2014) arise in shameful situations. Although we did not assess parental shame explicitly, the theory on contingent self-esteem assumes (and explicitly includes in measures) that failures in the domain of contingency elicit shame (e.g., Ng et al., 2014). Research shows that individuals who do not recognize or accept shame tend to respond to a shaming event with anger directed at others (*attack others*; Elison et al., 2006). Anger directed at someone else, in turn, comes with the tendency to induce shame in someone else, which serves the aim of creating a better self-image. In light of these findings, conditional negative regard might well reflect parents' dysfunctional shame regulation by attacking the child. Besides outward-directed anger, shame coping theories suggest three more internalizing dysfunctional strategies: attacking the self, avoidance, and withdrawal (Elison et al., 2006). Including these reactions in future studies might allow us to gain more fine-grained insight on the action tendencies that constitute conditional regard. Furthermore, it allows us to investigate the idea that internalizing parental behaviors owing to self-esteem threat are perceived as devaluing by the child, while not reported as such by the parent (see our reasoning in the introduction). Identifying sources other than parents' explicit use of conditional regard for children's representations of being conditionally regarded is important because it might shed light on possible unintended and unacknowledged detrimental parenting behaviors.

Our findings have implications for the prevention of conditional negative regard. We assume that psychoeducation about the nature of PACNR and its negative consequences may be sufficient if conditional regard is used as a socialization strategy, but it may fall short if PACNR results from anger outbursts. In that case, parental anger regulation needs to be addressed as an additional intervention component to enable parents to act congruently with their intended parenting. An integrative regulation of anger would allow parents to deal autonomously and flexibly when anger arises in academic failure situations and prevents them from expressing their anger in a dysregulated manner. One important intervention component in the emotion-focused parenting program *Tuning in to Kids*, in which parents are taught to coach (instead of disregard or disapprove) their children's emotions, involves parents' emotion regulation strategies (Havighurst & Haley, 2007). Within the program, parents reflect on their own emotional experiences, their attitudes toward emotions, and the possible needs behind their emotions. This approach may help parents view their anger as containing information about themselves and as a possible indicator of the involvement of parental self-esteem with respect to the child's performance in school. The potential benefit of such interventions match ideas about the prevention of interpersonal aggression. Interventions to reduce family violence and conflict already consider anger management and involve the search for sources of anger as an important intervention component (Fetsch et al., 2008). In addition, because self-esteem concerns indicate a frustration of basic psychological needs, it seems worthwhile to address parents' proactive role in managing their own needs in a more constructive manner. Need crafting, which involves proactive management of basic psychological needs (Laporte et al., 2021), may have the potential to make controlling parenting behaviors (such as PACNR) unnecessary. In summary, we propose that the occurrence of strong negative emotions, dysregulated anger expression, and PACNR can be prevented if parents are knowledgeable about their anger and the involvement of CCSE, and are able to pursue self-esteem and need satisfaction beyond controlling parenting.

An important limitation of our study is that the cross-sectional data did not allow for causal conclusions or temporal inferences of effects. This is important because research stresses the reciprocal nature of parenting and child adjustment (Soenens et al., 2008; Otterpohl et al., 2021), and it is important to consider adolescents' role in shaping the parent-child relationship (Soenens & Vansteenkiste, 2020). Additionally, the literature already suggests that children parented with PACNR experience emotions like shame (Assor & Tal, 2012; Smiley et al., 2020) and anger (Smiley et al., 2016) in response to difficulties in achievement tasks, which may affect parents' emotional reactions. Together with our findings, the literature suggests that shame and anger may play roles as the antecedents and consequences of conditional regard, respectively. Therefore, it is worthwhile to investigate the interplay between children's and parents' emotional experiences. A second limitation concerns parents' reports of anger after a child's failure. Parents likely have experienced failure situations several times, and our measure may well reflect the parents' representation of failure situations. However, future studies need to explore parents' actual responses, for example, by observing anger expressions in an experimentally manipulated failure situation. A third limitation is that we investigated anger in a sample of mother-adolescent dyads. In a study by Wuyts et al., (2015), fathers reported a higher intention than mothers to use psychological control aimed at pressuring the child into high performance in school. Moreover, men were found to disguise their anger less (Timmers et al., 1998). It is worthwhile to investigate whether parental anger expression may help explain the differences between fathers and mothers in their use of conditional negative regard.

Taken together, this study contributes to the research in this field by unraveling an underlying mechanism of

how CCSE may promote conditional negative regard. Our results argue in favor of (at least) two routes toward conditional regard. In addition to applying it as a socialization strategy to foster child engagement (proactive), conditional negative regard may occur as a by-product of a dysregulated anger reaction (reactive), and hence does not necessarily involve socialization intentions. This reactive type of conditional regard may prevail, especially when parents are under internal pressure. Therefore, this study can serve as a starting point for understanding PACNR as a by-product of parental self-esteem regulation. The link between self-esteem threat and anger seems to be important, not only for overt aggression and violent behavior (Elison et al., 2014; Velotti et al., 2014), but also for more subtle depreciating behavior in the parent-child relationship. Accordingly, our results underline that enhancing parents' abilities to adaptively regulate anger and identify CCSE as a source may be fruitful in preventing overt family aggression as well as subtle and insidious harmful parenting such as conditional negative regard.

Author Contributions All authors contributed to the conception and design of the study. Funding was obtained through Nantje Otterpohl, Malte Schwinger, Avi Assor, and Yaniv Kanat-Maymon. Material preparation was performed by Sarah Teresa Steffgen, Nantje Otterpohl, and Avi Assor. Locating and constructing research's questionnaires was performed by Sarah Teresa Steffgen, Nantje Otterpohl, Avi Assor, and Bat El Gueta. Data collection and analysis were performed by Sarah Teresa Steffgen and Franziska Wessing. The first draft of the manuscript was written by Sarah Teresa Steffgen. Nantje Otterpohl and Joachim Stiensmeier-Pelster interpreted the findings. All authors commented on previous versions of the manuscript. All authors have read and approved the final manuscript.

Funding The study was supported by a grant from the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) - 396850149. Open Access funding enabled and organized by Projekt DEAL.

Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

Ethical Approval The study was approved by the local ethics committee of the Department of Psychology, Justus-Liebig University (Ethics approval number: 2016-0028).

Informed Consent Informed consent was obtained from all individual participants included in the study.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

References

Asparouhov, T., & Muthén, B. (2021). Bayesian estimation of single and multilevel models with latent variable interactions. *Structural Equation Modeling: A Multidisciplinary Journal*, *28*(2), 314–328. https://doi.org/10.1080/10705511.2020.1761808.

Assor, A., Buhnick-Atzil, O., Rabinovitz-Magen, L., Auerbach, J., Kanat-Maymon, Y., Smiley, P., & Moed, A. (2020). Maternal prenatal conditional regard orientation and postnatal controlling behaviour as predictors of preschoolers' helpless coping with failure: A prospective study. *European Journal of Developmental Psychology*, *17*(6), 828–854. https://doi.org/10.1080/17405629.2020.1822162.

Assor, A., Kanat-Maymon, Y., & Roth, G. (2014). Parental conditional regard: Psychological costs and antecedents. In N. Weinstein (Ed.), *Human motivation and interpersonal relationships*, pp. 215–237. Springer

Assor, A., Roth, G., & Deci, E. L. (2004). The emotional costs of parents' conditional regard: A self-determination theory analysis. *Journal of Personality*, *72*(1), 47–88. https://doi.org/10.1111/j.0022-3506.2004.00256.x.

Assor, A., & Tal, K. (2012). When parents' affection depends on child's achievement: Parental conditional positive regard, self-aggrandizement, shame and coping in adolescents. *Journal of Adolescence*, *35*(2), 249–260. https://doi.org/10.1016/j.adolescence.2011.10.004.

Berkowitz, L., & Harmon-Jones, E. (2004). Toward an understanding of the determinants of anger. *Emotion*, *4*(2), 107–130. https://doi.org/10.1037/1528-3542.4.2.107.

Brenning, K., Soenens, B., Van der Kaap-Deeder, J., Dieleman, L., & Vansteenkiste, M. (2020). Psychologically controlling parenting during toddlerhood: The role of mothers' perceived parenting history and emotion regulation style. *Journal of Child and Family Studies*, *29*(8), 2257–2267. https://doi.org/10.1007/s10826-020-01719-z.

Crandall, A., Deater-Deckard, K., & Riley, A. W. (2015). Maternal emotion and cognitive control capacities and parenting: A conceptual framework. *Developmental Review*, *36*, 105–126. https://doi.org/10.1016/j.dr.2015.01.004.

Curran, T. (2018). Parental conditional regard and the development of perfectionism in adolescent athletes: The mediating role of competence contingent self-worth. *Sport, Exercise, and Performance Psychology*, *7*(3), 284–296. https://doi.org/10.1037/spy0000126.

Curran, T., Hill, A. P., & Williams, L. J. (2017). The relationships between parental conditional regard and adolescents' self-critical and narcissistic perfectionism. *Personality and Individual Differences*, *109*, 17–22. https://doi.org/10.1016/j.paid.2016.12.035.

Crocker, J., Karpinski, A., Quinn, D. M., & Chase, S. K. (2003). When grades determine self-worth: Consequences of contingent self-worth for male and female engineering and psychology majors. *Journal of Personality and Social Psychology*, *85*(3), 507–516. https://doi.org/10.1037/0022-3514.85.3.507.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01.

Di Giunta, L., Rothenberg, W. A., Lunetti, C., Lansford, J. E., Pastorelli, C., Eisenberg, N. & Uribe Tirado, L. M. et al. (2020). Longitudinal associations between mothers' and fathers' anger/irritability expressiveness, harsh parenting, and adolescents' socioemotional functioning in nine countries. *Developmental Psychology*, *56*(3), 458–474. https://doi.org/10.1037/dev0000849.

Eaton, M. M., & Pomerantz, E. M. (2004). *Parental Contingent Self-Worth Scale*. Unpublished manuscript, University of Illinois, Urbana–Champaign.

Elison, J., Garofalo, C., & Velotti, P. (2014). Shame and aggression: Theoretical considerations. *Aggression and Violent Behavior*, *19*(4), 447–453. https://doi.org/10.1016/j.avb.2014.05.002.

Elison, J., Pulos, S., & Lennon, R. (2006). Shame-focused coping: An empirical study of the Compass of Shame. *Social Behavior and Personality: An International Journal*, *34*(2), 161–168. https://doi.org/10.2224/sbp.2006.34.2.161.

Fetsch, R. J., Yang, R. K., & Pettit, M. J. (2008). The RETHINK parenting and anger management program: A follow-up validation study. *Family Relations*, *57*(5), 543–552. https://doi.org/10.1111/j.1741-3729.2008.00521.x.

Gable, P. A., Poole, B. D., & Harmon-Jones, E. (2015). Anger perceptually and conceptually narrows cognitive scope. *Journal of Personality and Social Psychology*, *109*(1), 163–174. https://doi.org/10.1037/a0039226.

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, *2*(3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271.

Havighurst, S. S., & Harley, A. E. (2007). *Tuning in to Kids: Emotionally Intelligent Parenting: Program Manual*. The University of Melbourne.

Israeli-Halevi, M., Assor, A., & Roth, G. (2015). Using maternal conditional positive regard to promote anxiety suppression in adolescents: A benign strategy? *Parenting*, *15*(3), 187–206. https://doi.org/10.1080/15295192.2015.1053324.

Joussemet, M., Landry, R., & Koestner, R. (2008). A self-determination theory perspective on parenting. *Canadian Psychology*, *49*(3), 194–200. https://doi.org/10.1037/a0012754.

Kamins, M. L., & Dweck, C. S. (1999). Person versus process praise and criticism: Implications for contingent self-worth and coping. *Developmental Psychology*, *35*(3), 835–847.

Klein, A., & Moosbrugger, H. (2000). Maximum likelihood estimation of latent interaction effects with the LMS method. *Psychometrika*, 65(4), 457–474.

Laporte, N., Soenens, B., Brenning, K., & Vansteenkiste, M. (2021). Adolescents as active managers of their own psychological needs: The role of psychological need crafting in adolescents' mental health. *Journal of Adolescence*, 88, 67–83. https://doi.org/10.1016/j.adolescence.2021.02.004.

Lazarus, R. S. (2001). Relational meaning and discrete emotions. In K. R. Scherer, A. Schorr & T. Johnstone (Eds.), *Series in affective science. Appraisal processes in emotion: Theory, methods, research*, pp. 37–67. Oxford University Press.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling: A Multidisciplinary Journal*, *9*(2), 151–173. https://doi.org/10.1207/S15328007SEM0902_1.

Mabbe, E., Soenens, B., Vansteenkiste, M., van der Kaap-Deeder, J., & Mouratidis, A. (2018). Day-to-day variation in autonomy-supportive and psychologically controlling parenting: The role of parents' daily experiences of need satisfaction and need frustration. *Parenting*, *18*(2), 86–109. https://doi.org/10.1080/15295192.2018.1444131.

Mabbe, E., Soenens, B., Vansteenkiste, M., & Van Leeuwen, K. (2016). Do personality traits moderate relations between psychologically controlling parenting and problem behavior in adolescents? *Journal of Personality*, *84*(3), 381–392. https://doi.org/10.1111/jopy.12166.

Marsh, H. W., Hau, K. T., Balla, J. R., & Grayson, D. (1998). Is more ever too much? The number of indicators per factor in confirmatory factor analysis. *Multivariate Behavioral Research*, *33*(2), 181–220. https://doi.org/10.1207/s15327906mbr3302_1.

Mills, R. S. L., Freeman, W. S., Clara, I. P., Elgar, F. J., Walling, B. R., & Mak, L. (2007). Parent proneness to shame and the use of psychological control. *Journal of Child and Family Studies*, *16*(3), 359–374. https://doi.org/10.1007/s10826-006-9091-4.

Muthén, B. O. (2017, July 19). SEM interaction analyses and centering of indicators. http://www.statmodel.com/discussion/messages/11/744.html?1511305017

Muthén, B. O., Muthén, L. K., & Asparouhov, T. (2016). *Regression and mediation analysis using Mplus*. Muthén & Muthén.

Muthén, L. K. (2012). *Questions about MLR*. http://www.statmodel.com/discussion/messages/11/9196.html?1473117596

Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus User's guide* (eighth edn.). Muthén & Muthén.

Nathanson, D. L. (1992). *Shame and pride: Affect, sex, and the birth of the self*. Norton.

Ng, F. F.-Y., Pomerantz, E. M., & Deng, C. (2014). Why are Chinese mothers more controlling than American mothers? "My child is my report card". *Child Development*, *85*(1), 355–369. https://doi.org/10.1111/cdev.12102.

Ng, F. F.-Y., Pomerantz, E. M., Lam, S. F., & Deng, C. (2019). The role of mothers' child-based worth in their affective responses to children's performance. *Child Development*, *90*(1), e165–e181. https://doi.org/10.1111/cdev.12881.

Otterpohl, N., Keil, A. G., Assor, A., & Stiensmeier-Pelster, J. (2017). Erfassung von elterlicher bedingter Wertschätzung im Lern- und Leistungsbereich und im Bereich der Emotionsregulation. *Zeitschrift für Entwicklungspsychologie und pädagogische Psychologie*, *49*(2), 98–111. https://doi.org/10.1026/0049-8637/a000172.

Otterpohl, N., Lazar, R., & Stiensmeier-Pelster, J. (2019). The dark side of perceived positive regard: When parents' well-intended motivation strategies increase students' test anxiety. *Contemporary Educational Psychology*, *56*, 79–90. https://doi.org/10.1016/j.cedpsych.2018.11.002.

Otterpohl, N., Steffgen, S. T., Stiensmeier-Pelster, J., Brenning, K., & Soenens, B. (2020). The intergenerational continuity of parental conditional regard and its role in mothers' and adolescents' contingent self-esteem and depressive symptoms. *Social Development*, *29*(1), 143–158. https://doi.org/10.1111/sode.12391.

Otterpohl, N., Wild, E., Havighurst, S. S., Stiensmeier-Pelster, J., & Kehoe, C. E. (2021). The Interplay of Parental Response to Anger, Adolescent anger regulation, and externalizing and internalizing problems: A longitudinal study. *Research on Child and Adolescent Psychopathology*. https://doi.org/10.1007/s10802-021-00795-z.

Perrone, L., Borelli, J. L., Smiley, P., Rasmussen, H. F., & Hilt, L. M. (2016). Do children's attributions mediate the link between parental conditional regard and child depression and emotion? *Journal of Child and Family Studies*, *25*(11), 3387–3402. https://doi.org/10.1007/s10826-016-0495-5.

Rhoades, K. A., Grice, C., & Del Vecchio, T. (2017). Barriers to mothers' implementation of non-harsh discipline techniques: Anger, impulsivity, and situational demands. *Journal of Child and Family Studies*, *26*(11), 3179–3191. https://doi.org/10.1007/s10826-017-0801-x.

Roth, G., Assor, A., Niemiec, C. P., Deci, E. L., & Ryan, R. M. (2009). The emotional and academic consequences of parental conditional regard: Comparing conditional positive regard, conditional negative regard, and autonomy support as parenting practices. *Developmental Psychology*, *45*(4), 1119–1142. https://doi.org/10.1037/a0015272.

Roth, G., Ron, T., & Benita, M. (2009). Mothers' parenting practices and adolescents' learning from their mistakes in class: The mediating role of adolescent's self-disclosure. *Learning and Instruction*, *19*(6), 506–512. https://doi.org/10.1016/j.learninstruc.2008.10.001.

Roth, G., Vansteenkiste, M., & Ryan, R. M. (2019). Integrative emotion regulation: Process and development from a self-determination theory perspective. *Development and Psychopathology*, *31*(3), 945–956. https://doi.org/10.1017/S0954579419000403.

Ryan, R. M., & Brown, K. W. (2003). Why we don't need self-esteem: On fundamental needs, contingent love, and mindfulness. *Psychological Inquiry*, *14*(1), 71–76.

Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality*, *74*(6), 1557–1585. https://doi.org/10.1111/j.1467-6494.2006.00420.x.

Sarıtaş, D., Grusec, J. E., & Gençöz, T. (2013). Warm and harsh parenting as mediators of the relation between maternal and adolescent emotion regulation. *Journal of Adolescence*, *36*(6), 1093–1101. https://doi.org/10.1016/j.adolescence.2013.08.015.

Smiley, P. A., Buttitta, K. V., Chung, S. Y., Coffey, J. K., Wang, B. A., & Borelli, J. L. (2016). Anger in response to challenge: Children's emotion socialization predicts approach versus avoidance. *Motivation and Emotion*, *40*(6), 923–935. https://doi.org/10.1007/s11031-016-9583-5.

Smiley, P. A., Rasmussen, H. F., Buttitta, K. V., Hecht, H. K., Scharlach, K. M., & Borelli, J. L. (2020). Parent control and child shame: Associations with children's task persistence and depressive symptoms in middle childhood. *Parenting*, *20*(4), 311–336. https://doi.org/10.1080/15295192.2019.1694837.

Soenens, B., Luyckx, K., Vansteenkiste, M., Duriez, B., & Goossens, L. (2008). Clarifying the link between parental psychological control and adolescents' depressive symptoms: Reciprocal versus unidirectional models. *Merrill-Palmer Quarterly*, *54*(4), 411–444. https://doi.org/10.1353/mpq.0.0005.

Soenens, B. & Vansteenkiste, M. (2020). Taking adolescents' agency in socialization seriously: The role of appraisals and cognitive-behavioral responses in autonomy-relevant parenting. *or Child and Adolescent Development*, 2020(173), 7–26. https://doi.org/10.1002/cad.20370.

Soenens, B., Wuyts, D., Vansteenkiste, M., Mageau, G., & Brenning, K. (2015). Raising trophy kids: The role of mothers' contingent self-esteem in maternal promotion of extrinsic goals. *Journal of Adolescence*, *42*, 40–49. https://doi.org/10.1016/j.adolescence.2015.04.001.

Statistisches Bundesamt (2019). Schnellmeldungsergebnisse der Schulstatistik zu Schülerinnen und Schülern der allgemeinbildenden und beruflichen Schulen. https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bildung-Forschung-Kultur/Schulen/Publikationen/Downloads-Schulen/schnellmeldung-schueler-5211003198004.html

Statistisches Bundesamt (2020a). Bevölkerung und Erwerbstätigkeit: Haushalte und Familien Ergebnisse des Mikrozensus 2019. *Destatis*, *1*(3).

Statistisches Bundesamt (2020b). Schulbesuch nach ausgewählten Schularten und höchstem allgemeinen Schulabschluss der Eltern. https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bildung-Forschung-Kultur/Bildungsstand/Tabellen/allgemeinbildender-abschluss.html

Steffgen, S. T., Soenens, B., Otterpohl, N., Stiensmeier-Pelster, J., & Schwinger, M. (2022). Latent profiles of parental academic conditional positive and negative regard. *Parenting*, 1–35. https://doi.org/10.1080/15295192.2021.2010501

Tangney, J. P., Wagner, P., Fletcher, C., & Gramzow, R. (1992). Shamed into anger? The relation of shame and guilt to anger and self-reported aggression. *Journal of Personality and Social Psychology*, 62(4), 669–675.

Timmers, M., Fischer, A. H., & Manstead, A. S. R. (1998). Gender differences in motives for regulating emotions. *Personality and Social Psychology Bulletin*, *24*(9), 974–985. https://doi.org/10.1177/0146167298249005.

Van der Kaap-Deeder, J., Soenens, B., Mabbe, E., Dieleman, L., Mouratidis, A., Campbell, R., & Vansteenkiste, M. (2019). From daily need experiences to autonomy-supportive and psychologically controlling parenting via psychological availability and stress. *Parenting*, *19*(3), 177–202. https://doi.org/10.1080/15295192.2019.1615791.

Velotti, P., Elison, J., & Garofalo, C. (2014). Shame and aggression: Different trajectories and implications. *Aggression and Violent Behavior*, *19*(4), 454–461. https://doi.org/10.1016/j.avb.2014.04.011.

Walling, B. R., Mills, R. S. L., & Freeman, W. S. (2007). Parenting cognitions associated with the use of psychological control. *Journal of Child and Family Studies*, *16*(5), 642–659. https://doi.org/10.1007/s10826-006-9113-2.

Wouters, S., Colpin, H., Luyckx, K., & Verschueren, K. (2018). Explaining the relationship between parenting and internalizing symptoms: The role of self-esteem level and contingency. *Journal of Child and Family Studies*, *27*, 3402–3412. https://doi.org/10.1007/s10826-018-1167-4.

Wuyts, D., Vansteenkiste, M., Soenens, B., & Assor, A. (2015). An examination of the dynamics involved in parental child-invested contingent self-esteem. *Parenting*, *15*(2), 55–74. https://doi.org/10.1080/15295192.2015.1020135.

Zeigler-Hill, V., Besser, A., & King, K. (2011). Contingent self-esteem and anticipated reactions to interpersonal rejection and achievement failure. *Journal of Social and Clinical Psychology*, *30*(10), 1069–1096.

Declaration

I hereby declare that I have prepared the thesis at hand independently and without undue aid or the use of any resources other than indicated within the thesis. All parts of my thesis taken either verbatim or analogously from the published or unpublished works of or based on oral communications with others are indicated as such. Regarding all aspects of my scientific enquiries as they appear in my thesis, I have upheld the tenets of good scientific practice as laid out in the "Satzung der Justus-Liebig-Universität Gießen zur Sicherung guter wissenschaftlicher Praxis" and complied with the precept of ethics, data protection and animal welfare. I declare that I have neither directly nor indirectly given monetary or any other valuable considerations to others in connection with the thesis at hand. I declare that I have not presented the thesis at hand, either in an identical or similar form, to an examination office or agency in Germany or any other country as part of any examination or degree. All materials from other sources as well as all works performed by others used or directly referenced within the thesis at hand have been indicated as such. In particular, all persons involved directly or indirectly in the development of the thesis at hand have been named. I agree with the screening of my thesis for plagiarism via offline or online detection-software.

Frankfurt, 18.10.2022

Sarah Teresa Steffgen