



The Development of Coping across Childhood and Adolescence: An Integrative Review and Critique of Research

Journal:	<i>International Journal of Behavioral Development</i>
Manuscript ID:	JBD-2009-06-1126.R2
Manuscript Type:	Review
Keywords:	coping, stress, self regulation, emotion regulation, hierarchical families, children, adolescents
Abstract:	<p>Despite consensus that development shapes every aspect of coping, studies of children and adolescents have proven difficult to integrate, primarily because they examine largely unselected age groups, and utilise overlapping coping categories. A developmental framework was used to organise 58 studies of coping involving over 250 age comparisons or correlations with age. The framework was based on (1) conceptualisations of coping as regulation to suggest ages at which coping should show developmental shifts (Skinner & Zimmer-Gembeck, 2009) and (2) notions of hierarchical families to clarify which coping categories should be distinguished at each age (Skinner, Edge, Altman, & Sherwood, 2003). Developmental patterns in coping (e.g., problem-solving, distraction, support-seeking, escape) were scrutinised with a focus on common age shifts. Two kinds of age trends were discerned, one reflecting increases in coping capacities, as seen in support-seeking (from reliance on adults to more self-reliance), problem-solving (from instrumental action to planful problem-solving), and distraction (adding cognitive to behavioural strategies); and one reflecting improvements in the deployment of different coping strategies according to which ones are most effective in dealing with specific kinds of stressors. Results were used to formulate guidelines for future research on the development of coping.</p>

SCHOLARONE™
Manuscripts

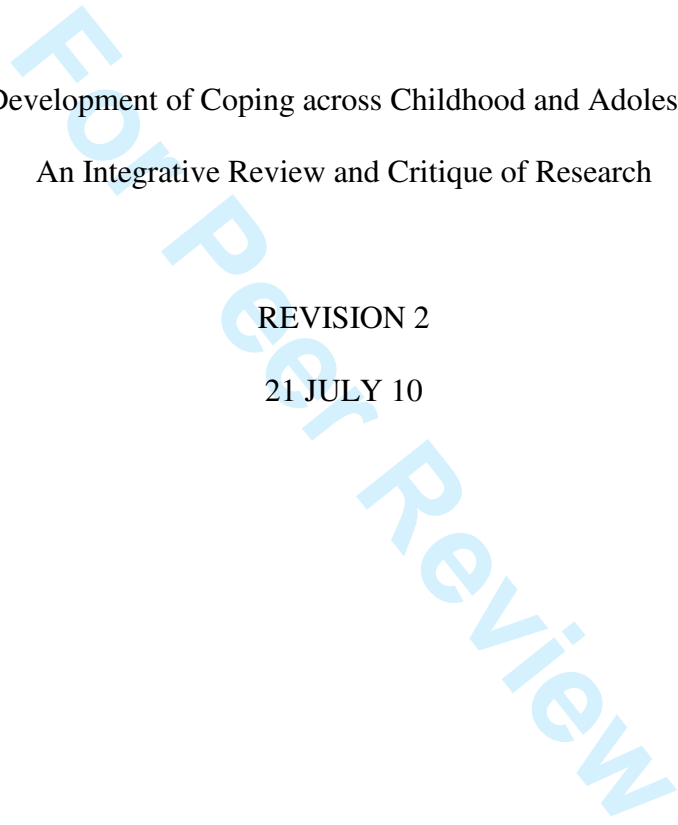
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Running Head: REVIEW OF COPING DEVELOPMENT

The Development of Coping across Childhood and Adolescence:
An Integrative Review and Critique of Research

REVISION 2

21 JULY 10



Abstract

Despite consensus that development shapes every aspect of coping, studies of children and adolescents have proven difficult to integrate, primarily because they examine largely unselected age groups, and utilise overlapping coping categories. A developmental framework was used to organise 58 studies of coping involving over 250 age comparisons or correlations with age. The framework was based on (1) conceptualisations of coping as regulation to suggest ages at which coping should show developmental shifts (Skinner & Zimmer-Gembeck, 2009) and (2) notions of hierarchical families to clarify which coping categories should be distinguished at each age (Skinner, Edge, Altman, & Sherwood, 2003). Developmental patterns in coping (e.g., problem-solving, distraction, support-seeking, escape) were scrutinised with a focus on common age shifts. Two kinds of age trends were discerned, one reflecting increases in coping *capacities*, as seen in support-seeking (from reliance on adults to more self-reliance), problem-solving (from instrumental action to planful problem-solving), and distraction (adding cognitive to behavioural strategies); and one reflecting improvements in the *deployment* of different coping strategies according to which ones are most effective in dealing with specific kinds of stressors. Results were used to formulate guidelines for future research on the development of coping.

Keywords: Coping, stress, self-regulation, emotion regulation, hierarchical families, children, adolescents, stress reactivity

The Development of Coping across Childhood and Adolescence:
An Integrative Review and Critique of Research

Although the first systematic longitudinal study of coping from infancy to adolescence was initiated in 1953 (Murphy & Moriarity, 1976), the study of children's coping began in earnest in the 1980's with two seminal publications (Compas, 1987; Garnezy & Rutter, 1983). Since that time, many ways of coping have been identified, such as problem-solving, support seeking, rumination, escape, and distraction, and their explicit study distinguishes research on coping from work on risk, resilience, and adversity more generally. A primary focus has been research examining the connections between different ways of coping and important outcomes during childhood and adolescence. Multiple reviews summarise these studies (Aldwin, 2007; Bridges, 2003; Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Frydenberg, 1997; Seiffge-Krenke, 1995; Wolchik & Sandler, 1997) and attest to the role of coping in academic and social functioning, adjustment to stressful events, internalising and externalising behaviour, well-being, competence, and resilience. In tandem, interventionists have tested programs designed to support young people as they cope with stressful events (e.g., Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997). The interplay of work on assessment, individual differences, and interventions has created fertile ground for theoretical and empirical growth.

There is, however, one area in which little empirical progress has been made over the last 20 years, and that is the study of the normative development of coping. Despite consensus that development shapes every aspect of coping, an integrated and interpretable body of research detailing how coping changes across childhood and adolescence has yet to emerge (Aldwin, 2007; Compas, 1998; Compas, Malcarne, & Banez, 1992; Coping Consortium, 1998, 2001; Skinner & Edge, 1998; Skinner & Zimmer-Gembeck, 2007). Many studies examine how children and youth cope at particular ages, but few studies explicitly investigate the age differences and

1
2
3 age changes in coping that take place within or across developmental periods.
4

5
6 A coherent body of developmental research on coping would be highly valuable for many
7
8 reasons (Compas, 2009). A careful map of normative age-graded transitions in coping would
9
10 allow the identification of healthy pathways through which children can acquire robust resources
11
12 for dealing constructively with challenges, obstacles, failure, and loss. It would provide
13
14 interventionists with a guide to the kinds of changes in coping they should target. It could answer
15
16 important questions about measurement by specifying the profile of ways of coping that should
17
18 be assessed at different ages. The description of age-graded shifts in how children and
19
20 adolescents cope would provide a foundation for subsequent studies designed to uncover the
21
22 underlying developments (in neurophysiological, cognitive, emotional, attentional, or social
23
24 processes) that account for these shifts.
25
26
27
28

29
30 The integration of studies examining age differences and changes would also allow work
31
32 on coping to more vigorously contribute to other developmental research examining children's
33
34 reactions to adversity and challenge. Studies of coping could add value to work on risk and
35
36 resilience by suggesting a set of age-graded mechanisms through which risk could be exacerbated
37
38 or ameliorated (Haggerty, Sherrod, Garnezy, & Rutter, 1994). Studies on the normative
39
40 development of individual ways of coping, such as social problem-solving or help-seeking, could
41
42 benefit from considering them as part of the development of a repertoire of coping strategies
43
44 (Compas et al., 1992). A developmental description would also allow coping, which focuses
45
46 largely on children and youth, to be integrated with the study of the constitutional underpinnings
47
48 and social factors that shape infants' and young children's distress reactions and influence their
49
50 attempts to ameliorate distress (Derryberry, Reed, & Pilkenton-Taylor, 2003; Eisenberg, Fabes,
51
52 & Guthrie, 1997; Fox, Henderson, Marshall, Nichols, & Ghera, 2005).
53
54
55
56
57
58
59
60

Goals of the Review: Integration and Critique

The overarching goal of this paper is to contribute to a description of the normative development of coping by integrating and critiquing research on age differences and age changes in ways of coping during childhood and adolescence. In the twenty-five years since the field came into its own, more than fifty studies have been published that report such information. Studies were located by searching electronic databases and reference lists, consulting previous reviews, and contacting key authors in the area of children's stress and coping. In all, 58 studies incorporating more than 250 age comparisons were identified, more than twice as many studies as included in previous comprehensive reviews. Appendix A includes a summary description of the methods used in each study (see web resources for Appendix A and for references to all studies included in the review).

The major contribution of this paper resides in our attempt to overcome the four obstacles to integrating these studies noted by previous reviewers (Aldwin, 2007; Band, 1995; Bridges, 2003; Compas et al., 2001; Decker, 2006; Eisenberg et al., 1997; Fields & Prinz, 1997; Holt, Hoar, & Fraser, 2005). First, studies incorporate a wide variety of age groups and gaps, ranging from two year gaps (e.g., age 12 vs. 14) to 32 year gaps (i.e., age 14-46). However, without an understanding of the ages at which developmental shifts are expected, it is difficult to know where to look (or, more precisely, *when* to look) for age differences and changes, or how to interpret the *lack* of such differences or changes. Second, measures in these studies tap a wide range of differing and partially overlapping coping categories, including many assessments that combine multiple coping strategies. Without a common set of coping categories, it is difficult to determine which findings to compare or aggregate.

Third, the stressors with which children and adolescents are coping differ widely across studies, ranging, for example, from daily difficulties with peers, family, and school, to

1
2
3 uncontrollable medical events and parental cancer, to unspecified self-identified stressors,
4
5 hypothetical issues, multiple problems, or coping in general. If the nature and domain of the
6
7 problem shape how children and adolescents cope (e.g., Brown, O'Keefe, Sanders, & Baker,
8
9 1986; Compas, Malcarne, & Fondacaro, 1988; Irion & Blanchard-Fields, 1987; Stern & Zevon,
10
11 1990), it would be important to differentiate studies based on the stressors they target. Fourth,
12
13 studies rely on a variety of methods to capture coping, including observations, open-ended
14
15 interviews, written responses, questionnaires, and checklists. If age differences are more easily
16
17 detected with some of these methods than others (e.g., in children's self-reports compared to
18
19 observations; Altshuler, Genevro, Ruble, & Bornstein, 1995), it would be important, when
20
21 integrating studies, to consider their measurement strategies.
22
23
24
25

26
27 *Developmental framework.* In order to tackle these problems, we relied on a framework
28
29 grounded in recent theoretical and methodological advances in work on the development of
30
31 coping (Compas, 2009; Coping Consortium, 1999, 2001; Eisenberg, et al., 2009; Skinner &
32
33 Zimmer-Gembeck, 2007, 2009). This emerging multi-level framework views coping as a set of
34
35 adaptive processes that can diminish or magnify the effects of risk or adversity, more generally,
36
37 on the development of competence or dysfunction. New conceptualisations of coping as
38
39 "regulation under stress" provide a bridge to theories and research about regulation and its typical
40
41 development (Compas et al., 2001; Compas, Connor, Osowiecki, & Welch, 1997; Rossman,
42
43 1992; Skinner, 1999; see Eisenberg et al., 1997 for an extended discussion). Although
44
45 controversies about the meaning of both regulation (e.g., Cole, Martin, & Dennis, 2004) and
46
47 coping (Compas et al., 2001) abound, new conceptualisations emphasise their common
48
49 conceptual ground: Both are concerned with situations in which reflexive or automatic responses
50
51 do not serve and during which strong emotions or impulses may be generated; they often involve
52
53 efforts to deal with internal and external demands; they imply prolonged interactions or episodes
54
55
56
57
58
59
60

1
2
3 which are shaped by task characteristics and the participation of social partners; the processes
4
5 individuals use to manage ongoing interactions can be adaptive or maladaptive.
6
7

8 We used the framework to guide our integration of studies of age-related differences and
9
10 changes in coping. First, the bridge to regulation helped identify likely landmarks in the
11
12 development of coping.¹ Research on regulation is spread over many relatively independent
13
14 areas, focusing on the regulation of emotion, behaviour, and attention, as well as on topics that
15
16 are not explicitly labeled as regulation but are commonly understood to involve regulatory
17
18 processes, such as delay of gratification, will-power, social and cognitive problem-solving, and
19
20 help-seeking. Within each of these areas, the majority of research focuses on individual
21
22 differences. However, a few strands of research directly examine age-graded developmental
23
24 changes in regulatory processes (Bridges & Grolnick, 1995; Bronson, 2000; Campos, Frankel, &
25
26 Camras, 2004; Deci & Ryan, 1985; Eisenberg & Fabes, 1992; Holodyski & Friedlmeier, 2006;
27
28 Kopp, 1982, 1989, 2003; Mischel & Mischel, 1983; Ryan & Connell, 1989; Spivak & Schure,
29
30 1982; Sroufe, 1996).
31
32
33
34
35

36 Stated briefly (see Skinner & Zimmer-Gembeck, 2007, 2009, for more details), this
37
38 research, combined with theories and studies of children's neurological, emotional, memory,
39
40 cognitive, language, and social development, allowed us to identify particular ages when coping
41
42 processes are likely to undergo significant qualitative and quantitative shifts. Although there may
43
44 be other transitions, the most conclusive evidence points to transitions during the following age
45
46 periods: (1) infancy to toddlerhood (about age 2); (2) ages 5 to 7; (3) late childhood to early
47
48 adolescence (about ages 10 to 12); (4) early to middle adolescence (about ages 14 to 16); and (5)
49
50 middle to late adolescence (about ages 18 to 22). Each of these age periods entail transitions in
51
52 cognitive and emotional development, as well as significant changes in regulatory capacities and
53
54 the social environment, all of which play important roles in processes of stress and coping.
55
56
57
58
59
60

Hence, in our review, we paid special attention to comparisons involving these age groups.

Families of coping. The second way we used the developmental framework was to organize the variety of ways of coping and coping combinations measured in studies. Previous theoretical and empirical analyses have converged on 12 higher-order families of coping (Skinner et al, 2003; Skinner & Zimmer-Gembeck, 2007). Each family represents a functionally homogeneous set of ways of coping that serves the same adaptive functions. For example, problem-solving (or problem-focused coping) consists of ways of coping aimed at changing the stressful situation to bring it in line with the individual's desires and motives, and so would include instrumental actions, effort exertion, experimentation, problem-solving, planning, and so on. The family of support seeking would include seeking contact, comfort, advice, or aid from parents, teachers, other adults, or peers. The 12 families are depicted in Table 1.

All the ways of coping in a family serve the same adaptive functions, but the forms in which particular adaptive functions can be expressed are decisively constrained by developmental capacities. For example, escape can be expressed by leaving the scene only after a child is able to locomote, and information seeking can be expressed in the form of questions only after a child can talk. However, the identification of the overarching adaptive functions served by particular families makes it possible to deduce or discover the ways in which these functions can be fulfilled using the capacities that are available at different developmental levels. For example, gaze aversion or falling asleep may be early forms of escape; and social referencing or object exploration may be early forms of information seeking. Despite apparent differences in expression, these ways of coping can all be considered members of the same family because they serve the same set of adaptive functions. Examples of developmentally different members of some coping families are presented in Table 2 (see also Holodynski & Friedlmeier, 2006, Table 3.3). Hence, in our review, we distinguished developmentally-graded ways of coping from each

1
2
3 other and compared them between ages.
4

5 *Organising studies of age differences and changes in coping.* The developmental
6
7 framework suggested several avenues for solving the problems identified in previous reviews,
8
9 which we used as strategies to help make sense of the patterns of age differences and age changes
10
11 found in studies (see Table 3). First, we coded each of the categories used in a study into the
12
13 lower-order ways of coping suggested by the hierarchical families of coping. Table 4 (see web
14
15 resources) summarises definitions of coping families used to categorise coping strategies.
16
17
18 Second, we arranged the findings within each coping family as a function of age, in order to
19
20 determine whether differences and changes were more prominent during the developmental
21
22 windows suggested by theories of regulation. Third, we focused on “pure” subscales, that is, ones
23
24 that did not combine items from different families, in order to see whether they produced clearer
25
26 developmental trends.
27
28
29

30
31 Fourth, we attended to the different methodologies used to assess coping, such as open-
32
33 ended interviews, observations, or questionnaires. Fifth, we organised studies according to the
34
35 domains of stress. Finally, we considered more than increases or decreases (or sometimes
36
37 curvilinear changes) in coping with age. To explore whether coping behaviours change in their
38
39 organisation with age, we extracted, from the subset of studies that have done such analyses,
40
41 information about age-related changes in correlations among coping behaviours. We did not
42
43 report these findings in detail, but used them to make more general conclusions about qualitative
44
45 age-related shifts in coping.
46
47
48

49 *Findings about Developmentally-graded Ways of Coping*

50
51

52
53 Despite the fact that there are hundreds of potential coping responses, children and
54
55 adolescents commonly relied on ways of coping drawn from four families, namely, problem-
56
57 solving, distraction, support seeking, and escape. In addition, studies revealed high use of two
58
59
60

1
2
3 other families, accommodation and self-reliance, which depended on age and the nature of the
4
5 stressor. Age trends in the other six families (helplessness, delegation, social isolation,
6
7 negotiation, submission, and opposition) were more difficult to gauge, because they were studied
8
9 less often, used less frequently, or typically combined with other dominant ways of coping.
10
11

12 Findings for the four most common strategies are described in detail below and
13 summarised in Tables 5-8 (see web resources) and Table 9 (see web resources) provides the
14
15 details for studies that focused on accommodation as a coping strategy. In each table, column one
16
17 labels each study, using abbreviations to conserve space (e.g., PS1 for Problem-solving study 1).
18
19 Column two lists the study, column three shows the coping category used in the study as well as
20
21 the domain of the stressor (e.g., medical, interpersonal, general) and the source of the data (e.g.,
22
23 interview, questionnaire, observation). Column four lists our coping family categorisation, and
24
25 denotes measures that focused only on the specific family. The remaining columns summarise
26
27 measures, ages studied, and results related to age. As expected, coping did differ by age², and the
28
29 strategies suggested by the developmental framework were useful in ordering and integrating
30
31 findings. (Appendix B, see web resources, contains the following sections with detailed
32
33 citations.)
34
35
36
37
38
39

40 *Problem-solving*

41
42
43 As shown in Table 5 (see web resources), problem-solving was examined in 41 studies
44
45 involving 59 age comparisons or correlations with age. Overall, the pattern of findings suggested
46
47 increases with age: 25 comparisons revealed increases (highlighted in green in Table 5), 15
48
49 reported decreases (highlighted in red), and 19 found no differences or associations (highlighted
50
51 in yellow). At the same time, a closer analysis using strategies from the developmental
52
53 framework brought additional clarity to this pattern. It was especially helpful to organise studies
54
55 according to scale content, age groups included in the comparisons, and the nature of the stressor.
56
57
58
59
60

Figure 1 provides a graphical summary of the findings.

“Pure” problem-solving measures. Studies were examined that relied on measures consisting only of items from the problem-solving family (i.e., instrumental action, cognitive problem-solving, planning). When the 31 comparisons from these studies (denoted with + in Table 5) were tallied, 15 showed increases, 5 found decreases, and 11 reported no differences. The 15 comparisons that documented increases utilised a variety of methods (i.e., questionnaire, interview, written responses) and found increases during middle childhood, in early, middle, and late adolescence, and in young adulthood.

Next, the stressor domain was examined. Increases were found in studies of coping in general or with multiple and/ or self-identified stressors. In contrast, 8 of the 16 comparisons that found no differences or decreases examined the use of problem-solving in the interpersonal domain or with uncontrollable problems (e.g., parental cancer) (no differences: interpersonal, leukemia, parent cancer, parent conflict, home, interpersonal; decrease: friend conflict, peer). We also considered the age groups and gaps used in the studies relying on “pure” measures. Five of the comparisons that found no differences or decreases included age gaps across multiple developmental periods (e.g., ages 5-15, 6-32, 8-14, 13-20).

Problem-solving and support-seeking. In organising findings from scales that combined problem-solving with ways of coping from other families, we used the coding system to examine whether age differences depended on the specific ways of coping that were included. The most common combination was adding support-seeking to problem-solving, referred to as “active” or “approach” coping. Of the 12 age comparisons using this combination (highlighted with ^a in Table 5), 2 showed increases, 6 showed decreases, and 4 showed no association. However, patterns were more discernable when the *nature* of the support-seeking and the nature of the stressor were considered. Both of the studies that found increases included items that tapped

1
2
3 problem-focused support-seeking, such as seeking instrumental help or advice, and examined
4
5 differences from early to middle childhood (between ages 5-11, 6-8). In contrast, 8 of the 10
6
7 comparisons that showed decreases or no differences included measures that tapped the use of
8
9 emotion-focused support-seeking (e.g., comfort seeking) when coping with distress or pain or
10
11 dealing with uncontrollable stressors (e.g., waiting for surgery) or interpersonal problems (e.g.,
12
13 parental grounding).

14
15
16
17 *Problem-solving with coping from other families.* Eight comparisons combined problem-
18
19 solving with other cognitive strategies such as distraction or focus on the positive (^c in Table 5),
20
21 and all found age increases (e.g., ages 6-12, 10-14, 13-18, 16-19). Two comparisons combined
22
23 problem-solving with emotion management (^e in Table 5), and both found no differences (ages
24
25 13-18). Two comparisons combined problem-solving with ambition and commitment (referred to
26
27 as working hard; ^h in Table 5) and both found decreases in adolescence (ages 12-16 and 12-17).
28
29 Two comparisons combined problem-solving with escape (referred to as Primary Control coping;
30
31 ^p in Table 5) and both found decreases (from 8-16).
32
33
34
35

36
37 *Summary.* Overall, differentiating studies by carefully coding coping families provided a
38
39 clearer picture of age trends. Increases in problem-solving coping were consistently found when
40
41 measures focused exclusively on problem-solving, examined smaller age gaps (less than five
42
43 years), and considered problem-solving as an all-purpose strategy for dealing with multiple,
44
45 general, or self-identified stressors. Increases in problem-solving were also found for scales that
46
47 combined problem-solving with other families when the additional items marked families
48
49 appropriate to the developmental level: Increases were found during childhood and early
50
51 adolescence for scales that added items tapping *instrumental* support-seeking, and increases were
52
53 found during adolescence for scales that added items tapping other cognitive strategies, such as
54
55 distraction or focus on the positive. In general, few differences in problem-solving coping were
56
57
58
59
60

found across age gaps that encompassed multiple developmental periods or that focused on problem-solving as a strategy for dealing with interpersonal or uncontrollable stressors.

Decreases were often found when problem-solving measures added items from families that are likely decreasing across childhood and adolescence, such as escape or the use of emotion-focused support-seeking for dealing with distress.

Distraction

Forty-three studies included measures of distraction as a way of coping. Regarding age differences prior to preschool age, there were increases in behavioural distraction in very young children. Focusing on children in their first year (Braungart-Rieker & Stifter, 1996; Mangelsdorf, Shapiro, & Marzolf, 1995), studies revealed that escape via gaze aversion declined with age, while distraction by turning to other objects increased between 6 months and 12 months of age, as would be expected given infants' increasing abilities to locomote and coordinate behaviours.

Findings for distraction from 41 studies focusing on children age four and older are summarised in Table 6 (see web resources), and included 64 age comparisons or correlations. As a whole, findings suggested increases or stability in use of distraction coping: 25 comparisons revealed increases (green in Table 6) and 25 found no differences or associations (yellow in Table 6) whereas 14 reported decreases (red in Table 6). However, examining whether measures focused only on distraction or combined distraction with ways of coping from other families revealed additional order. Figure 2 provides a graphical summary of the overall findings.

“Pure” distraction measures. In terms of scale content, 27 comparisons relied on measures focusing purely on distraction (denoted with + in Table 6), and all but 4 showed increases (11 comparisons) or found no differences (12 comparison). Studies were further distinguished by the means of distraction: behavioural, cognitive, or both. Fourteen comparisons focused only on *behavioural* distraction (^b in Table 6). Of these, five revealed increases starting

1
2
3 at the youngest ages and continuing across adolescence (e.g., ages 4-10, 12-18). The other eight
4
5 showed no difference or association with age across approximately the same age ranges.

6
7
8 However, the basis for stability could be identified in five comparisons because these studies also
9
10 reported mean levels. All five comparisons found no age differences because behavioural
11
12 distraction was already the most commonly used strategy starting at the earliest age considered
13
14 (age 5) and remained high until the oldest age (age 18).

15
16
17 Four of the 27 comparisons focused on only *cognitive* distraction (^c in Table 6) and all
18
19 four considered uncontrollable medical stressors. Three found increases during childhood (ages
20
21 5-11, 5-11, 8-10) and one found no age differences. Increases were found in comparisons of
22
23 cognitive distraction that asked about *hypothetically* possible ways of coping or in situations in
24
25 which behavioural distraction was not an option (i.e., during a dental exam). No differences were
26
27 found in a study focusing on cognitive distraction in a situation where behavioural distraction
28
29 was possible (i.e., waiting for surgery). In this situation, children rarely reported using cognitive
30
31 distraction, and this held true across the age range examined (ages 5-11).
32
33
34
35

36
37 Eight of the 27 comparisons involved measures that mixed cognitive *and* behavioural
38
39 distraction in their coding or questionnaires or did not specify the kind of distraction (^m in Table
40
41 6). Three of these comparisons found no age differences, two found increases, and three found
42
43 decreases. No differences were found during adolescence (ages 9-14, 12-17, 12-18) when
44
45 distraction was among the most common strategies used to deal with uncontrollable stressors
46
47 (e.g., being grounded by parents) or in general. Increases were found between ages 6 and 18
48
49 when dealing with leukemia or when requested to write down all the strategies used for dealing
50
51 with a self-identified stressor and a set of uncontrollable stressors (getting a shot at the dentist,
52
53 giving a school report). All three studies that found decreases examined coping with
54
55 interpersonal or self-identified stressors (usually interpersonal) from ages 8 to 14.
56
57
58
59
60

1
2
3 One study (D5) shed light on the use of behavioural and cognitive distraction as ways of
4 coping with uncontrollable stressors (in this case waiting for pediatric surgery). In semi-
5 structured interviews, children ages 5 to 11 named things a hypothetical child could do,
6 observations were conducted in the waiting room, and children's retrospective reports were
7 collected one week later about what they actually did. Observations showed behavioural
8 distraction to be the most common coping strategy across all ages. In the hypothetical scenarios,
9 children named behavioural distraction frequently and this did not differ across age; older
10 children were more likely to name cognitive distraction as a *possible* strategy. In their
11 retrospective accounts of what they actually did, however, children rarely reported using
12 cognitive distraction as a strategy at any age. At the same time, older children were more likely to
13 report using behavioural distraction than younger children. It may be that, although younger
14 children actually use behavioural distraction, they only begin to intentionally deploy it as a
15 strategy somewhat later during middle childhood.
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

33
34 In terms of the domain of the stressor, studies that examined only distraction tended to
35 focus on using it to cope with distress, uncontrollable stressors, or serious problems. However,
36 when no association with age were found, comparisons were more likely to examine coping in
37 general or with multiple different kinds of stressors. In terms of the method of data collection
38 (i.e., observation, questionnaire), three of the four studies that found increases in cognitive
39 distraction used open-ended formats in which students volunteered strategies (i.e., interview or
40 open-ended written responses). Comparisons involving questionnaires were more likely to find
41 no differences or decreases.
42
43
44
45
46
47
48
49
50
51

52
53 *Distraction as accommodation.* In organising findings for scales that combined
54 distraction with other ways of coping, we used the coding system to examine whether age
55 differences depended on the specific ways of coping that were added. Twelve comparisons
56
57
58
59
60

1
2
3 combined distraction with other ways of coping from the accommodation family, such as focus
4
5 on the positive (^a in Table 6). Six found increases and six no differences. In two of these
6
7 comparisons, focus on the positive was combined with *behavioural* distraction and showed no
8
9 difference across adolescence (ages 13-20, 14-18). In five comparisons, focus on the positive was
10
11 combined with *cognitive* distraction: four found increases across adolescence (ages 10-14, 12-16,
12
13 12-18, 12-18), and one found no differences at earlier ages (ages 8-11).
14
15
16

17
18 *Distraction as emotion management.* Nine comparisons considered distraction as part of
19
20 emotion management, combining it with calming and relaxation, instrumental action, self-
21
22 reliance, comfort-seeking, help-seeking, or self-soothing (^e in Table 6). Six of these comparisons
23
24 showed increases, one a decrease, and three no differences. All of the comparisons that showed
25
26 increases included *cognitive* distraction whereas all of the comparisons that showed no
27
28 differences combined these strategies only with *behavioural* distraction. One study explicitly
29
30 stated that emotion-focused strategies for dealing with a parent's cancer moved from behavioural
31
32 to cognitive over the age range studied (D12: ages 6-32).
33
34
35

36
37 *Distraction as avoidance.* Fifteen comparisons considered distraction as part of
38
39 avoidance, combining it with behavioural or cognitive avoidance or escape and social isolation (^v
40
41 in Table 6). Of these, two found increases, nine decreases, and four no differences. In both of the
42
43 comparisons that found increases, distraction was combined with avoidance and described as a
44
45 strategy used to avoid problems at younger ages (ages 4-12, 7-10). Five other comparisons that
46
47 combined distraction with avoidance found decreases and three found no differences at slightly
48
49 older ages (e.g., ages 7-17, 16-20). None of the comparisons that combined distraction with
50
51 escape found increases; four found decreases and one no age differences.
52
53
54

55
56 *Summary.* A focus on comparisons that included “pure” measures of distraction revealed
57
58 that behavioural distraction was a way of coping commonly used to deal with uncontrollable
59
60

1
2
3 events and to manage emotions starting at the youngest ages studied, and it remained an
4
5 important general purpose strategy across childhood and adolescence. Behavioural distraction
6
7 was also likely to show increases in use across this age range in situations in which it was not
8
9 already high, perhaps reflecting more intentional deployment as children reached late childhood
10
11 and early adolescence. Children also showed increasing *awareness* of cognitive distraction as a
12
13 possible strategy, although they only used it more frequently in stressful situations where
14
15 behavioural distraction was not an option (e.g., during a dental procedure). Studies were more
16
17 likely to find increases when children were asked open-ended questions about the strategies they
18
19 use; questionnaires were more likely to show no differences.
20
21
22
23

24 Comparisons involving measures that combined distraction with other *accommodative*
25
26 strategies (such as focus on the positive) generally found age differences commensurate with the
27
28 kind of distraction that was included: stability if the distraction was *behavioural* or increases if
29
30 the distraction was *cognitive*. Studies that combined distraction with other forms of *emotion*
31
32 *management* (such as comfort-seeking or instrumental action) also found age differences
33
34 corresponding to the kind of distraction included: Studies that showed no differences combined
35
36 these strategies only with *behavioural* distraction whereas all of the studies that showed increases
37
38 included *cognitive* distraction.
39
40
41
42

43 The most heterogeneous pattern of findings came from studies that considered distraction
44
45 as part of “avoidance” coping. Increases were found in studies that considered avoidance an
46
47 adaptive prevention strategy and assessed it with teacher-ratings or interviews; other comparisons
48
49 also revealed decreases and no differences. The only comparisons in which decreases with age
50
51 were consistently found were ones in which distraction was combined with escape. One factor
52
53 likely contributing to this heterogeneous pattern has been uncovered in subsequent studies:
54
55 Confirmatory structural analyses have shown that “distraction” is not part of escape or avoidance
56
57
58
59
60

1
2
3 coping (e.g., Ayers, Sandler, West, & Roosa, 1996; Connor-Smith, Compas, Wadsworth,
4
5
6 Thomsen, & Saltzman, 2000).

7 8 *Support-seeking*

9
10 Findings from 48 studies utilising measures with some support seeking content showed
11
12 that it was common, multidimensional, and complex. In particular, conclusions about age
13
14 patterns depended on the span of ages under investigation as well as the characteristics of the
15
16 supportive presence and the nature of the support sought. Additionally, age-related increases in
17
18 support seeking were more likely to be found when specific stress domains were identified.
19
20

21
22 In two studies of infants and toddlers, support seeking was a frequent coping strategy, as
23
24 would be expected. Behaviours included reliance on attachment figures to regulate responses to
25
26 stressful events and using directed vocalisation to gain assistance (e.g., get Mom to do
27
28 something). These strategies increased with age and become more direct between about 5 and 18
29
30 months of age (Braungart-Rieker & Stifter, 1996; Mangelsdorf et al., 1995). As described by
31
32 Barrett and Campos (1991), sometime early in the second half of the first year of life, infants
33
34 develop the ability to direct their facial responses in ways that elicit support or guide the
35
36 instrumental actions of others. Other adaptive strategies for support seeking also emerge around
37
38 this time, such as seeking eye contact with caregivers when soothing or other forms of assistance
39
40 are desired (Kopp, 1989).
41
42
43
44

45
46 Table 7 (see web resources) summarises findings for support-seeking from 46 studies
47
48 focusing on children age 4 and older, and includes 80 age comparisons or correlations. Taken
49
50 together, findings suggested decreases or stability in use of support-seeking coping with age: 37
51
52 comparisons revealed no differences or associations (yellow in Table 7) and 23 found decreases
53
54 (red in Table 7), whereas only 20 reported increases (green in Table 7). However, more order was
55
56 detected, particularly after considering developmental levels included in the comparisons and
57
58
59
60

1
2
3 whether measures focused only on support-seeking or combined support-seeking with other
4 families. Findings are graphically depicted in Figure 3.
5
6

7
8 “Pure” support-seeking measures. In terms of scale content, 41 comparisons (denoted
9 with a + in Table 7) were identified that relied on measures focusing *only* on support-seeking; the
10 majority of these (38 comparisons) mixed help-seeking and comfort-seeking in their measures.
11
12 Of these, 23 showed no differences, 11 found decreases, and 7 found increases, but the pattern
13 became clearer when developmental level was considered.
14
15
16
17
18

19
20 Ten comparisons focused on *middle childhood* (ages 7 to 12): Six of these revealed
21 decreases, three found no differences, and only one found an increase. Decreases were found all
22 across this age range (from 5-8 to 10-12) and across stressors involving achievement, peers,
23
24 distress, self-identified issues, and uncontrollable problems. Ten comparisons spanned from
25
26
27 *childhood to adolescence* (e.g., 5-15, 7-16). All but one found no age differences.
28
29
30

31
32 Fourteen comparisons included *adolescents* (ages 12 to 24). Of these, nine found no
33 differences and five found increases. No differences were found all across this age range (e.g.,
34 12-16, 16-20) and across a range of stressors, including interpersonal, school, self-identified,
35
36 multiple different stressors, and in general. The five comparisons that found increases were also
37
38 across the entire age range (e.g., 11-13, 16-20) and across different stressors (peer; general; self-
39
40 identified; general).
41
42
43
44

45
46 *Sources of support.* One of our expectations was that children would increasingly turn to
47 peers as sources of support across later childhood and early adolescence, especially for dealing
48
49 with issues in which peers are perceived to have expertise, such as homework and social
50
51 problems. However, few of the measures distinguished the source of social support. Most
52
53 combined support from parents and other family members with support from friends, and
54
55 sometimes from teachers or other adults; often the referent was “someone,” as in “I talked to
56
57
58
59
60

1
2
3 someone about it.” One study that did distinguish peers from adults as sources of support (S5)
4
5 found that younger children (ages 5-6) preferred adults to peers, but by primary school (ages 7-8),
6
7 children began to prefer peers to adults. However, by the end of childhood (ages 10-11), children
8
9 began to prefer adults to peers in dealing with uncontrollable stressors (such as medical
10
11 situations). Two additional comparisons that explicitly targeted friends as sources of support
12
13 found no association with age across ages 12 to 18. However, the specific stressor was not
14
15 distinguished; these two studies examined coping in general.
16
17
18

19
20 In one notable study (S39), approach coping in the form of talking with adults for
21
22 guidance to solve a problem was positively correlated with age (12 to 18 years). In an additional
23
24 study (S36), support-seeking from family and friends was combined with information seeking
25
26 from professionals; this was a common strategy during adolescence and showed linear increases
27
28 between ages 12 to 15 as well as ages 16 to 19. An additional study that examined seeking
29
30 guidance from professionals (without combining it with general support-seeking, S40c) found
31
32 that this strategy was not very common during adolescence, but increased in use from age 14 to
33
34 16 (S40c2). Taken together, these comparisons suggest that young people may continue to seek
35
36 help and information from adults, and this might even increase with age, whereas emotional
37
38 support seeking from adults may decline as emotional self-regulation and emotional support
39
40 seeking from peers increases.
41
42
43
44

45
46 *Support-seeking as part of active coping.* Support-seeking was combined with ways of
47
48 coping from several other families. The most common was to include support-seeking with
49
50 instrumental action or problem-solving, often referred to as “approach” or “active” coping (see
51
52 section on problem-solving and support-seeking). Of 11 comparisons using this combination (^a in
53
54 Table 7), two found increases, six found decreases, and three found no differences. Increases
55
56 were found in combinations that were labeled as “adaptive approach” or “direct problem-
57
58
59
60

1
2
3 solving,” suggesting that problem-solving predominated. All six of the decreases focused on
4
5 using a combination of support-seeking and problem-solving to cope with distress, pain, cancer,
6
7 or self-identified, mostly interpersonal, problems.
8
9

10 *Support-seeking as part of emotion management.* In 11 comparisons, support-seeking was
11
12 combined with other constructive strategies for emotion management, such as problem-solving
13
14 and negotiation or distraction (^c in Table 7). Six of these studies found increases from childhood
15
16 to adolescence (e.g., ages 6-12, 13-18) and five found no differences across the same age range.
17
18

19 *Support-seeking as part of emotion-focused coping.* In six comparisons, support-seeking,
20
21 usually comfort-seeking, was combined with other strategies used to deal with distress, such as
22
23 escape and social isolation (^p in Table 7). Three of these comparisons found decreases across
24
25 adolescence (ages 8-16) or larger age ranges (ages 14-46), whereas three comparisons found no
26
27 differences across approximately the same ages (8-18, 10-15, 14-18). None found increases.
28
29

30 *Summary.* A focus on comparisons that included “pure” measures of support-seeking,
31
32 which typically combined help- and comfort-seeking, revealed that, as would be expected, this
33
34 was the most frequently used strategy for coping with problems and distress for young children.
35
36 Although support-seeking remained a common coping strategy, its use decreased during
37
38 childhood (ages 7-12), and then levelled off during adolescence. A recent study of utilisation of
39
40 attachment figures in middle childhood produced a similar pattern of findings (Kerns, Tomich, &
41
42 Kim, 2006): Although children in third and sixth grades indicated that they would typically turn
43
44 to parents when sick, scared, or sad (85-98% of the time), the sixth graders (compared to third
45
46 graders) reported lower levels of reliance on their mothers and fathers in times of stress.
47
48
49
50
51

52 There were some indications that the preferred source of support shifted from adults to
53
54 peers starting in late childhood and early adolescence, even though adolescents continued to rely
55
56 on adults for guidance and to deal with uncontrollable stressors. Another recent study provides
57
58
59
60

1
2
3 additional insight into sources of support (Crystal, Kakinuma, DeBell, Azuma, & Miyashita,
4
5 2008). Using an open-ended format to ask children in grades 6, 8, and 10 whom they rely on to
6
7 help them with certain tasks (e.g., cheering them up when they are upset, helping fix a problem,
8
9 homework), researchers distinguished among self, family, and peers, ranging from 0 (not
10
11 mentioned as a source of support) to 1 (mentioned at least once). Although youth most frequently
12
13 identified family at all ages, significant grade differences were found for each source of support.
14
15 Compared to younger children, adolescents relied less on their family members ($M_s = .78, .65,$
16
17 $.56$, for grades 6, 8, and 10, respectively), and more on themselves ($M_s = .13, .17, .21$) and their
18
19 peers ($M_s = .13, .20, .29$).

20
21
22
23
24 Distinguishing ways of coping combined with support-seeking revealed some coherence
25
26 in the pattern of findings. When support-seeking was combined with adaptive problem-solving,
27
28 this combination showed increases during the ages when problem solving is increasing (ages 5-
29
30 11), but decreases predominated from ages 7 to 14 when this combination was aimed at coping
31
32 with interpersonal problems or with uncontrollable stressors, pain, or distress, perhaps reflecting
33
34 the fact that these latter stressors were found to be increasingly dealt with using distraction across
35
36 this age range. Increases or no differences were found from childhood to adolescence when
37
38 support-seeking was combined with other adaptive strategies of “emotion management” (such as
39
40 distraction or negotiation). However, comparisons involving “emotion-focused coping” which
41
42 combined support-seeking with escape, venting, or emotion suppression, revealed lower levels
43
44 with increasing age or no differences across the same age range.

45 46 47 48 49 *Escape*

50
51
52 Findings for escape from 37 studies involving 64 age comparisons or correlations with
53
54 age are summarised in Table 8 (see web resources). Findings suggested a pattern of no
55
56 differences or lower levels of escape coping with increasing age: 32 comparisons found no
57
58
59
60

1
2
3 differences (yellow in Table 8) and 22 revealed decreases (red in Table 8), whereas only 10
4
5 reported increases (green in Table 8). At the same time, a closer examination of the findings,
6
7 based on the criteria from the developmental framework, suggested additional order. It was
8
9 useful to consider the content of scales, the age groups included in the comparisons, and the
10
11 nature of the stressor.
12
13

14
15 “Pure” escape measures. Only 22 comparisons relied on measures including only the
16
17 escape family (i.e., attempts to leave the distressing situation or to avoid direct action to resolve a
18
19 problem, denoted with + in Table 8). These comparisons suggested no differences (13
20
21 comparisons) or decrease (6 comparisons); only 3 comparisons showed increases. Most studies
22
23 focused on cognitive escape (e.g., wishful thinking, minimisation, denial; 8 comparisons, ^c in
24
25 Table 8) or a combination of behavioural and cognitive (or unspecified modes) of escape (8
26
27 comparisons, ^m in Table 8). Six comparisons focused exclusively on behavioural escape (^b in
28
29 Table 8); five of these examined young children (e.g., ages 3-5, 6-8), three with observations and
30
31 two with maternal ratings.
32
33
34
35

36
37 In general, studies reporting mean levels suggested that, on the one hand, escape is the
38
39 most common of the maladaptive coping strategies (compared to, for example, opposition, social
40
41 isolation, or catastrophising). On the other hand, compared to more adaptive strategies, such as
42
43 problem-solving, distraction, or support-seeking, escape is not a very common way of coping in
44
45 childhood or adolescence. One possible developmental period when escape seems to be more
46
47 common was during early childhood (ages 3-5, 6-8) when behavioural escape or avoidance was
48
49 frequently used in response to one’s own distress or to peer provocation.
50
51

52
53 In eleven of the 22 comparisons using measures of “pure” escape, there was an overall
54
55 pattern of low levels of use and no age differences: during early childhood (ages 4-6; 5-11; 6-8),
56
57 middle childhood: (ages 8-11; 8-14; 9-12) from childhood to adolescence (ages 7-18; 9-15; 10-
58
59
60

1
2
3 13; 10-14) and during adolescence (ages 13-20). Comparisons that found decreases in escape
4
5 were concentrated during late childhood (ages 7-10, 8-11, 9-10, and 9-14) and applied to dealing
6
7 with social stressors or one's own distress. The few comparisons showing increases in escape
8
9 were found during early adolescence (ages 9-15, 10-13) in 3 studies that included cognitive
10
11 escape (e.g., "I tell myself it doesn't matter"), although overall usage still remained low.
12
13

14
15 *Escape as part of maladaptive coping.* Nineteen comparisons combined escape coping
16
17 with maladaptive coping from other families (e.g., aggression, isolation, helplessness, ^t in Table
18
19 8). The pattern of age-related decreases for these comparisons was more pronounced than for
20
21 those comparisons focusing only on more "pure" escape: eight comparisons showed decreases,
22
23 eight found no differences, and three showed increases. Again, usage was generally low, except
24
25 for behavioural indicators observed in one study of young children in uncontrollable situations.
26
27

28
29 Age-related declines in maladaptive coping combined with escape were concentrated in
30
31 childhood, starting earlier than declines found with measures tapping only escape (e.g., ages 4-6,
32
33 5-11, 8-18). Comparisons finding no age differences were distributed across early childhood
34
35 (ages 4-10), childhood (ages 5-11), from childhood to adolescence (ages 7-18; 10-14) and in
36
37 adolescence (ages 13-18; 14-18). The four comparisons showing increases in maladaptive coping
38
39 were found during early adolescence (ages 10-14; 10-15; 12-15; 12-15), notably in the academic
40
41 domain. Four comparisons combined escape with substance use as well as with other
42
43 maladaptive forms of coping. One of these comparisons found a longitudinal increase in early
44
45 adolescence (age 12-15), two comparisons showed decreases (ages 12-17; 16-19), and one found
46
47 no differences (age 14-18).
48
49
50
51

52
53 *Escape combined with distraction.* Measures that combined escape with distraction as a
54
55 form of "avoidance" coping were used in 23 comparisons (^d in Table 8). Comparisons utilising
56
57 this combination were the ones most likely to show increases (6 comparisons), although this was
58
59
60

1
2
3 still less common than finding decreases in escape (11 comparisons) or no differences (6
4
5 comparisons). Some of the increases were found in the same domains in which we found
6
7 increasing use of distraction (e.g., dealing with distress and uncontrollable stressors), although
8
9 three other comparisons involving distress showed no differences and one showed decreases.
10
11

12
13 Decreases in combinations of escape and distraction were concentrated during the
14
15 adolescent transition (ages 5-8 vs. 12-15; 6-12; 8-14). However, comparisons that found no
16
17 differences also examined adolescents of the same age (6-12; 8-14; 12-18) as well as younger
18
19 children (6-8) and older adolescents (13-20 and adolescents vs. adults). Three studies combined
20
21 escape with adaptive forms of coping besides distraction, referring to them as primary control
22
23 coping (combining escape with problem-solving, direct action, comfort-seeking), catastrophising
24
25 (combining escape with support-seeking), or wishful thinking (combining cognitive escape with
26
27 optimism). One of these unusual combinations showed a decrease, whereas two showed no age
28
29 differences across childhood to adolescence (ages 8-16, 8-18, 12-18).
30
31
32

33
34 *Summary.* Although it was the most common maladaptive way of coping, the use of
35
36 escape to deal with stress was generally infrequent across childhood and adolescence. The only
37
38 exception might be the use of behavioural escape in early childhood to deal with peer
39
40 provocation or uncontrollable stressors. Few age differences or changes in escape were found
41
42 when measures tapped only the escape family. When age differences were revealed, however,
43
44 they were predominantly decreases in escape concentrated during late childhood, when escape
45
46 was used increasingly less often to deal with one's own distress or with interpersonal stressors.
47
48 The few comparisons that found increases in escape typically involved increasing use of
49
50 cognitive modes of escape during early adolescence.
51
52
53

54
55 When escape was combined with other maladaptive strategies (such as aggression,
56
57 helplessness, or rumination), usage was still low, but the pattern of age-related decreases was
58
59
60

1
2
3 more pronounced and started already in early childhood. “Avoidance” aggregates which
4
5 combined escape with a more adaptive form of coping, namely, distraction, were the only escape
6
7 combinations likely to show increases, but increases in this kind of “avoidance” were still less
8
9 common than decreases (concentrated during the transition to adolescence) and no differences
10
11 (distributed across the entire age range). Aggregates that combined escape with substance use did
12
13 not show clear age-graded patterns, but a longitudinal study suggested an increase with age
14
15 during early adolescence.
16
17

18
19 A general pattern could be discerned across studies, although the tendency to examine
20
21 escape in combination with a range of disparate coping strategies makes these conclusions
22
23 tentative, so we do not illustrate them in a figure. Overall, studies suggested the low and steady
24
25 usage of escape across childhood and adolescence (except behavioural escape during preschool).
26
27 However, for pure escape measures, decreases were found starting in late childhood, and for
28
29 more maladaptive combinations, decreases were seen starting already in early childhood. The
30
31 only increases were found in cognitive forms of escape during early adolescence. Although
32
33 higher levels in older compared to younger age groups were sometimes found for combinations
34
35 that included distraction along with escape, it is likely that these combinations will no longer be
36
37 used in future studies, since structural analyses confirm that distraction and escape are not part of
38
39 the same higher-order family of coping (Ayers et al., 1996; Connor-Smith et al., 2000).
40
41
42
43
44

45 *Accommodation, Self-reliance, Rumination, and Opposition*

46
47 We also identified studies that included measures classified into one of four other
48
49 families of coping: accommodation (e.g., cognitive restructuring, focusing on the positive,
50
51 positive self-talk), self-reliance (e.g., accepting responsibility for the problem or solving the
52
53 problem, keeping feelings to oneself, self-regulation of emotions), rumination, and opposition
54
55 (e.g., aggression, blaming others). Of these, children and adolescents reported relatively frequent
56
57
58
59
60

1
2
3 use of accommodation to cope with stress (e.g., “I accepted the problem because nothing could
4 be done to change it”), but items were often combined with other commonly used coping
5 responses, such as problem-solving and distraction. Self-reliance was also common, whereas
6 levels of rumination and worry were moderate, and opposition was an infrequent response to
7 stress. All of these coping strategies were studied less frequently than (or were often combined
8 with) problem-solving, distraction, social support seeking, and/or escape.
9

10
11
12
13
14
15
16
17
18 *Accommodation.* Accommodation was the most frequently studied of this group of coping
19 families. Table 9 (see web resources) summarises 19 studies including 29 age comparisons
20 involving accommodation. Accommodation was frequently combined with items that measured
21 problem solving, support seeking, distraction and emotion regulation (P in Table 9), and this is
22 when age-related increases in accommodation were found between childhood and adolescence
23 (age 4-12, 7-10), during adolescence (age 12-15, 16-19), and between adolescence and
24 adulthood.
25
26
27
28
29
30
31
32

33
34 No age differences or changes in accommodative coping were found in nine studies
35 (highlighted in yellow in Table 9). In all these studies, items were *not* combined with problem
36 solving items, or measures referred more directly to minimising the stressor (e.g., “it is not a big
37 deal!”) and thought stopping rather than the use of positive self-talk and positive thinking
38 strategies to change appraisals of stressful events. In these studies, no age differences were found
39 during childhood (age 4-6, 8-11), between childhood and early adolescence (ages 8-14, 10-14)
40 and during adolescence (age 12-16, 13-20). Hence, accommodation is a common response to
41 stress among children and adolescents but it may be the more advanced cognitive processing
42 strategies that show increases rather than the ability to think positive thoughts or stop negative
43 ones. Finally, two studies reported lower accommodative strategies in adolescence compared to
44 late childhood and early adolescence (age 8-16, 9-14). In these studies, children completed the
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 Kidcope (Spirito et al., 1991) when thinking about homesickness at camp or a self-identified
4
5 stressor. However, it was not clear how distressing these events were to children and
6
7 accommodation items were combined with items assessing a range of potential responses (e.g.,
8
9 thinking about supportive others, doing fun things).
10
11

12 *Self-reliance.* Self-reliance was rarely assessed separately from other coping categories
13
14 and was most frequently combined with items that measured emotional expression or regulation.
15
16 However, three studies that included measures categorised as assessing self-reliance all revealed
17
18 increases with age: it was used more frequently among adolescents than children (ages 8-12, 9-
19
20 14; Ryan, 1989; Spirito et al., 1991) and was also found to be higher in middle compared to early
21
22 adolescence (age 12-16; Frydenberg & Lewis, 2000). This pattern is consistent with the study
23
24 described previously in which youth's reports of self-reliance showed linear increases from age
25
26 11 to 15 (Crystal et al., 2008).
27
28
29
30

31 *Rumination.* Rumination and/or submission were measured in 11 studies (Bernzweig,
32
33 Eisenberg, & Fabes, 1993; Brown et al., 1986, 1992; Frydenberg & Lewis, 2000; Garnefski et al.,
34
35 2002; Hempel & Petermann, 2005, 2006; Losoya et al., 1998; Newman, Murray, & Lussier,
36
37 2001; Phipps, Fairclough, & Mulhern, 1995; Thomsen et al., 2002). In general, the pattern of
38
39 age-related differences in rumination was difficult to discern because of the variety of ways of
40
41 assessing this strategy and forming composite scores. Nevertheless, worrying did seem to be
42
43 relatively stable in early adolescence (age 10-14; Hampel & Petermann, 2006) and within the age
44
45 range of 8 to 18 (Brown et al., 1986), but was higher in early adolescence (10-14) than in late
46
47 childhood (age 8-9; Hampel & Petermann, 2005), and higher in later adolescence than in
48
49 childhood (Brown et al., 1986) or early adolescence (Frydenberg & Lewis, 2000). Moreover,
50
51 adults reported more worry than adolescents (age 18-71; Garnefski et al., 2002). However, when
52
53 "giving up" was measured instead of worry, this coping response (perhaps a form of
54
55
56
57
58
59
60

1
2
3 helplessness) was rare, less common than worry, fairly stable in late childhood (age 6-8, 8-10;
4
5 Bernzweig et al., 1993; Newman et al., 2001), and was still rare but higher in early adolescence
6
7 than in childhood (age 4-12; Losoya et al., 1998).
8
9

10 *Opposition.* Opposition and aggression in response to stress were low in most studies, but
11
12 some age-related patterns were found. Aggression in response to stress, when reported by
13
14 teachers, declined between the ages of 4 to 6 and 6 to 8 and remained relatively stable until age
15
16 12 (Losoya et al., 1998). However, self-reports in eight studies revealed more use of verbal
17
18 aggression (e.g., “taking it out on others”), venting, and other forms of opposition during
19
20 adolescence when compared to late childhood (e.g., ages 7-16, 10-13, 12-15; Eschenbeck,
21
22 Kohlmann, & Lohaus, 2007; Griffith et al., 2000; Hampel & Petermann, 2006; Hoffman et al.,
23
24 1992; Roecker, Dubow, & Donaldson, 1996; Ryan, 1989; Seiffge-Krenke et al., 2009; Spirito et
25
26 al., 2001), most often in response to peer conflict or school problems. Three studies showed no
27
28 age differences in opposition during middle to late adolescence (age 13-18; 16-19) in response to
29
30 family problems, peer problems and self-identified stressors (Griffith et al., 2000; Groër,
31
32 Thomas, & Shoffner, 1992; Seiffge-Krenke et al., 2009). Finally, adults reported more opposition
33
34 and venting than adolescents in one study (age 12 -71; Garnefski et al., 2002).
35
36
37
38
39

40 *Integration of Developmental Findings across Families of Coping*

41
42

43 The study of a profile of stress responses distinguishes work on coping from research that
44
45 focuses on individual strategies, such as problem-solving or rumination. Hence, an important
46
47 goal of this review was to examine age trends in the organisation of coping actions. We focused
48
49 on the families of coping that were most commonly employed at each age, on findings within
50
51 studies about the trade-offs in use of different coping strategies, and, in the few studies that
52
53 conducted such analyses, on age differences or changes in the structure of coping. Our review
54
55 revealed several major age-related changes in profiles of coping. Our review
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
Preschool age. A clear trend detected across studies was that patterns of coping became more differentiated with age. Young children primarily seek support from adults or use overt behaviours to get what they want, overcome obstacles, stand their ground, distract themselves, or withdraw from stressful encounters. Support-seeking, especially from adults, seems to be an all-purpose strategy primed to back-up other coping actions: useful for regulating behaviour when instrumental actions are not effective, for regulating attention when behavioural distraction is not working, and for regulating emotion when stressors are too arousing. In this sense, support-seeking may be a safety valve that prevents frustration or failure from leading to more maladaptive reactions to stress, such as defeat, aggression, or outbursts. This could explain why the less adaptive families of coping, such as opposition, helplessness, submission, and passivity, are not normatively common even at this young age.

29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
In fact, the primary alternative to support-seeking that young children use when coping efforts are not working is behavioural escape or avoidance. They leave the scene of stressful encounters if they can. Although at older ages, when alternative strategies are available, escape may signal high stress reactivity or a lack of competent coping strategies (Compas et al., 2001), during preschool age and especially when dealing with peer provocations, escape or avoidance may be a preferred alternative to escalating conflict (Baumgartner & Strayer, 2008; Eisenberg et al., 1994). It may also be an avenue that allows young children to re-engage with the stressor after regrouping or calming down.

48
49
50
51
52
53
54
55
56
57
58
59
60
At the same time, support-seeking is likely to be more developmentally useful than escape in the face of obstacles and difficulties. Support-seeking, when it leads to cooperative joint coping between a child and a competent and supportive adult, may be a pathway to more independent and complex forms of problem-solving, negotiation, and emotion management (e.g., Neitzel & Stright, 2003; Zimmer-Gembeck, Lees, & Skinner, in press). Normative trends from

1
2
3 the current review support this: Across early childhood (especially the 5 to 7 year shift) when
4 support-seeking is high, decreasing reliance on escape (especially combined with other
5
6 maladaptive forms of coping, such as passivity) is accompanied by increasing use of problem-
7
8 solving and behavioural distraction (in situations in which distraction is not already high).
9

10
11 Consistent with work on attachment, this pattern suggests that an indicator of risk at preschool
12
13 age (and a marker of cumulative failure of social partners to provide support) would be reactions
14
15 to stressful encounters in which children primarily rely on social withdrawal and isolation.
16
17

18
19 Finally, young children's almost exclusive reliance on behavioural strategies when coping makes
20
21 clear why the use of observational methods to capture coping is prevalent in studies of young
22
23 children (and infants and toddlers) but is rarely seen in older children, adolescents, or adults,
24
25 when cognitive strategies are also prominent.
26
27

28
29 *Middle childhood.* As children start school, they seek to become increasingly self-reliant
30
31 and their coping strategies become more differentiated and sophisticated. As pointed out by
32
33 Compas et al. (2001), "More complex methods of achieving the goals of emotional palliation and
34
35 problem-solving emerge in early to middle childhood, with the development of more complex
36
37 language and metacognitive capacities. These include cognitive reframing or restructuring a
38
39 problem situation, cognitive representations of absent caregivers, using self-talk to calm negative
40
41 emotions, and generating alternative solutions to solve problems" (p. 91). Our review revealed
42
43 increasing differentiation during middle childhood when cognitive strategies emerge across all
44
45 families of adaptive coping, especially mastery-related problem-solving strategies, complex
46
47 distraction techniques, and the capacity to intentionally direct attention to positive features of
48
49 stressful situations. In fact, the emergence of cognitive strategies may account for some of the
50
51 increases in self-reliance seen across this age range.
52
53
54
55

56
57 At the same time, support seeking becomes more differentiated in terms of sources and
58
59
60

1
2
3 reasons for seeking support. Although they continue to rely on parents, children find additional
4 sources of support (e.g., from peers and teachers), and so seeking emotional (but not
5 informational) support from caregivers declines. Children gain a greater understanding of
6
7
8
9
10 situational specificity – older children and adolescents become increasingly more selective about
11 whom to go to for support when dealing with different kinds of stressful situations. They can use
12 these more specific supports (such as advice) to renew independent coping efforts, better
13 coordinated with environmental contingencies and interpersonal options. It is likely that
14
15
16
17 children's growing abilities to take the perspective of others allows them to better coordinate
18 their coping with social partners and to more effectively negotiate in situations of interpersonal
19 stress (the most common and most stressful situations identified by children and adolescents).
20
21
22
23
24
25
26
27 Unfortunately, however, few measures of coping include negotiation in their profile of strategies,
28 so this expectation could not be examined using findings from current studies. As cognitive
29 strategies for dealing with problems and managing emotions are added to behavioural strategies
30 during middle childhood, it is not surprising that clear declines in escape and other maladaptive
31 forms of coping are also apparent.
32
33
34
35
36
37

38 *Adolescence.* Studies that directly examined the breadth of coping strategies found that, in
39 general, children and adolescents' coping repertoires increase with age. As children grow older,
40 instrumental action is supplemented by playful problem-solving, which are among the most
41 common strategies adolescents use when they encounter challenges. Distraction tactics also
42 become more diverse; compared to children, adolescents more often draw upon *both* behavioural
43 and cognitive strategies. The use of both behavioural and cognitive strategies may also occur
44 with the coping strategy of escape, although findings were less clear. Further, adolescents are
45 better able to attend to and reflect on their own internal emotional states, and increasingly rely on
46 more sophisticated strategies to deal with emotions. During adolescence, such emotion-focused
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 strategies can also lead to more rumination, which may even become more common into early
4
5 adulthood. At the same time, other useful coping strategies are on the rise, including positive
6
7 self-talk and intentional self-regulation of emotion. Adolescent coping is increasingly self-reliant
8
9 as cognitive strategies become more powerful in guiding action and regulating emotions in the
10
11 face of situational pressures.
12
13

14
15 Other indications of increasing differentiation were evident when we compared general
16
17 findings across studies of older adolescents to those of children and younger adolescents -- age
18
19 differences in coping among older adolescents are more dependent on the type of adversity
20
21 studied (e.g., coping in response to specific, self-identified stressors vs. general coping patterns).
22
23 An expanding and differentiated repertoire of coping actions coupled with an increasing
24
25 appreciation of the specific requirements of different stressful situations is associated with
26
27 increases in coping flexibility from early childhood to adolescence. As noted by Compas et al.
28
29 (2001), "Greater diversity and flexibility in the range of coping responses available to the
30
31 individual is expected to develop during middle childhood and adolescence. In addition, with
32
33 increasing metacognitive skills in early adolescence, a greater ability to match coping efforts to
34
35 the perceived objective characteristics of stress is expected" (p. 91). However, it is important to
36
37 note that, although some studies did provide support for increased flexibility of coping among
38
39 adolescents, especially older adolescents compared to younger groups, it is possible that *less*
40
41 flexibility will occur with age as young people more routinely rely on the coping strategies that
42
43 work well in particular situations (e.g., problem-solving for controllable stressors compared to
44
45 distraction for uncontrollable ones; Sorgen & Manne, 2002).
46
47
48
49
50
51

52
53 Results also clearly showed that early strategies, such as behavioural distraction or
54
55 contact seeking, do not disappear. In fact, one trend, which was hard to verify with the current set
56
57 of studies, suggested that it is adaptive to maintain access to these more "basic" coping strategies.
58
59
60

1
2
3 Early behavioural forms of coping may actually be more effective when dealing with extreme
4
5 forms of stress, and so older children and adolescents (maybe even increasingly and
6
7 intentionally) continue to draw upon them when they are needed. For example, the supposition
8
9 that behavioural distraction (i.e., doing something fun) is more effective than cognitive
10
11 distraction (i.e., thinking about something pleasurable) in taking one's mind off seriously
12
13 troubling events, may account for the increased use of distraction even during adolescence when
14
15 dealing with life-threatening uncontrollable events, like parental cancer.
16
17
18

19
20 Many of these age differences suggest a pattern of normative improvements, as would be
21
22 expected. However, some age comparisons suggest increasing struggles with stressors and
23
24 coping, especially during the transition to adolescence (Donaldson, Prinstein, Danovsky, &
25
26 Spirito, 2000). Compared to older adolescents, young adolescents sometimes showed lower
27
28 levels of help-seeking and effort expenditure even in domains where they would be helpful (e.g.,
29
30 school). Moreover, although overall levels were low, there is a rise during early adolescence in
31
32 some of the potentially more maladaptive stress reactions, such as cognitive escape, rumination,
33
34 verbal aggression, and venting. It is even possible that developmental advances may introduce
35
36 new vulnerabilities. For example, young adolescents' increasing capacity to reflect on their own
37
38 emotions brought with it increasingly sophisticated emotion regulation strategies, such as
39
40 positive self-talk. However, it may also open the door to emotional vulnerabilities, such as
41
42 increases in rumination and blaming others. In a similar vein, the same forward-looking
43
44 capacities that allow adolescents to *plan* for the future also allow them to *worry* about the future.
45
46 And the increasing autonomy of adolescents, although generally a positive development, may
47
48 also permit them to escape more effectively from home, when, for example, home contains a
49
50 parent suffering from cancer. Coping frameworks will need to be able to account for patterns of
51
52 developmental gains *and* losses (Baltes, 1987).
53
54
55
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Summary. Overall, the developmental trends we identified are congruent with the picture painted in major reviews of coping during childhood and adolescence (Decker, 2006; Eisenberg et al., 1997; Fields & Prinz, 1997; Holt et al., 2005; Losoya et al., 1998). However, the inclusion of many additional studies and the use of organisational strategies suggested by the developmental framework provided a much clearer picture of quantitative and qualitative age differences in coping, starting in preschool and ending in early adulthood. One thing that previous reviewers agreed upon was the marked inconsistencies in age trends for every kind of coping examined. This conclusion can now be updated by the sets of different trends identified for each family of coping based on the particular combinations of coping used in measures (weighting especially heavily studies involving “pure” measures), on the specific age ranges (focusing especially on key developmental transitions), and on the target stressor (especially its controllability).

When considering the findings as a whole, it is clear that a major complication in identifying age trends is that at least two different kinds of developmental changes can be distinguished. On the one hand, there are age-graded increases in children’s general coping *capacities*, as seen in cognitive and meta-cognitive elaborations of problem-solving (from instrumental action to planful problem-solving), distraction (adding cognitive to behavioural strategies), and support-seeking (from reliance on adults to more self-reliance). On the other hand, there are improvements with age in the *deployment* of specific coping strategies according to which ones are most effective in dealing with particular kinds of stressors, as seen in the increasing use of problem-solving for dealing with difficulties in school or sports and the increasing use of distraction for dealing with uncontrollable stressors or to manage emotions. Combining these two trends, however, means that children and adolescents may show decreasing *use* of strategies that they are increasingly *capable* of deploying, as they become both more self-

reliant and more discriminating about which strategies are most effective for dealing with different kinds of stressors.

Recommendations for Future Research on the Development of Coping

Existing studies provide important information, but their limitations are also evident. In many studies, the development of coping was not the central empirical question, sometimes resulting in unclear or incomplete reports of findings. About one-third of the studies had small sample sizes (< 100) and only ten were longitudinal. It was not possible in the review to completely overcome problems created by inconsistencies in how coping was assessed. Coding coping measures according to the families brought some order, but it could not add ways of coping that had not been assessed nor could it "unmix" ways of coping that had been combined within measures. For example, combining "practical" ways of coping during preschool disguises the potential shift away from support seeking and toward more independent action. Or using "emotion-focused" combinations during adolescence obscures the potential shift away from venting and toward more controlled emotional expression. At the most general level, the biggest limitation of studies of age differences and changes is that decisions about how to empirically investigate them, such as which ways of coping to measure and what ages to study, were rarely made on the basis of developmental theories of coping. This, of course, reflects a limitation, not of the researchers, but of the field (Compas, 1998; Compas et al, 1992; Coping Consortium, 1998, 2001; Eisenberg et al., 1997; Skinner & Zimmer-Gembeck, 2007).

Several practical recommendations for future research on the development of coping follow directly from the current review. They focus on issues of design, such as the selection of ways of coping, age groups, and target stressors, and of data analysis, such as the variety of ways to examine different kinds of potential developmental changes. There is also a more general recommendation that research would benefit from theories that integrate the current findings with

1
2
3 closely-related research on the development of individual ways of responding to and dealing with
4 stress, failure, and challenge, which are currently distributed across a variety of areas (Compas,
5
6 1987, 1998; Eisenberg et al., 1997; Skinner & Zimmer-Gembeck, 2007; Wolchik & Sandler,
7
8 1997; Zimmer-Gembeck, Lees, Skinner, & Bradley, 2009).

9
10
11
12 *Design issues.* A key recommendation for future studies would be for researchers to more
13 carefully coordinate their selection of age groups and gaps with the specific stressors they
14
15 examine and the families of coping (and members within families) that they assess. For example,
16
17 if preschool is the target age, then it would be important to assess multiple practical ways of
18
19 coping from different families separately, and to distinguish situations in which trusted adults are
20
21 available from those in which they are not. Moreover, an analysis of the *forms* of support sought
22
23 or spontaneously provided, and the balance between individual and interpersonal coping, might
24
25 reveal additional developmental trends. The five-to-seven shift might be an especially
26
27 informative age window during which to detect children's emerging self-reliance, and how they
28
29 become better able to coordinate their coping with others in the face of higher levels of stress.
30
31
32
33
34
35

36
37 If the focus is late childhood to early adolescence, then a variety of more cognitive
38
39 strategies from different families should be assessed in addition to, and separately from,
40
41 behavioural strategies, and situations that are controllable or escapable should be distinguished
42
43 from those that are not. Moreover, a focus on how children are able to switch back and forth
44
45 *between* behavioural and cognitive forms within the same family, and between different families
46
47 to deal with different stressors, might reveal interesting developmental trends. The shift from 10-
48
49 to-12 years of age might be an especially informative age window during which to detect
50
51 increasing differentiation and flexibility of strategy use.
52
53

54
55 *Selection of stressors and domains.* To get a clearer picture of developmental differences
56
57 and changes, it will be necessary to consider the stressors children are facing when they
58
59
60

1
2
3 formulate their coping responses. On the one hand, if children are asked about specific stressors
4
5 or observed in specific stressful situations, then researchers can analyse whether children
6
7 increasingly prefer the family of coping that is most suitable for dealing with that class of stressor
8
9 or whether children increasingly use more developmentally advanced ways of coping from the
10
11 appropriate family. On the other hand, if researchers study self-identified stressors, they should
12
13 focus instead on the emergence of new kinds of developmentally-graded members across the
14
15 wide variety of families that may be used to deal with unselected stressors, looking for more
16
17 general shifts in forms of coping, for example, from interpersonal to individual forms during the
18
19 five-to-seven shift or from behavioural to cognitive means during late childhood.
20
21
22
23

24
25 It is important to point out, however, that this latter strategy may interfere with the
26
27 detection of developmental differences. If children and adolescents report their coping in
28
29 response to unspecified events, it will always be difficult to determine whether age-related
30
31 changes are due to actual changes in how children cope or to changes in the kinds of stressors
32
33 that they experience or report (Folkman, Lazarus, Pimley, & Novacek, 1987). Hence, future
34
35 studies that have the development of coping as their focus should utilise methods that allow the
36
37 stressor to be specified, for example, by observing or assessing domain specific stressors, specific
38
39 hypothetical stressors, or requesting children to self-identify a stressor within a specific domain.
40
41 If researchers elect to use unspecified self-identified stressors, then they can classify stressors
42
43 *post hoc* themselves or they can ask respondents to rate the events on important dimensions, such
44
45 as severity or controllability. If all the current studies had used such strategies, it might have been
46
47 easier to integrate their findings on age trends.
48
49
50
51

52
53 *Analysis of developmental change.* Our review suggests that, in addition to documenting
54
55 the ages at which specific ways of coping first appear and examining age differences in mean
56
57 level of each way of coping, it would be informative to analyse developmental differences in the
58
59
60

1
2
3 structure of coping. Previous studies offer several strategies for investigating structural change,
4 including the analysis of age differences in the factor structure of multiple ways of coping, in the
5 zero-order correlations among different ways of coping (or the inter-factor correlations), and in
6 the number and variety of coping strategies available or utilised. Recent studies have taken
7 advantage of growth modelling to identify age related trends in longitudinal data (e.g., Seiffge-
8 Krenke et al., 2009; Vierhaus & Lohaus, 2009), opening up the possibility of detecting piecewise
9 or curvilinear changes.
10
11

12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Ingenuity is needed to devise empirical indicators for other meaningful developments, such as partial substitution of old forms of coping with new, flexibility in use of different means, changing fallbacks, hierarchies, or sequences of strategies, and balances between advances and vulnerabilities. There is much work to be done in order to examine how coping strategies become more organised and flexible in their deployment, while they also may be changing in form and function with age. If previous research on age differences and age changes in ways of coping is one foundation upon which new and improved developmental frameworks will be constructed, then extracting lessons from this body of work, which was the purpose of the current review, can be considered a useful contribution to these endeavours.

Footnotes

¹ Since stress reactions and action regulation appear to have different underlying temperamental bases and different developmental timetables (Compas et al., 2001; Eisenberg et al., 1997; Metcalfe & Mischel, 1999; Rothbart, Derryberry, & Posner, 1994), it is likely that research on normative age changes in stress reactivity will eventually contribute to a more complete picture of major developments in coping.

² It is important to note that the majority of the studies reported age differences or correlations with age; only 10 included longitudinal data. Nevertheless, for brevity's sake, we sometimes use the term "increases" as shorthand to refer to positive correlations with age, age differences in which older children have higher mean levels than younger children, and actual intraindividual increases. We also use "decreases" as shorthand to refer to negative correlations with age, age differences in which older children have lower mean levels than younger children, and actual intraindividual decreases. We use the term "change" only to refer to longitudinal findings.

References

- Aldwin, C. M. (2007). *Stress, coping, and development: An integrative perspective (second ed.)*. New York: Guilford Press.
- Altshuler, J. L., Genevro, J. L., Ruble, D. N., Bornstein, M. H. (1995). Children's knowledge and use of coping strategies during hospitalization for elective surgery. *Journal of Applied Developmental Psychology, 16*, 53-76.
- Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M. W. (1996). A dispositional and situational assessment of children's coping: Testing alternative models of coping. *Journal of Personality, 64*, 923-958.
- Baltes, P. B. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology, 23*, 611-626.
- Band, E. B. (1995). Coping among school-aged children: The influence of development and environment. In J. Valsiner (Ed.), *Social co-construction and environmental guidance in development* (pp. 199-224). Westport, CT: Ablex Publishing.
- Barrett, K. C., & Campos, J. J. (1991). A diacritical function approach to emotions and coping. In E. M. Cummings, A. L. Greene, & K. H. Karraker (Eds.) *Life-span developmental psychology: Perspectives on stress and coping* (pp. 21-41). Hillsdale, NJ: Erlbaum.
- Baumgartner, E., & Strayer, F. F. (2008). Beyond fight or flight: Developmental changes in children's coping with peer conflict. *Acta Ethologica, 11*, 16-25.
- Bernzweig, J., Eisenberg, N., & Fabes, R. A. (1993). Children's coping in self- and other-relevant contexts. *Journal of Experimental Child Psychology, 55*, 208-226.
- Block, J. H., & Block, J. (1980). The role of ego-control and ego-resiliency in the organization of behaviour. In W. A. Collins (Ed.), *Minnesota Symposium on Child Psychology: Vol. 13*.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Development of cognition, affect, and social relations (pp. 39-101). Hillsdale, NJ: Erlbaum.

Braungart-Rieker, J. M., & Stifter, C. A. (1996). Infants' responses to frustrating situations: Continuity and change in reactivity and regulation. *Child Development, 67*, 1767-1779.

Bridges, L. J. (2003). Coping as an element of developmental well-being. M. Bornstein, L. Davidson, C. L. Keyes, & K. A. Moore (Eds.), *Well-being: Positive development across the life course* (pp. 155-166). Mahwah, NJ: Erlbaum.

Bridges, L. J., & Grolnick, W. S. (1995). The development of emotional self-regulation in infancy and early childhood. In N. Eisenberg (Ed.), *Social development: Vol. 15. Review of Personality and Social Psychology* (pp. 185- 211). Thousand Oaks, CA: Sage.

Bronson, M. B. (2000). *Self-regulation in early childhood: Nature and nurture*. New York: Guilford Press.

Brown, J. M., O'Keeffe, J., Sanders, S. H., & Baker, B. (1986). Developmental changes in children's cognition to stressful and painful situations. *Journal of Pediatric Psychology, 11*, 343-357.

Campos, J. J., Campos, R. G., & Barrett, K. C. (1989). Emergent themes in the study of emotional development and emotion regulation. *Developmental Psychology, 25*, 394-402.

Campos, J. J., Frankel, C. B., & Camras, L. (2004). On the nature of emotion regulation. *Child Development, 75*, 377-394.

Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development, 75*, 317-333.

Compas, B. E. (1987). Coping with stress during childhood and adolescence. *Psychological Bulletin, 101*, 393-403.

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
- Compas, B. E. (1998). An agenda for coping research and theory: Basic and applied developmental issues. *International Journal of Behavioural Development*, 22, 231-237.
- Compas, B. E. (2009). Coping, regulation, and development during childhood and adolescence. In E. A. Skinner, & M. J. Zimmer-Gembeck (Eds.), *Coping and the development of regulation. New Directions in Child and Adolescent Development* (Vol. 124, pp. 87-99). San Francisco: Jossey-Bass.
- Compas, B. E., Connor, J., Osowiecki, D., & Welch, A. (1997). Effortful and involuntary responses to stress: Implications for coping with chronic stress. In B. H. Gottlieb (Ed.), *Coping with chronic stress* (pp. 105-130). New York: Plenum.
- Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, 127, 87-127.
- Compas, B. E., Malcarne, V. L., & Banez, G. A. (1992). Coping with psychosocial stress: A developmental perspective. In B. N. Carpenter (Ed.), *Personal coping: Theory, research, and application* (pp. 47-63). London: Praeger.
- Compas, B. E., Malcarne, V. L., & Fondacaro, K. M. (1988). Coping with stressful events in older children and young adolescents. *Journal of Consulting and Clinical Psychology*, 56, 405-411.
- Connor-Smith, J. K., Compas, B. E., Wadsworth, M. E., Thomsen, A. H., & Saltzman, H. (2000). Responses to stress in adolescence: Measurement of coping and involuntary stress responses. *Journal of Consulting & Clinical Psychology*, 68, 976-992.
- Coping Consortium (I. Sandler, B. Compas, T. Ayers, N. Eisenberg, E. Skinner, & P. Tolan) (Organizers) (1998, 2001). *New Conceptualizations of Coping*. Workshop sponsored by the Arizona State University Prevention Research Center. Tempe, AZ.

- Crystal, D. S., Kakinuma, M., DeBell, M., Azuma, H., & Miyashita, T. (2008). Who helps you? Self and other sources of support among youth in Japan and the USA. *International Journal of Behavioural Development*, 32, 496-508.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.
- Decker, C. L. (2006). Coping in adolescents with cancer. *Journal of Psychosocial Oncology*, 24, 123 - 140.
- Derryberry, D., Reed, M. A., & Pilkenton-Taylor, C. (2003). Temperament and coping: Advantages of an individual differences perspective. *Development and Psychopathology*, 15, 1049-1066.
- Donaldson, D. Prinstein, M. J., Danovsky, M., & Spirito, A. (2000). Patterns of children's coping with life stress: Implications for clinicians. *American Journal of Orthopsychiatry*, 70, 351-359.
- Eisenberg, N., & Fabes, R. A. (1992). Emotion, regulation, and the development of social competence. In M. S. Clark (Ed.), *Emotion and social behaviour. Review of personality and social psychology*, Vol. 14. (pp. 119-150). Thousand Oaks, CA: Sage.
- Eisenberg, N., Fabes, R. A., & Guthrie, I. K. (1997). Coping with stress: The roles of regulation and development. In S. A. Wolchik, & I. N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention* (pp. 41-70). New York: Plenum Press.
- Eisenberg, N., Valiente, C., & Sulik, M. J. (2009) How the study of regulation can inform the study of coping. In E. A. Skinner, & M. J. Zimmer-Gembeck (Eds.), *Coping and the development of regulation. New Directions in Child and Adolescent Development* (Vol. 124, pp. 75-86). San Francisco: Jossey-Bass.

- 1
2
3 Eschenbeck, H., Kohlmann, C.-W., & Lohaus, A. (2007). Gender differences in coping strategies
4
5 in children and adolescents. *Journal of Individual Differences*, 28, 18-26.
6
7
8 Fields, L., & Prinz, R. J. (1997). Coping and adjustment during childhood and adolescence.
9
10
11 *Clinical Psychology Review*, 17, 937-976.
12
13 Folkman, S., Lazarus, R., Pimley, S., & Novacek, J. (1987). Age differences and coping
14
15 processes. *Journal of Personality and Social Psychology*, 2, 171-184.
16
17
18 Fox, N. A., Henderson, H. A., Marshall, P. J., Nichols, K. E., & Ghera, M. A. (2005).
19
20 Behavioural Inhibition: Linking biology and behaviour within a developmental
21
22 framework. *Annual Review of Psychology*, 56, 235-262.
23
24
25 Frydenberg, E. (1997). *Adolescent coping: Theoretical and research perspectives*. New York:
26
27 Routledge.
28
29 Frydenberg, E., & Lewis, R. (2000). Teaching coping to adolescents: When and to whom?
30
31
32 *American Educational Research Journal*, 37, 727-745.
33
34 Garnezy, N., & Rutter, M. (Eds.). (1983). *Stress, coping, and development in children*.
35
36 Baltimore, MD: Johns Hopkins University Press.
37
38
39 Garnefski, N., Legerstee, J., Kraaij, V., van der Kommer, T., & Teerds, J. (2002). Cognitive
40
41 coping strategies and symptoms of depression and anxiety: A comparison between
42
43 adolescents and young adults. *Journal of Adolescence*, 25, 603-611.
44
45
46 Griffith, M. A., Dubow, E. F., & Ippolito, M. F. (2000). Developmental and cross-situational
47
48 differences in adolescents' coping strategies. *Journal of Youth and Adolescence*, 29, 183-
49
50 204.
51
52
53 Groër, M. W., Thomas, S. P., & Shoffner, D. (1992). Adolescent stress and coping: A
54
55 longitudinal study. *Research in Nursing and Health*, 15, 209-217.
56
57
58
59
60

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
- Gunnar, M. R., & Quevedo, K. (2007). The neurobiology of stress and development. *Annual Review of Psychology, 58*, 145-173.
- Haggerty, R. J. Sherrod, L. R. Garmezy, N., & Rutter, M. (Eds.). (1994). *Stress, risk, and resilience in children and adolescents: Processes, mechanisms, and interventions*. New York: Cambridge University Press.
- Hampel, P., & Petermann, F. (2005). Age and gender effects on coping in children and adolescents. *Journal of Youth and Adolescence, 34*, 78-83.
- Hampel, P., & Petermann, F. (2006). Perceived stress, coping, and adjustment in adolescents. *Journal of Adolescent Health, 38*, 409-415.
- Hoffman, M .A., Levy-Shiff, R., Sohlberg, S. C., & Zarizki, J. (1992). The impact of stress and coping: Developmental changes in the transition to adolescence. *Journal of Youth and Adolescence, 21*, 451-469.
- Holodynski, M., & Friedlmeier, W. (2006). *Development of emotions and emotion regulation*. New York: Springer.
- Holt, N. L., Hoar, S., & Fraser, S. N. (2005). How does coping change with development? A review of childhood and adolescence sport coping research. *European Journal of Sport Science, 5*, 25-39.
- Irion, J. C., & Blanchard-Fields, F. (1987). A cross-sectional comparison of adaptive coping in adulthood. *Journal of Gerontology, 42*, 502-504.
- Kerns, K. A., Tomich, P. L., & Kim, P. (2006). Normative trends in children's perceptions of availability and utilization of attachment figures in middle childhood. *Social Development, 15*, 1-22.
- Kochanska, G., Coy, K. T., & Murray, K. T. (2005). The development of self-regulation in the first four years of life. *Child Development, 72*, 1091-1111.

- 1
2
3 Kopp, C. B. (1982). Antecedents of self-regulation: A developmental perspective. *Developmental*
4
5 *Psychology, 18*, 199-214.
6
7
8 Kopp, C. B. (1989). Regulation of distress and negative emotions: A developmental view.
9
10 *Developmental Psychology, 25*, 343-354.
11
12
13 Kopp, C. B. (2003). Self-regulation in children. In N. J. Smelser & P. B. Baltes (Eds.-in-Chief),
14
15 N. Eisenberg (Vol. Ed.), *International Encyclopedia of the Social and Behavioural*
16
17 *Sciences*. Elsevier: Oxford, Great Britain.
18
19
20 Losoya, S., Eisenberg, N., & Fabes, R. A. (1998). Developmental issues in the study of coping.
21
22 *International Journal of Behavioural Development, 22*, 287-313.
23
24
25 Mangelsdorf, S. C., Shapiro, J. R., & Marzolf, D. (1995). Developmental and temperamental
26
27 differences in emotion regulation in infancy. *Child Development, 66*, 1817-1828.
28
29
30 Metcalfe, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification:
31
32 Dynamics of willpower. *Psychological Review, 106*, 3-19.
33
34
35 Mischel, H. N., & Mischel, W. (1983). The development of children's knowledge of self-control
36
37 strategies. *Child Development, 54*, 603-619.
38
39
40 Murphy, L., & Moriarity, A. (1976). *Vulnerability, coping, and growth: From infancy to*
41
42 *adolescence*. New Haven: Yale University Press.
43
44
45 Neitzel, C., & Stright, A. D. (2003). Mother's scaffolding of children's problem-solving:
46
47 Establishing a foundation of academic self-regulatory competence. *Journal of Family*
48
49 *Psychology, 17*, 147-159.
50
51
52 Newman, R. S., Murray, B., & Lussier, C. (2001). Confrontation with aggressive peers at school:
53
54 Students' reluctance to seek help from the teacher. *Journal of Educational Psychology,*
55
56 *64*, 398-410.
57
58
59
60

- 1
2
3 Phipps, S., Fairclough, D. L., & Mulhern, E. K. (1995). Avoidant coping in children with cancer.
4
5 *Journal of Pediatric Psychology, 20*(2), 217-232.
6
7
8 Roecker, C. E., Dubow, E. F., & Donaldson, D. (1996). Cross-situational patterns in children's
9
10 coping with observed interpersonal conflict. *Journal of Clinical Child Psychology, 25*,
11
12 288-299.
13
14
15 Rossman, B. B. R. (1992). School-age children's perceptions of coping with distress: Strategies
16
17 for emotion regulation and the moderation of adjustment. *Journal of Clinical Psychology*
18
19 *and Psychiatry and the Allied Disciplines, 33*, 1373-1397.
20
21
22 Rothbart, M. K., Derryberry, D., Posner, M. I. (1994). A psychobiological approach to the
23
24 development of temperament. In J. E. Bates, & T. D. Wachs (Eds.), *Temperament:*
25
26 *Individual differences at the interface of biology and behaviour* (pp. 83-116). Washington,
27
28 DC: American Psychological Association.
29
30
31 Rueda, M. R., & Rothbart, M. K. (2009). The influence of temperament on the development of
32
33 coping: The role of maturation and experience. In E. A. Skinner, & M. J. Zimmer-
34
35 Gembeck (Eds.), *Coping and the development of regulation. New Directions in Child and*
36
37 *Adolescent Development* (Vol. 124, pp. 19-32). San Francisco: Jossey-Bass.
38
39
40
41 Ryan, N. M. (1989). Stress-coping strategies identified from school age children's perspective.
42
43 *Research in Nursing & Health, 11*1-122.
44
45
46 Ryan, R. M., & Connell, P. (1989). Perceived locus of causality and internalization: Examining
47
48 reasons for acting in two domains. *Journal of Personality and Social Psychology, 57*,
49
50 749-761.
51
52
53 Sandler, I. N., Wolchik, S. A., MacKinnon, D., Ayers, T. S., & Roosa, M. W. (1997). Developing
54
55 linkages between theory and intervention in stress and coping processes. In S. A. Wolchik
56
57
58
59
60

- 1
2
3 & I. N. Sandler (Eds.). *Handbook of children's coping: Linking theory, research, and*
4
5 *intervention* (pp. 3-40). New York: Plenum Press.
6
7
- 8 Seiffge-Krenke, I. (1995). *Stress, coping, and relationships in adolescence*. Hillsdale, NJ:
9
10 Erlbaum.
- 11
12 Seiffge-Krenke, I., Aunola, K., & Nurmi, J.-E. (2009). Changes in stress perception and coping
13
14 during adolescence: The role of situational and personal factors. *Child Development, 80*,
15
16 259-279.
17
18
- 19
20 Skinner, E. A. (1999). Action regulation, coping, and development. In Brandtstädter, J. B., &
21
22 Lerner, R. M. (Eds.), *Action and self-development* (pp. 465-503). Thousand Oaks, CA:
23
24 Sage.
25
26
- 27 Skinner, E. A., & Edge, K. (1998). Reflections on coping and development across the lifespan.
28
29 *International Journal of Behavioural Development, 22*, 357-366.
30
31
- 32 Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual Review*
33
34 *of Psychology, 58*, 119-144.
35
36
- 37 Skinner, E. A., & Zimmer-Gembeck, M. J. (2009). Challenges to the developmental study of
38
39 coping. In E. A. Skinner, & M. J. Zimmer-Gembeck (Eds.), *Coping and the development*
40
41 *of regulation. New Directions in Child and Adolescent Development* (Vol. 124, pp. 5-17).
42
43 San Francisco: Jossey-Bass.
44
45
- 46 Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of
47
48 coping: A review and critique of category systems for classifying ways of coping.
49
50 *Psychological Bulletin, 129*, 216-269.
51
52
- 53 Sorgen, K. E., & Manne, S. L. (2002). Coping in children with cancer: Examining the goodness-
54
55 of-fit hypothesis. *Children's Health Care, 31*, 191-207.
56
57
58
59
60

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
- Spear, L. P. (2000). Neurobehavioural changes in adolescence. *Current Directions in Psychological Science*, 9, 111-114.
- Spirito, A., Stark, L. J., Grace, N., & Stamoulis, D. (1991). Common problems and coping strategies reported in childhood and early adolescence. *Journal of Youth and Adolescence*, 20, 531-544.
- Spivak, G., & Shure, M. B. (1982). The cognition of social adjustment: Interpersonal problem-solving thinking. In b. B. Lahey & A. E. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 5, pp. 323-372). New York: Plenum.
- Sroufe, L. A. (1996). *Emotional development: The organization of emotional life in the early years*. New York: Cambridge University Press.
- Stern, M., & Zevon, M. A. (1990). Stress, coping, and family environment: The adolescent's response to naturally occurring stressors. *Journal of Adolescent Research*, 5, 290-305.
- Thomsen, A. H., Compas, B. E., Colletti, R. B., Stanger, C., Boyer, M. C., & Konik, B. S. (2002). Parent reports of coping and stress responses in children with recurrent abdominal pain. *Journal of Pediatric Psychology*, 27, 215-226.
- Vierhaus, M., & Lohaus, A. L. (2009). Children's perceptions of relations between anger or anxiety and coping: Continuity and discontinuity of relational structures. *Social Development*, 18, 747-763.
- Wolchik, S.A., & Sandler, I.N. (Eds.). (1997). *Handbook of children's coping: Linking theory and intervention*. New York: Plenum.
- Zimmer-Gembeck, M. J., Lees, D., & Skinner, E. A. (in press). Children's emotions and coping with interpersonal stress as correlates of social competence, *Australian Journal of Psychology*.

Zimmer-Gembeck, M. J., Lees, D., Bradley, G., & Skinner, E. A. (2009). Use of an analogue method to examine children’s appraisals of threat and emotion in response to stressful events. *Motivation and Emotion*, 33, 136-149.

For Peer Review

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Table 1

Links between 12 higher-order families of coping and adaptive processes

Family of Coping	Family Function in Adaptive Process
1. Problem-solving Strategising Instrumental action Planning	Adjust actions to be effective
2. Information Seeking Reading Observation Asking others	Find additional contingencies
3. Helplessness Confusion Cognitive interference Cognitive exhaustion	Find limits of actions
4. Escape Behavioural avoidance Mental withdrawal Denial Wishful thinking	Escape noncontingent environment
5. Self-reliance Emotion regulation Behaviour regulation Emotional expression Emotion approach	Protect available social resources
6. Support Seeking Contact seeking Comfort seeking Instrumental aid Social referencing	Use available social resources

Table 1 continues on the next page.

Table 1, continued

Links between 12 higher-order families of coping and adaptive processes

Family of Coping	Family Function in Adaptive Process
7. Delegation Maladaptive help-seeking Complaining Whining Self-pity	Find limits of resources
8. Social Isolation Social withdrawal Concealment Avoiding others	Withdraw from unsupportive context
9. Accommodation Distraction Cognitive restructuring Minimisation Acceptance	Flexibly adjust preferences to options
10. Negotiation Bargaining Persuasion Priority-setting	Find new options
11. Submission Rumination Rigid perseveration Intrusive thoughts	Give up preferences
12. Opposition Other-blame Projection Aggression	Remove constraints

Note. Adapted from Skinner, Edge, Altman, & Sherwood, 2003.

Table 2

Examples of Developmentally-graded Members of Coping Families

Coping Family and Ways of Coping					
Age Period	Problem-solving	Comforting	Distraction	Escape	Information seeking
Infancy (Birth to 18 mons.)	Effort Repetition Practice	Appeals to caregiver Proximity seeking Physical self- soothing (e.g., sucking, stroking)	Gaze at attractive objects Distracted by caregiver	Gaze aversion Signal to caregiver	Social referencing Observation
Preschool (Ages 2 to 5)	Instrumental actions Request instrumental aid	Self-comfort with behaviours (e.g., get blanket) Seeks comfort	Behavioural distraction (doing something else)	Leave situation (behavioural withdrawal)	Ask for information
Middle childhood (Ages 6 to 9)	Strategising Alternative mental means Repair	Self-comfort through verbal reassurance	Cognitive distraction (thinking about something else)	Mental withdrawal	Learn from others' experiences Social comparison
Early adolescence (Ages 10 to 14)	Planning Self-regulated learning (studying, rehearsal)	Think about positive future situations	Plan distracting activities	Avoid potentially negative situation	Independent pursuit of information (e.g., reading)
Middle and late adolescence (Ages 14 to 22)	Prevention Coordination of multiple activities	Larger perspective Downward social comparison	Meditation, guided relaxation	Decide which situations to participate in	Integration of information from multiple sources

Table 3

Strategies for Organising Studies of Age Differences and Age Changes in Ways of Coping

1. *Hierarchical families of coping.* Code subscales as to ways of coping included in hierarchical families.
 2. *Developmental shifts.* Array studies along an axis of chronological age, looking for differences or changes during ages at which developmental shifts are hypothesised.
 3. *Homogeneity of subscales.* Identify relatively "pure" subscales that do not mix items or codes across families and examine them for homogeneous developmental trends.
 4. *Method of assessment.* Group studies according to the method used to assess coping (open-ended interviews, observations, or questionnaires) to determine whether similar methods lead to more similar developmental trends.
 5. *Target stressor.* Group studies according to the stressor in response to which coping was assessed (self-identified, domain-specific, or wide variety of stressors) to determine whether similar stressors lead to more similar developmental trends.
 6. *Pattern of findings.* Group studies according to whether they find increases, decreases, or no differences in a family of coping, and examine whether the groups of studies differ according to age range, homogeneity of subscale, method of assessment, or nature of stressor.
-

Figure Headings

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Figure 1. Summary of the developmental progression of problem-solving from early childhood to early adulthood

Note. X indicates no or little information.

Figure 2. Summary of the developmental progression of distraction from early childhood to early adulthood.

Note. X indicates no or little information.

Figure 3. Summary of the developmental progression of support seeking from early childhood to early adulthood

Figure 1

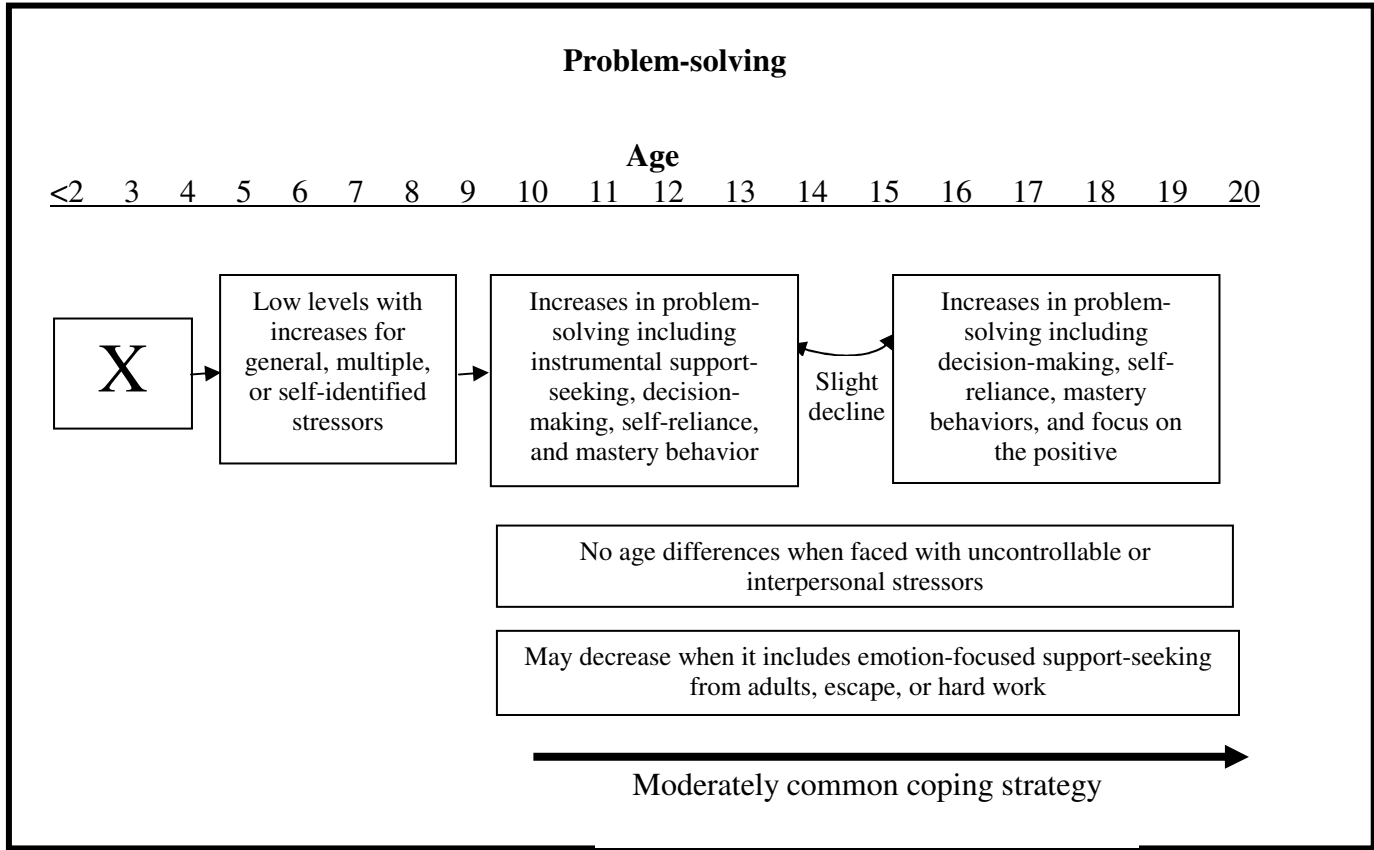


Figure 2

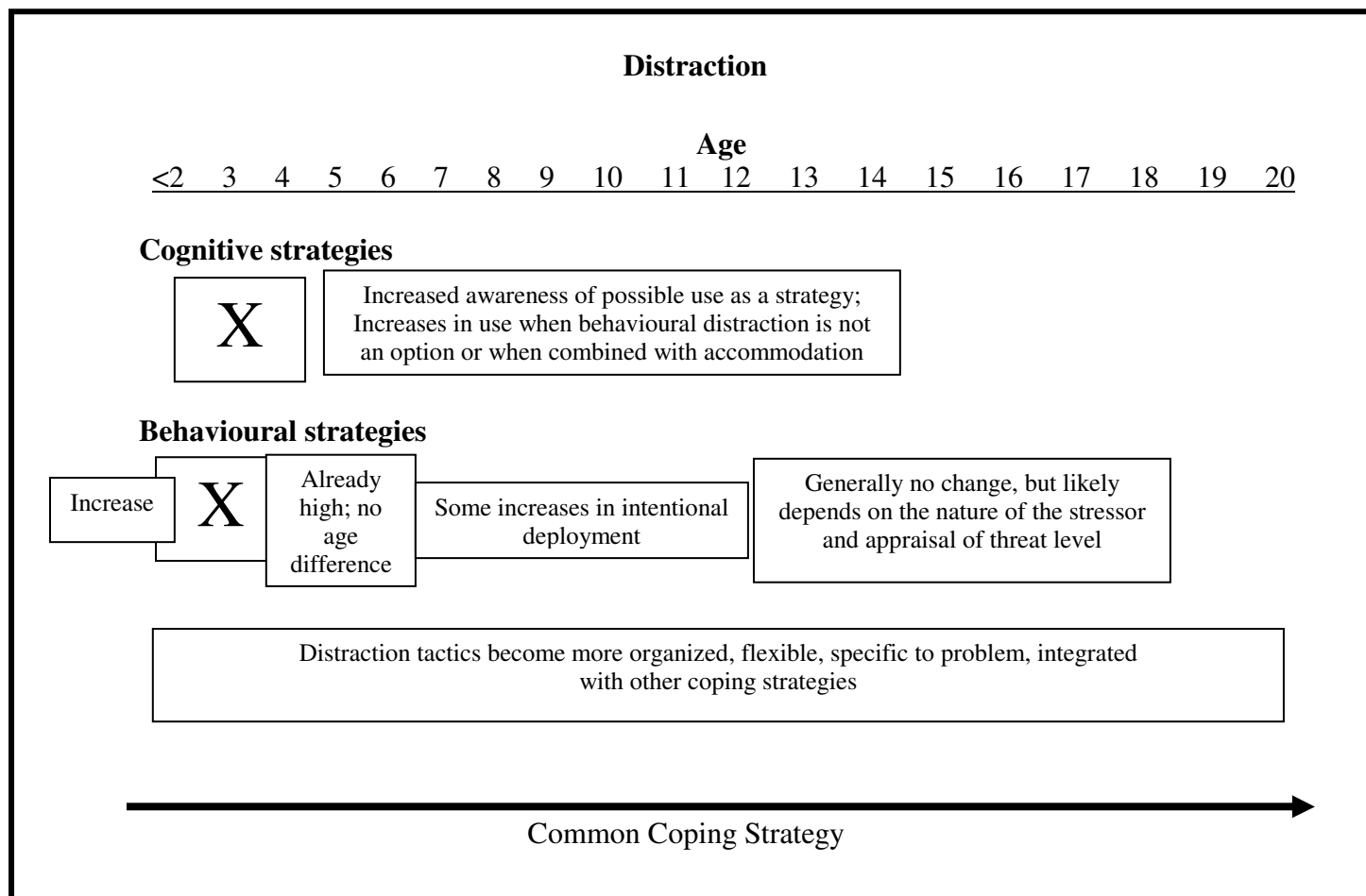
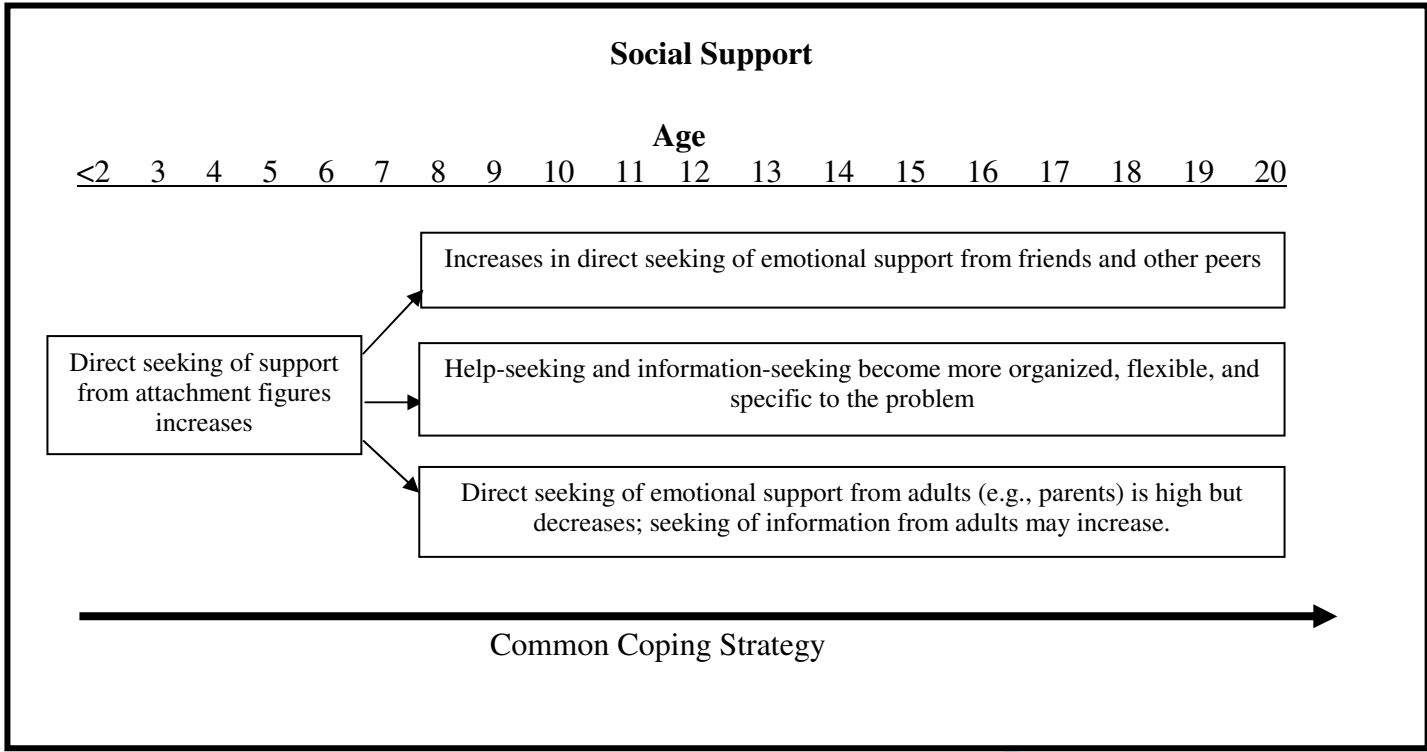


Figure 3



Running Head: REVIEW OF COPING DEVELOPMENT

The Development of Coping across Childhood and Adolescence:
An Integrative Review and Critique of Research

WEB MATERIALS

21 July 2010

Table 4

Summary of Coding for Common Families of Coping

Coping family	Coping Categories Included in the Family
Instrumental action	Effort exertion, attempts, or behaviors aimed at changing the stressful situation.
Problem-solving	Strategizing or generating alternative means for changing the stressful situation.
Planning/ Prevention	Long-term thinking about how to prevent or deal with future stressful situations.
Contact-seeking	Requesting contact or approaching others for contact (if provided, code target person: caregiver, teacher, adult, friend, peer).
Help-seeking	Requesting instrumental aid or approaching others for instrumental aid (if provided, code target person: caregiver, teacher, adult, friend, peer).
Comfort seeking	Requesting comfort or approaching others for comfort (if provided, code target person: caregiver, teacher, adult, friend, peer).
Behavioral escape	Physically leaving the site of a stressful transaction.
Cognitive escape	Mentally withdrawing from a stressful transaction.
Behavioral distraction	Engaging in some pleasurable physical activity (e.g., playing with a toy or game) to take one's mind off of a stressful situation.
Cognitive distraction	Thinking about something pleasurable (e.g., a place, person, or activity) to take one's mind off of a stressful situation.
Accommodation/ adjustment	Willingly going along with demands.
Opposition	Refusing to cooperate, active non-compliance, or doing the opposite of what is requested or expected.
Denial	Refusing to acknowledge the stressful elements of a situation.

Table 4 continues on the next page.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Table 4, continued

Summary of Coding for Common Families of Coping

Coping family	Coping Categories Included in the Family
Self-reliance	Desiring, choosing, or attempting to deal with a stressful event on one's own.
Aggression	Verbal or physical attacks aimed at a person or object.
Social isolation	Withdrawing from social contact or refusing social contact (if provided, code target person: caregiver, teacher, adult, friend, peer).
Negotiation	Attempts to increase options, compensation or trade-offs in return for concessions. Includes persuasion, bargaining, and appeals.
Helplessness	Giving up, passivity, or confusion in the face of demands.
Focus on the positive	Positive cognitive reappraisal or turning attention toward the positive features of a stressful situation.
Rumination	Repetitive negative or anxious thoughts about a past, current, or future stressful episode.

Note. Adapted from Skinner, Edge, Altman, & Sherwood, 2003.

<http://mc.manuscriptcentral.com/ijbd>

Table 5

Summary of Results for the Coping Family of Problem-solving, Studies of Children and/or Adolescents Aged 4 or Older

Study number	Author, year (see Appendix A)	Coping category ¹ Stressor ² Method ³	Coping family(ies) ⁴	Description / sample items	Min age	Max age	Results
PS1^a	Eisenberg et al., 1994	Instrumental coping Gen, P-, T-Rating	Problem-solving Instrumental action Help-seeking Comfort-seeking	Takes some constructive action to improve the problem situation	4	6	No association with age reported (footnote only)
PS2a^a	Altshuler et al., 1995	Adaptive approach Medical Hypothetical, Int Retrospective, Int	Problem-solving Help seeking	Do what is asked, seek information	5	11	r with age = .30, $p < .05$
PS2b^a							No association with age
PS3a⁺	Garber et al., 1995	Problem-solving Interpersonal Academic game Questionnaire	*Problem-solving Instrumental action	Take or think about action that directly addresses the problem or plan for how to alleviate the problematic situation, practice so get better at it, think about what you should have done to win	5	15	No association with age in interpersonal situation, K-3 grade students used more than 4-8 grade students in achievement situation after adjusting for gender and depression
PS3b⁺							Grade 2 > kindergarten
PS4^a	Bernzweig et al., 1993	Direct problem-solving Distress, Int	Problem-solving Help seeking Comfort seeking	Efforts to change the problem situation by changing oneself or one's environment, included getting support	6	8	
PS5a^a	Rossmann, 1992	Use of caregiver Distress Interview	Problem-solving Help-seeking Comfort seeking	talk to mom/dad about feeling bad, get mom/dad help with something bad, talk mom/dad about how to change what's wrong, think about how mom/dad would fix. Included items about fixing/solving the problem.	6	12	r with age = -.15, $p < .05$

Table 5 continues on the next page.

1								
2								
3								
4	PS5b^a	Rossmann, 1992	Self-calming Distress Interview	Problem-solving Self-soothing Cognitive distraction Behavioral distraction	try to forget, deep breaths, think about something fun, get myself to relax, tell self it will be OK, but also included think how to solve or change problem.	6	12	r with age = $-.12, p < .05$
5								
6								
7								
8								
9	PS6⁺	Band & Weisz, 1990	Secondary control net of primary control Multiple Interview	*Problem-solving Self-reliance	Primary control: efforts to modify or change objective circumstances directly. Secondary control: efforts to modify or influence the impact of objective circumstances on one's subjective psychological state (e.g., by adjusting affect, expectations, or mood, to achieve a goodness of fit with circumstances as they are). All were rated on scales from 1 (primary) to 5 (secondary). KidCope (Spirito et al., 1988)	6	16	Higher in adolescence than in late childhood
10								
11								
12								
13								
14								
15								
16								
17								
18								
19	PS7⁺	Brown et al., 1992	Problem solving Leukemia Questionnaire	*Problem-solving		6	17	No association with age reported
20								
21	PS8⁺	Compas et al., 1996	Problem-focused Parent cancer, Int	*Problem-solving	Problem-focused included things like helping in the house to make patient rest or feel better.	6	32	No association with age
22								
23								
24	PS9⁺	Vierhaus & Lohaus, 2009	Problem solving Anger, anxiety Questionnaire Longitudinal	*Problem-solving	I take the matter into my own hands I start to tackle the problem I try extra hard	7	10	Linear increases
25								
26								
27								
28	PS10a⁺	Eschenbeck et al., 2007	Problem-solving Ac, Pers Questionnaire	*Problem-solving	I try to think of different ways to solve it	7	16	Academic: grade 5&6 > 3&4 Social: grade 7&8 < 5&6
29								
30	PS10b⁺							
31								
32	PS11^a	Thomsen et al., 2002	Primary control engagement coping Abdominal pain Parent Quest	Problem-solving Self-reliance Support-seeking	Tries to think of different ways to make her stomachache feel better or go away, lets someone know something know about his feelings, keeps feelings under control	7	18	r with age = $-.16, p < .05$
33								
34								
35								
36								
37	PS12^c	Curry & Russ, 1985	Total cognitive coping Dental, Interview	Problem-solving Distraction Accommodation	Working through, positive restructuring, defensive reappraisal, emotion- and behavior-regulating cognitions, diversionary thinking	8	10	r with age = $.39, p < .05$
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 5 continues on the next page.

1								
2								
3								
4	PS13⁺	Kliewer, 1991	Cognitive decision- making Multiple, Quest	*Problem-solving	I thought about what I could do to make the problem better	8	11	Higher in age 10+ than age 6-7
5								
6								
7	PS14^c	Ryan, 1989	Cognitive activities S-I: Distress Questionnaire Focus groups	Problem-solving Accommodation	Behaviors that require deliberate cognitive activity, includes problem-solving behavior (e.g., figure out what to do, think positive, plan what to do).	8	12	Higher at ages 10-12 than at ages 6-9
8								
9								
10								
11	PS15⁺	Hampel & Peterman n, 2005	Situation control SI: Interpersonal, academic Questionnaire	*Problem-solving Instrumental action	I'm making a plan to fix the problem! I try to figure out what the problem is! I'm wondering what to do! I'm doing something to fix the problem!	8	14	No age differences
12								
13								
14								
15								
16	PS16^a	Kliewer & Sandler, 1993	Active coping General Teacher report	Problem-solving Help seeking Comfort seeking Accommodation Focus on the positive	Cognitive decision-making, direct problem- solving, problem focused support, positive cognitive restructuring, seeking understanding, behavioral avoidance.	8	14	No association with age
17								
18								
19								
20								
21								
22	PS17a^p	Thurber & Weisz, 1997	Primary control, low homesickness group Homesickness Quest, Interview	Problem-solving Comfort seeking Instrumental action Behavioral escape	I went to someone who could talk with me and help me feel better, like a leader or one of my friends, I did something to try to get back home, like run away, or write to my parents and tell them to come get me.	8	16	Decreased with age
23								
24								
25								
26								
27	PS17b^p	Thurber & Weisz, 1997	Primary control, high homesickness group Homesickness Quest, Interview	Problem-solving Comfort seeking Instrumental action Behavioral escape	I went to someone who could talk with me and help me feel better, like a leader or one of my friends, I did something to try to get back home, like run away, or write to my parents and tell them to come get me.	8	16	Decreased with age
28								
29								
30								
31								
32	PS18⁺	Brown et al., 1986	Problem-solving Positive self-talk Multiple + S-I Written response	*Problem-solving Self-reliance	Don't be nervous, I can do this, orient to task, rehearse.	8	18	Increased with age
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 5 continues on the next page.

Review of coping development 7

PS19 ^c	Olson et al., 1993	Coping Multiple Self-Identified Questionnaire	Problem-solving? Cognitive distraction Behavioral distraction Comfort seeking Help seeking	Positive self-talk, attention diversion, relaxation, thought stopping, task orientation, talk with someone, good problem-solving activity	8	18	Increased with age
PS20 ⁺	DeBoo & Wicherts, 2009	Problem-focused General Questionnaire	*Problem-solving	Cognitive decision making: You think about what you can do before you do something Direct problem solving: You do something to make things better Seeking understanding: You try to figure out why things like this happen	9	12	No differences
PS21a ^a	Spirito et al., 1991	Problem-solving Self-Identified Questionnaire	Problem-solving Instrumental action Support-seeking	I tried to fix the problem by thinking of answers, I tried to fix the problem by doing something or talking to someone	9	14	Lower at age 14 than earlier
PS21b ^a	Spirito et al., 1991	Problem-solving Pers Questionnaire	Problem-solving Instrumental action Support-seeking	I tried to fix the problem by thinking of answers, I tried to fix the problem by doing something or talking to someone	9	14	Age 11 > 13, 14 Age 12 > 14
PS22 ^a	Hoffman et al., 1992	Practically oriented efforts SI, Quest	Problem-solving Help seeking	resolving or circumventing problems or threats. (primarily cognitive efforts are emphasized as representative of this type)	10	13	No association with age
PS23a ⁺	Roecker et al., 1996	Problem-solving Parent conflict Questionnaire	*Problem-solving	Try to think of different ways to solve it	10	13	No association with age
PS23b ⁺	Roecker et al., 1996	Problem-solving Observed conflict between friends Questionnaire	*Problem-solving	Try to think of different ways to solve it	10	13	5th grade < 4th grade
PS24 ^c	Compas et al., 1988	Emotion-focused S-I: Interpersonal + Academic Open-ended written	Problem-solving Help seeking Comfort seeking Instrumental action Negotiation	“studied more”, “did more homework”, “talked things over with the other person involved”	10	14	Increased with age
PS25a ^e	Fear et al., 2009	Primary control coping Family, depression Child Quest	Problem-solving Emotion management	Problem solving, emotional expression, emotional modulation	9	15	No association with age Proportion scores

Table 5 continues on the next page.

1								
2								
3								
4	PS25b^e	Fear et al., 2009	Primary control coping Family, depression P-rate Quest	Problem-solving Emotion management	Problem solving, emotional expression, emotional modulation	9	15	No association with age Proportion scores
5								
6								
7								
8	PS26⁺	Hampel & Petermann, 2006	Situation control SI: Pers, peers Questionnaire	*Problem-solving	I'm making a plan to fix the problem! I try to figure out what the problem is! I'm wondering what to do! I'm doing something to fix the problem!	10	14	Grade 7 < grade 5
9								
10								
11								
12	PS27a^c	Seiffge- Krenke et al., 2009	Internal SI: Multiple Questionnaire Longitudinal	Problem-solving Accommodation	6 strategies based on cognitive processes, such as thinking about possible solutions, recognizing one's own limitations, and being willing to accept compromises (I accept my limits, I think about the problem and try to find different solutions)	12	15	Linear increase (latent growth curve model)
13								
14								
15								
16								
17								
18								
19	PS27b^c	Seiffge- Krenke et al., 2009	Internal SI: Multiple Questionnaire Longitudinal	Problem-solving Accommodation	6 strategies based on cognitive processes, such as thinking about possible solutions, recognizing one's own limitations, and being willing to accept compromises (I accept my limits, I think about the problem and try to find different solutions)	16	19	Linear increase (latent growth curve model)
20								
21								
22								
23								
24								
25								
26	PS28⁺	Brodzinsky et al., 1992	Factor 2 – Cognitive/ behavioral problem- solving Self-Identified Questionnaire	*Problem-solving Instrumental action	I thought about the problem and tried to figure out what to do, I took a chance and tried new way to solve, I made a plan to solve, I went over in my head some things to do, I thought of a new way of dealing with problem, I learned a new way of dealing, I tried to figure out how I felt, I figured out what had to be done and did it).	10	15	Grade 8 < grade 6
27								
28								
29								
30								
31								
32								
33								
34	PS29a1⁺	Frydenberg & Lewis, 2000	Solving problem General Questionnaire	*Problem-solving Instrumental action	Problem-focused strategy that tackles the problem systematically by learning about it and takes in to account different points of view or options; Work at solving the problem to the best of my ability	12	16	Age 12-14 stability, and age 14-16 increase
35								
36								
37	PS29a2⁺							
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 5 continues on the next page.

1								
2								
3								
4	PS29b^h	Frydenberg & Lewis, 2000	Work hard General Questionnaire	Problem-solving Instrumental action	Commitment, ambition and industry; Work hard	12	16	Steady decline from age 12 to 16
5								
6								
7								
8	PS30a⁺	Zimmer-Gembeck & Locke, 2007	Active coping Self-identified: School + Home Questionnaire	*Problem-solving	I did something to make things better, tried to think about ways to solve the problem	12	16	r with age = .13, $p < .05$ when coping with a recent school stressor.
9								No association when coping with a home stressor
10								
11								
12								
13								
14	PS30b⁺							
15	PS31a⁺	Frydenberg & Lewis, 1993	Solve the problem General Questionnaire	*Problem-solving Instrumental action	Problem-focused strategy that tackles the problem systematically by learning about it and takes in to account different points of view or options; Work at solving the problem to the best of my ability	12	17	Increased with age
16								
17								
18	PS31b^h		Work & achieve General Questionnaire	Problem-solving Instrumental action Self-reliance	Commitment, ambition and industry; Work hard			Declined with age
19								
20								
21								
22								
23	PS32a⁺	Ebata & Moos, 1991	Logical analysis Self-Identified Questionnaire	*Problem-solving	I thought of different ways to deal with the problem	12	18	Increased with age
24								
25								
26	PS32b⁺	Ebata & Moos, 1991	Problem-solving Self-Identified Questionnaire	*Problem-solving Instrumental action	I decided on one way to deal with the problem and did it	12	18	Increased with age
27								
28								
29	PS33a⁺	Ebata & Moos, 1994	Logical analysis Self-Identified Questionnaire	*Problem-solving	I thought of different ways to deal with the problem	12	18	Increased with age, r with age = .28, $p < .05$
30								
31								
32	PS33b⁺	Ebata & Moos, 1994	Problem-solving Self-Identified Questionnaire	*Problem-solving Instrumental action	I decided on one way to deal with the problem and did it	12	18	Increased with age, r with age = .21, $p < .05$
33								
34	PS34a⁺	Irion & Blanchard-Fields, 1987	Planful problem-solving Self-Identified: Threat, Challenge Questionnaire	*Problem-solving Planning Instrumental action	Ways of Coping Questionnaire, no items provided	12?	70?	Young adults (M age 20) used more than adolescents (M age 16) in challenge situations, but no age difference in threat situations
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 5 continues on the next page.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49

PS35⁺	Garnefski et al., 2002	Refocus on planning Distress Questionnaire	*Problem-solving	I think of what I can do best I think of how I can best cope with the situation I think about how to change the situation I think about a plan of what I can do best	12	71	Adults (age 18-71) show more than adolescents (ages 12-16) Most common
PS36a^c	Griffith et al., 2000	Approach SI: Family, school, peers Questionnaire	Problem-solving Support-seeking Behavioral distraction Accommodation	Cognitive approach: logical analysis, positive appraisal Behavioral approach: guidance/ support seeking, problem solving Seeking alternative rewards Think of different ways to deal with the problem Talk with a friend about the problem Think about how this situation could change my life for the better Do more fun activities Make new friends	13	18	Family: Increase 9 th graders more than 7 th graders School: ns No grade differences Peers: Increase 7 th graders less than 9 th and 12 th graders
PS36b^c							
PS36c							
PS37a⁺	Stern & Zevon, 1990	Problem-focused coping, school S-I: School Questionnaire	*Problem-solving Instrumental action	Came up with a couple of different solutions to the problem, made a plan of action and followed it, tried to analyze the problem to understand it better	13	20	No association with age
PS37b⁺	Stern & Zevon, 1990	Problem-focused coping SI: Interpersonal Questionnaire	*Problem-solving Instrumental action	Came up with different solutions to the problem, made a plan of action and followed it, tried to analyze the problem to understand it better	13	20	No association with age
PS38^a	Phelps & Jarvis, 1994	Factor 1 Self-Identified Questionnaire	Problem-solving Instrumental action Help seeking	Active coping – I concentrate my efforts on doing something about it Planning – I think hard about what steps to take Suppression of competing activities – I put aside other activities to concentrate on... Seeking social support: Instrumental reasons – I ask people who had similar experiences	14	18	No association with age

Table 5 continues on the next page.

Review of coping development 11

1								
2								
3								
4								
5	PS39⁺	Blanchard- Fields & Irion, 1988	Problem-focused coping Self-Identified Questionnaire	Problem-solving	No examples given, used Ways of Coping Questionnaire	14	46	No association with age reported, but looked higher in young adults compared to adolescents particularly in controllable situations
6								<i>r</i> with age $-.20, p < .05$
7								
8								
9								
10	PS40^a	Wertlieb et al., 1987	Problem-solving Self-Identified Interview	Help seeking Comfort seeking Negotiation Instrumental action	Function to change the problematic situation by changing one's own behavior or action, by changing the damaging or threatening environment. Talk to mom, tell brother directly, clean up, play by myself	6	9	
11								
12								
13								
14								
15								
16	PS41^a	Bull & Drotar, 1991	Problem-solving General, cancer Interview	Help seeking Comfort seeking Negotiation Instrumental action	Function to change the problematic situation by changing one's own behavior or action, by changing the damaging or threatening environment. Talk to mom, tell brother directly, clean up, play by myself	7	17	Declined with age
17								
18								
19								
20								
21								
22								

¹ Label used by the study authors for the way of coping measured in the study.

² Gen = General, Mult = Multiple, SI = Self-Identified, Dist = Distress, Ac = Academic, Med = Medical, Pers = Interpersonal, Unc = Uncontrollable

³ Quest = Questionnaire, Int = Interview, T-rate = Teacher rating, P-rate = Parent rating, Obs = Observation, Writ = Written response

⁴ Coping family according to the coding system used for all studies in this review.

* = measures that included only the problem-solving family (instrumental action, problem-solving, planning).

+ measures that included only the problem-solving family (instrumental action, problem-solving, planning).

^a measures that combined support-seeking with problem-solving (referred to as active or approach).

^c measures that combined cognitive strategies (e.g., cognitive distraction, focus on the positive) with problem-solving.

^e measures that combined emotion management with problem-solving.

^h measures that combined ambition and commitment with problem-solving (referred to as hard work).

^p measures that combined escape with problem-solving (referred to as primary control coping).

Table 6

Summary of Results for the Coping Family of Distraction, Studies of Children and/or Adolescents Aged 4 or Older

Study number	Author, year (see Appendix A)	Coping category ¹ Stressor ² Method ³	Coping family(ies) ⁴	Description / sample items	Min age	Max age	Results
D1^v	Eisenberg et al., 1994	Distraction/ Avoidance Gen, P-,T-Rating	Behavioral distraction Escape Vs. Opposition	Keeps busy so not to think about the problem	4	6	Decrease with age (footnote only)
D2^{+b}	Bush et al., 1986	Prosocial Medical Observation	^{BD} Behavioral distraction	Quietly reading; other verbal interaction unrelated to medicine; playing with parent not involving medical objects; child playing along with objects brought to the clinic.	4	10	r with age = .35, $p < .05$
D3^v	Losoya et al., 1988	Behavioral avoidance Behavioral distraction Pers, T-rating	Behavioral distraction Behavioral escape	Leaves or avoids; keeps busy to not think about the problem	4	12	Increased with age
D4a^{+b}	Altshuler & Ruble, 1989	Partial avoidance: Behavioral distraction Med-Unc, Int	^{BD} Behavioral distraction	Do something fun/do something else, play, read, watch TV	5	11	No association with age
D4b^{+c}	Altshuler & Ruble, 1989	Partial avoidance: Cognitive distraction Med-Unc, Int	^{CD} Cognitive distraction	Think about something else/something fun, fantasy	5	11	Increased with age
D5a1^{+b}	Altshuler et al., 1995	Behavioral distraction Med, Hypothetical Med, Interview	^{BD} Behavioral distraction	Do something fun/something else, play, read, watch TV	5	11	No association with age
D5a2^{+b}							r with age = .30, $p < .05$
D5b^{+b}	Altshuler et al., 1995	Behavioral distraction Med, Observation	^{BD} Behavioral distraction	Play, read	5	11	No association with age

Table 6 continues on the next page.

D5c1^{+c}	Altshuler et al., 1995	Cognitive distraction Med, Hypothetical Med, Interview	^{CD} Cognitive distraction	Think about something else/something fun, fantasize	5	11	r with age = .30, $p < .05$
D5c2^{+c}							No association with age
D6a^v	Garber et al., 1995	Behavioral avoidance Interpersonal fight Academic game Questionnaire	Behavioral distraction Behavioral Escape Social isolation	Engage in an alternative behavior that gets away from the situation, do something else, go home	5	15	Grade 4-8 used more than K-3 students in interpersonal situation after adjusting for gender and depression
D6b^v							Grade 4-8 used more than K-3 students in in achievement situation after adjusting for gender and depression
D7^v	Bernzweig et al., 1993	Distracting and avoidant actions Distress Interview	Behavioral distraction Cognitive escape Behavioral escape Social isolation	Using distracting stimuli such as entertainment, continuing to play with friends, engaging in solitary activity such as reading, efforts to avoid a problem by leaving such as leaving the room	6	8	No association with age
D8a^e	Wertlieb et al., 1987	Function - Emotion management SI, Interview	Behavioral distraction Accommodation Self reliance Comfort seeking	Palliative in nature. Function is to manage somatic, subjective, and affective components of stress-related experiences. Cuddle with animals, never worry in the daytime because keep busy	6	9	r with age = .25, $p < .05$
D8b^e	Wertlieb et al., 1987	Direct action Self-Identified Interview	Behavioral distraction Instrumental action Comfort seeking	What child does to handle the stressful situation, does not include cognitive and intrapsychic maneuvers. Cuddled with animals, told her to stop	6	9	No association with age
D8c^v	Wertlieb et al., 1987	Intrapsychic Self-Identified Interview	Cognitive distraction Behavioral escape	Think about something fun, get tired and fall asleep, make up imaginary friend	6	9	Higher at age 10 than 7

Table 6 continues on the next page.

1								
2								
3								
4	D9a^v	Rossman, 1992	Distraction Avoidance Escape Distress, Interview	Behavioral distraction Behavioral escape Cognitive escape Focus on the positive	Magic or pretend, hobby/game, think positive, pretend hero to solve problem, get away, book to take mind off it.	6	12	r with age = $-.19, p < .05$
5								
6								
7								
8	D9b^e	Rossman, 1992	Use of peers Distress Interview	Behavioral distraction Comfort seeking Help seeking Behavioral escape	Play with someone, talk to friends, friend to fix it, but also included doing something active, watch TV, use medicine/drugs.	6	12	No association with age
9								
10								
11								
12	D9c^e	Rossman, 1992	Self-calming Distress Interview	Cognitive distraction Self-soothing Problem-solving	Try to forget, deep breaths, think about something fun, get myself to relax, tell self it will be OK, but also included think how to solve or change problem.	6	12	r with age = $-.12, p < .05$
13								
14								
15								
16	D10a^v	Phipps et al., 1995	Blunting, Avoidance General Child Questionnaire	Cognitive distraction Avoidance	think about other things to take your mind off the principal	6	15	$r = -.22, p < .001$, normative sample $r = -.44, p < .001$, sample with cancer
17								
18								
19								
20	D10b^v	Phipps et al., 1995	Blunting, Avoidance General Parent Questionnaire	Cognitive distraction Avoidance	think about other things to take your mind off the principal	6	15	$r = -.25, p < .001$, normative sample $r = -.45, p < .001$, sample with cancer
21								
22								
23								
24	D11^{+m}	Brown et al., 1992	Distraction Leukemia Questionnaire	Distraction	KidCope (Spirito et al., 1988)	6	17	$r = .47, p < .05$
25								
26								
27	D12^e	Compas et al., 1996	Emotion-focused Parent cancer Interview	Cognitive distraction Behavioral distraction Help seeking Behavioral escape Emotional regulation	Avoid or distract oneself from the parent's cancer or feelings about the cancer. Young children tried to do things they liked to do: playing with toys, TV, drawing. Adolescents spent time away from home, doing homework. Many emotion-focused responses also included information seeking, as information was often sought to ease concerns.	6	32	r with age = $.27, p < .05$
28								
29								
30								
31								
32								
33								
34								
35	D13	Vierhaus & Lohaus, 2009	Palliative coping Anger, anxiety Questionnaire Longitudinal	Behavioral distraction Cognitive distraction Emotion management	I think of something nice I try to calm down I do something to relax	7	10	Linear increases
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 6 continues on the next page.

D14 ^e	Band & Weisz, 1988	Secondary control Multiple events Interviews	Behavioral distraction Cognitive distraction Comfort seeking Help seeking	Praying, telling problems to friend, crying to let feelings out, kicking a wall after being embarrassed to let it out, watching TV to forget, daydreaming, hoping for the best	7	12	Higher among those in grades 6-7 than in grades 1-4
D15 ^e	Bull & Drotar, 1991	Emotion management General, cancer Interview	Cognitive distraction Behavioral distraction Self-reliance	Palliative in nature. Function is to manage somatic, subjective, and affective components of stress-related experiences. Cuddle with animals, never worry in the daytime because keep busy	7	17	Increased with age
D16 ^v	Thomsen et al., 2002	Secondary control engagement coping Abdominal pain Parent-rating	Cognitive distraction Accommodation Helplessness Focus on the positive	Thinks about happy things to take mind off of stomachache or emotions, realizes just has to live with things the way they are, positive thinking, tells self that everything will be all right, cognitive restructuring, thinks about learning from the situation or something good that will come from it	7	18	No association with age
D17 ^{+c}	Curry & Russ, 1985	Diversionsary thinking Focus on positive Dental, Interview	^{CD} Cognitive distraction	Attention to positive factors; divert ones thoughts away	8	10	r with age = .39, $p < .05$ for focus on the positive, no association with age for diversionsary thinking
D18a ^a	Kliewer, 1991	Blunting Multiple Questionnaire	^{CDCR} Cognitive distraction Focus on the positive	Try to think about happy things while get the shot.	8	11	No association with age
D18b ^{+b}	Kliewer, 1991	Distracting actions Multiple Questionnaire	^{BD} Behavioral distraction	Played a game with a friend	8	11	No association with age

Table 6 continues on the next page.

D19 ^{+b}	Ryan, 1989	Distracting activities Self-Identified: distress Written responses Focus Groups	^{BD} Behavioral distraction	Behaviors other than avoidant or isolating, that are deliberate and serve to delay the need to deal with a stressor (watch TV, cuddle a stuffed animal, clean my room, listen to my stereo, play a game, mow the lawn)	8	12	12-year-olds more than younger children
D20 ^{+m}	Hampel & Petermann, 2005	Distraction/recreation SI: Interpersonal, academic Questionnaire	^{BCD} Cognitive distraction Behavioral distraction	I imagine something really funny! I'm reading something, that's fun! I'm playing something! First, I'm going to make myself comfortable!	8	14	7 th graders less than 5 th & 6 th graders less than 3 rd & 4 th graders
D21a ^v	Kliewer & Sandler, 1993	Avoidance, child report General Questionnaire	Behavioral distraction Cognitive distraction Cognitive escape	Distracting actions, physical release of emotions, cognitive avoidance	8	14	No association with age
D21b ^v	Kliewer & Sandler, 1993	Passive coping (avoidance) General Teacher-rating	Cognitive distraction Behavioral distraction Cognitive escape	Distracting actions, cognitive avoidance	8	14	β with age = $-.24$, p $<.05$; controlling for gender and social competence
D22 ^{+m}	Brown et al., 1986	Coping Multiple + SI Written response	^{BCD} Cognitive distraction Behavioral distraction	Thinking about something else, listening to music	8	18	Increased with age
D23 ^e	Olson et al., 1993	Coping Multiple Self-Identified Questionnaire	Behavioral distraction Cognitive distraction Comfort seeking Help seeking Problem-solving	Positive self-talk, attention diversion, relaxation, thought stopping, task orientation, talk with someone, good problem-solving activity	8	18	Increased with age
D24 ^{+b}	DeBoo & Wicherts, 2009	Distraction strategies General Questionnaire	^{BD} Behavioral distraction	Distracting actions: You listen to music Physical release of emotions: You play sports	9	12	No differences

Table 6 continues on the next page.

D25a^{+m}	Spirito et al., 1991	Distraction Self-Identified Questionnaire	^{BCD} Cognitive distraction Behavioral distraction	I tried to forget it, I did something like watch TV and played a game to forget it	9	14	Decreased with age
D25b^{+m}	Spirito et al., 1991	Distraction Interpersonal conflict Questionnaire	^{BCD} Cognitive distraction Behavioral distraction	I tried to forget it, I did something like watch TV and played a game to forget it	9	14	No association with age
D26a^a	Fear et al., 2009	Secondary control coping Family, depression Child Quest	Distraction Accommodation	Cognitive restructuring, positive thinking, acceptance, distraction	9	15	No association with age Proportion scores
D26b^a	Fear et al., 2009	Secondary control coping Family, depression P-rate Quest	Distraction Accommodation	Cognitive restructuring, positive thinking, acceptance, distraction	9	15	No association with age Proportion scores
D27^a	Hoffman et al., 1992	Cognitively oriented efforts SI: felt pressured or uncomfortable Questionnaire	Cognitive distraction Cognitive restructuring Accommodation Helplessness	Altering or minimizing appraisals of threat or misfortune, concentrated on good things that might come out of situation, tried not to think too much about it, accepted the situation because nothing to do	10	13	Increased with age
D28^v	Brodzinsky et al., 1992	Cognitive avoidance Self-Identified Questionnaire	Cognitive distraction Behavioral distraction Cognitive escape Helplessness	Tried to get away by doing other things, pretend problem wasn't real, went on as if nothing was wrong	10	15	Lower in grade 8 than in grade 6
D29^{+m}	Hampel & Petermann, 2006	Distraction/recreation SI: Pers, peers Questionnaire	^{BCD} Behavioral distraction Cognitive distraction	I imagine something really funny! I'm reading something, that's fun! I'm playing something! First, I'm going to make myself comfortable!	10	14	Grades 6 and 7 less than grade 5
D30^e	Tolan et al., 2002	Distraction General, Questionnaire	Behavioral distraction Instrumental action	Play video, do activity, hobby, involved in school activities, get job/work harder	12	16	No association with age

Table 6 continues on the next page.

1								
2								
3								
4								
5								
6	D31^a	Tolan et al., 2002	Positive thinking General Questionnaire	^{CDCR} Cognitive distraction Focus on the positive	Focus on the positive	12	16	Over age 14 higher than younger
7								
8								
9	D32^{+m}	Frydenberg & Lewis, 1993	Relaxing diversions General Questionnaire	^{BCD} Behavioral distraction Cognitive distraction	Relaxation in general rather than about sport, leisure activities such as reading and painting; Find a way to relax, for example, listen to music, read a book, play a musical instrument, watch TV	12	17	No association with age
10								
11								
12								
13								
14	D33a^{+b}	Ebata & Moos, 1991	Alternative rewards SI, Questionnaire	^{BD} Behavioral distraction	I got involved in new activities	12	18	Increased with age
15								
16								
17								
18								
19	D33b^a	Ebata & Moos, 1991	Positive reappraisal SI, Questionnaire	^{CDCR} Cognitive distraction Focus on the positive	I tried to see the good side of the situation	12	18	Increased with age
20								
21								
22	D34a^{+b}	Ebata & Moos, 1994	Alternative rewards SI, Questionnaire	^{BD} Behavioral distraction	I got involved in new activities	12	18	No association with age
23								
24								
25								
26	D34b^a	Ebata & Moos, 1994	Positive reappraisal SI, Questionnaire	^{CDCR} Cognitive distraction Focus on the positive	I tried to see the good side of the situation	12	18	r with age = .21, $p < .05$
27								
28								
29								
30	D35^{+m}	Frydenberg & Lewis, 2000	Relaxing diversions General Questionnaire	^{BCD} Behavioral distraction Cognitive distraction	Relaxation in general rather than about sport, leisure activities such as reading and painting; Find a way to relax, for example, listen to music, read a book, play a musical instrument, watch TV	12	18	No association with age
31								
32								
33								
34	D36a^v	Irion & Blanchard-Fields, 1987	Distancing SI: Threat, Challenge Questionnaire	Behavioral distraction Cognitive distraction Behavioral escape Cognitive escape	Ways of Coping Questionnaire, no items provided	12?	70?	Adolescents (M age 16) > young adults (M age 20) in threat situations.
35								
36								
37	D36b^v							No age difference in challenge situations.
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 6 continues on the next page.

D37⁺	Garnefski et al., 2002	Positive refocusing Distress Questionnaire	^{CD} Cognitive distraction	I think of nicer things than what I have experienced, I think of pleasant things that have nothing to do with it, I think of something nice instead of what has happened, I think about pleasant experiences	12	71	Adults (age 18-71) show more than adolescents (ages 12-16)
D38a^a	Griffith et al., 2000	Approach SI: Family, school, peers Questionnaire	Problem-solving Support-seeking Behavioral distraction Accommodation	Cognitive approach: logical analysis, positive appraisal; Behavioral approach: guidance/ support seeking, problem solving; Seeking alternative rewards: Think of different ways to deal with the problem, Talk with a friend about the problem, Do more fun activities, Make new friends	13	18	Family: Increase 7 th graders < 9 th graders
D38b^a							School: ns No grade differences
D38c^a							Peers: Increase 7 th graders < 9 th and 12 th
D39a1^{+b}	Groër et al., 1992	Active distraction General Written response Longitudinal	^{BD} Behavioral distraction	Walking, sports, exercising	13	18	Girls: Reduced active Boys: ns Most common (50-75%)
D39a2^{+b}							
D39b1^{+b}	Groër et al., 1992	Passive distraction General Written response Longitudinal	^{BD} Behavioral distraction	Reading, music, sleep, relaxing	13	18	Girls: Increased passive Boys: ns Second common (13-30%)
D39b2^{+b}							
D40^a	Stern & Zevon, 1990	Focus on positive Self-Identified Questionnaire	^{BDCR} Behavioral distraction Accommodation Focus on the positive	Tried to look on the bright wide, tried to do something creative	13	20	No association with age

Table 6 continues on the next page.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49

D41^a	Phelps & Jarvis, 1994	Factor 4 Self-Identified Questionnaire	^{BDCR} Behavioral distraction Accommodation Focus on the positive	I make sure not to make matters worse by acting too soon, I try to look for something good in what is happening, I learn to live with it, I go to the movies or watch TV to think less about it.	14	18	No association with age
------------------------	-----------------------	--	--	--	----	----	-------------------------

¹ Label used by the study authors for the way of coping measured in the study.

² Gen = General, Mult = Multiple, SI = Self-Identified, Dist = Distress, Ac = Academic, Med = Medical, Pers = Interpersonal, Unc = Uncontrollable

³ Quest = Questionnaire, Int = Interview, T-rate = Teacher rating, P-rate = Parent rating, Obs = Observation, Writ = Written response

⁴ Coping family according to the coding system used for all studies in this review.

^{e BD} Behavioral distraction only, ^{CD} Cognitive distraction only, ^{BCD} Cognitive and behavioral distraction only, ^{BDCR} Behavioral distraction and positive cognitive restructuring only, ^{CDCR} Cognitive distraction and positive cognitive restructuring only.

+ measures that included only the distraction family.

^b measures that included only behavioral distraction.

^c measures that included only cognitive distraction.

^m measures that mixed behavioral and cognitive distraction.

^a measures that combined accommodation (e.g., focus on the positive) and distraction.

^e measures that combined emotion management and distraction.

^e measures that combined avoidance and distraction.

Table 7

Summary of Results for the Coping Family of Support Seeking, Studies of Children and/or Adolescents Aged 4 or Older

Study number	Author, year (see Appendix A)	Coping category ¹ Stressor ² Method ³	Coping family(ies) ⁴	Description / sample items	Min age	Max age	Results
S1⁺	Baumgartner & Strayer, 2008	Seek help Peer provocation Observation	*Help-seeking	Solicit intervention of a third person (teacher or peer)	3	5	No age differences Not very common (15%)
S2⁺	Eisenberg et al., 1994	Emotional intervention, support Instrumental intervention, support Gen, P-, T-Rating	Help seeking Comfort seeking Problem solving	Cries to elicit assistance from others to help solve the problem, Talk about problems with friends or a teacher in hope of getting support, Ask an adult or another child to help solve the problem, Talk with a friend or teacher about the problem to help find a solution	4	6	No association with age reported (footnote only)
S3a	Fabes & Eisenberg, 1992	Adult seeking Interpersonal anger Observation	*Help seeking Comfort seeking	Attempts or threats to tell the teacher or seek comfort from the teacher or other adult.	4	6	With increasing age, girls were less likely to seek adults Boys, no association
S3b⁺							No association with age
S4	Bush et al., 1986	Attachment Wait in Dr.'s office Observation	Help seeking Comfort seeking Instrumental action	Look at parent, approach parent, touch parent, express verbal concern	4	10	No association with age
S5⁺	Losoya et al., 1998	Emotional support Interpersonal conflict, T-rating	*Help seeking Comfort seeking	Talks about problem to friends or teacher	4	12	No association with age
S6a⁺	Altshuler & Ruble, 1989	Social support Multiple-unc Interview	*Help seeking Comfort seeking	References to social support in responses	5	11	Age 7-8 preferred peer support to adult support.
S6b⁺							Age 5-6 and 10-11 preferred adult support to peer support

Table 7 continues on the next page.

S7a^a	Altshuler et al., 1995	Adaptive approach Medical- Unc, Int Hypothetical Retrospective	Help seeking Info Seeking Problem-solving	Do what is asked, seek information	5	11	r with age = .30, $p < .05$
S7b^a							No association with age
S8a⁺	Garber et al., 1995	Seeking support Interpersonal Academic game Questionnaire	*Help seeking Comfort seeking	Seeks out others to talk about problems, ask someone for help, talk to mom or dad about it	5	15	No association with age in interpersonal situation, 7-8 grade students used less than K-3 grade students in achievement situation after adjusting for gender and depression
S8b⁺							Lower in grade 2 than in kindergarten
S9a⁺	Bernzweig et al., 1993	Problem-focused support Distress, Interview	*Help seeking	The involvement of other people as resources to assist in seeking solutions for one's own problems; includes seeking advice or information	6	8	Lower in grade 2 than in kindergarten
S9b⁺	Bernzweig et al., 1993	Emotion-focused support Distress, Interview	*Comfort seeking	The involvement of other people in listening to feelings, providing understanding, or helping to see a more positive/less distressing way	6	8	Lower in grade 2 than in kindergarten
S9c^a	Bernzweig et al., 1993	Direct problem-solving Distress, Interview	Help seeking Comfort seeking Instrumental action	Efforts to change the problem situation by changing oneself or one's environment, included getting support	6	8	Higher in grade 2 than in kindergarten
S10a^a	Wertlieb et al., 1987	Problem-solving Self-Identified Interview	Help seeking Comfort seeking Negotiation Instrumental action	Function to change the problematic situation by changing one's own behavior or action, by changing the damaging or threatening environment. Talk to mom, tell brother directly, clean up, play by myself	6	9	r with age -.20, $p < .05$
S10b⁺	Wertlieb et al., 1987	Support seeking S-I, Interview	*Help seeking Comfort seeking	Child tries to elicit the involvement or assistance of another. Asked my Dad, stayed with friends.	6	9	Marginally lower at age 10 than age 7

Table 7 continues on the next page.

S11a^a	Rossman, 1992	Use of caregiver Distress Interview	Help seeking Comfort seeking Problem-solving	Talk to mom/dad about feeling bad, get mom/dad help with something bad, talk mom/dad about how to change what's wrong, think about how mom/dad would fix, but included two items about fixing/solving the problem.	6	12	High use; r with age = $-.15, p < .05$
S11b^e	Rossman, 1992	Use of peers Distress Interview	Help seeking Comfort seeking Behavioral distraction	play with someone, talk to friends, friend to fix it, but also included doing something active, watch TV, use medicine/drugs.	6	12	No association with age
S12⁺	Brown et al., 1992	Seeking social support Leukemia Questionnaire	*Support-seeking	KidCope (Spirito et al., 1988)	6	17	$r = .50, p < .05$
S13^e	Compas et al., 1996	Emotion focused coping Parent cancer Interview	Help seeking Comfort seeking Instrumental action Negotiation	Talked about the problem with a friend or family member	6	32	Increased with age, r with age = $.27, p < .05$
S14⁺	Vierhaus & Lohaus, 2009	Seeking social support Anger, anxiety Questionnaire Longitudinal	*Support-seeking Help seeking Comfort seeking	I let someone comfort me I ask someone to help me with the problem I ask someone for advice on how to solve the problem	7	10	Linear increases
S15^e	Band & Weisz, 1988	Secondary control Multiple events Interviews	Comfort seeking Help seeking Behavioral distraction Cognitive distraction	Praying, telling problems to friend, crying to let feelings out, kicking a wall after being embarrassed to let it out, watching TV to forget, daydreaming, hoping for the best	7	12	Higher among those in grades 6-7 than in grades 1-4
S16⁺	Eschenbeck et al., 2007	Seeking social support Ac, Pers Questionnaire	*Support seeking	I ask someone for help	7	16	No grade group differences Used more in social Pretty common
S17^a	Bull & Drotar, 1991	Problem-solving General, cancer Interview	Help seeking Comfort seeking Negotiation Instrumental action	Function to change the problematic situation by changing one's own behavior or action, by changing the damaging or threatening environment. Talk to mom, tell brother directly, clean up, play by myself	7	17	Declined with age

Table 7 continues on the next page.

1								
2								
3								
4	S18^a	Thomsen et al., 2002	Primary control engagement coping Abdominal pain Parent Quest	Problem-solving Self-reliance Support-seeking	Tries to think of different ways to make her stomachache feel better or go away, lets someone know something know about his feelings, keeps feelings under control	7	18	r with age = $-.16, p < .05$
5								
6								
7	S19⁺	Curry & Russ, 1985	Support seeking Dental Observation	*Help seeking Comfort seeking	Attempts to establish supportive relationship with health provider	8	10	No association with age
8								
9	S20a⁺	Newman et al., 2001	Help-seeking Peer aggression Open-ended	*Help seeking Comfort seeking	Would you ask for help?	8	10	Girls in grade 4 > grade 3; Boys in grade 4 < grade 3
10								
11	S20b⁺							
12	S21a⁺	Kliewer, 1991	Problem-focused support Multiple, Quest	*Help seeking	I asked my friends to help me	8	11	Lower in grade 5 than in grade 2
13								
14	S21b⁺	Kliewer, 1991	Emotion-focused support Multiple, Quest	*Comfort seeking	I tried to talk to my mom about how I was feeling	8	11	Lower in grade 5 than in grade 2
15								
16	S22⁺	Ryan, 1989	Social support SI: distress Questionnaire Focus groups	*Help seeking Comfort seeking	Non-aggressive behaviors that involve the presence of another individual; sharing (talk to my Mom, hug a friend, ask for help, go to Dad's house).	8	12	8-year-olds used more than older children
17								
18	S23⁺	Hampel & Petermann, 2005	Support seeking SI: Interpersonal, academic Questionnaire	*Help-seeking Contact seeking	I'm letting somebody help me! I'm asking for somebody's advice! I'm asking somebody what to do! I'm talking to somebody about that!	8	14	No age differences
19								
20	S24a^e	Kliewer & Sandler, 1993	Active coping, teacher report General Teacher Rating	Help seeking Comfort seeking Problem-solving Accommodation	Cognitive decision-making, direct problem-solving, seeking understanding, positive cognitive restructuring	8	14	No association with age
21								
22	S24b	Kliewer & Sandler, 1993	Support seeking, child report General, T-Rating	*Help seeking Comfort seeking	Problem focused support, emotion focused support.	8	14	No association with age
23								
24	S25a^p	Thurber & Weisz, 1997	Primary control, low homesickness Homesickness Questionnaire Interview	Help seeking Comfort seeking Problem-solving Instrumental action Behavioral Escape	I went to someone who could talk with me and help me feel better, like a leader or one of my friends, I did something to try to get back home, like run away, or write to my parents and tell them to come get me.	8	16	Decreased from age 8 to 16
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 7 continues on the next page.

S25b^P	Thurber & Weisz, 1997	Primary control, high homesickness Homesickness Questionnaire Interview	Help seeking Comfort seeking Problem-solving Instrumental action Behavioral Escape	I went to someone who could talk with me and help me feel better, like a leader or one of my friends, I did something to try to get back home, like run away, or write to my parents and tell them to come get me.	8	16	Decreased from age 8 to 16
S26^P	Brown et al., 1986	Catastrophizing Multiple + S-I Written response	Support seeking Behavioral Escape	I want to run away, Mommy come and get me, I knew I shouldn't have come	8	18	No association with age
S27^e	Olson et al., 1993	Coping Self-Identified Questionnaire	Help seeking Comfort seeking Problem-solving Behavioral distraction	Positive self-talk, attention diversion, relaxation, thought stopping, task orientation, talk with someone, problem-solving activity	8	18	Increased with age
S28a⁺	Gamble, 1994	Direct problem solve	*Help seeking Comfort seeking	Talk to mother or friend about fighting/talk to teacher about failure	8	14	No association with age
S28b⁺	Gamble, 1994	Seeking social support Multiple, Quest	*Help seeking Comfort seeking	Talk to friend about problem.	8	14	No association with age
S28c⁺	Gamble, 1994	Direct problem solve Multiple, Quest	*Help seeking Comfort seeking	Talk to mother or friend about fighting/talk to teacher about failure	14	24	No association with age
S28d⁺	Gamble, 1994	Seeking social support Multiple, Quest	*Help seeking Comfort seeking	Talk to friend about problem	14	24	No association with age
S29⁺	De Boo & Wicherts, 2009	Support seeking strategies General Questionnaire	*Help-seeking Comfort-seeking	Support for actions: You tell others how you like to solve the problem Support for feelings: You tell people how you feel about the problem	9	12	No differences
S30a⁺	Spirito et al., 1991	Social support Self-Identified Questionnaire	*Help seeking Comfort seeking	I tried to feel better by spending time with others like family, grownups, or friends	9	14	No association with age
S30b⁺	Spirito et al., 1991	Social support Interpersonal Questionnaire	*Help seeking Comfort seeking	I tried to feel better by spending time with others like family, grownups, or friends	9	14	No association with age
S30c^a	Spirito et al., 1991	Problem-solving Self-Identified Questionnaire	Problem-solving Instrumental action Support-seeking	I tried to fix the problem by thinking of answers, I tried to fix the problem by doing something or talking to someone	9	14	Lower at age 14 than earlier

Table 7 continues on the next page.

1								
2								
3								
4								
5	S30d^a	Spirito et al., 1991	Problem-solving Interpersonal Questionnaire	Problem-solving Instrumental action Support-seeking	I tried to fix the problem by thinking of answers, I tried to fix the problem by doing something or talking to someone	9	14	Age 11 > 13, 14 Age 12 > 14
6								
7	S31^a	Hoffman et al., 1992	Practically oriented coping Self-Identified Questionnaire	Help seeking Comfort seeking Problem-solving Instrumental action	Resolving or circumventing problems or threats. (primarily cognitive efforts are emphasized as representative of this type). (tried to solve the problem by talking to people involved, talked with someone about how to solve problem)	10	13	No association with age
8								
9								
10								
11								
12								
13	S32a⁺	Roecker et al., 1996	Seeking social support Parent conflict Questionnaire	*Help seeking Comfort seeking	Ask a friend for advice	10	13	No association with age
14								
15								
16								
17	S32b⁺	Roecker et al., 1996	Seeking social support Questionnaire Observed conflict between friends	*Help seeking Comfort seeking	Ask a friend for advice	10	13	4th & 7th > 5th
18								
19								
20								
21								
22	S33^e	Compas et al. 1988	Emotion focused coping S-I: Interpersonal + Academic Open-ended written	Help seeking Comfort seeking Problem-solving Instrumental action Negotiation	Talked about the problem with a friend or family member	10	14	Increased with age for social stressors
23								
24								
25								
26								
27	S34⁺	Hampel & Petermann, 2006	Support seeking SI: Pers, peers Questionnaire	*Support-seeking Help-seeking Contact seeking	I'm letting somebody help me! I'm asking for somebody's advice! I'm asking somebody what to do! I'm talking to somebody about that!	10	14	Grades 6 and 7 less than grade 5
28								
29								
30								
31	S35^p	Brodzinsky et al., 1992	Factor 1 – assistance seeking Self-Identified Questionnaire	Help seeking Comfort seeking Social isolation	I asked someone in my family for help with the problem, I got advice from someone about what to do, I shared my feelings about the problem with another, I kept my feelings to myself	10	15	No association with age
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 7 continues on the next page.

S36a	Seiffge-Krenke et al., 2009	Active SI: Multiple Questionnaire Longitudinal	Support-seeking Information-seeking	7 strategies involving formal and informal support systems, such as seeking advice or emotional assistance from parents or friends or searching for information and assistance from counseling centers (I discuss my problem with my parents, I try to solve the problem with the help of my friends)	12	15	Linear increase (latent growth curve model)
S36b	Seiffge-Krenke et al., 2009	Active SI: Multiple Questionnaire Longitudinal	Support-seeking Information-seeking	7 strategies involving formal and informal support systems, such as seeking advice or emotional assistance from parents or friends or searching for information and assistance from counseling centers (I discuss my problem with my parents, I try to solve the problem with the help of my friends)	16	19	Linear increase (latent growth curve model)
S37a^e	Tolan et al., 2002	Seeking support General Questionnaire	Support seeking Negotiation Repair	Go along with parents, do things with family, reason with parents/ compromise, talk with mother, apologize to people	12	16	No association with age
S37b⁺	Tolan et al., 2002	Seeking guidance General, Questionnaire	*Support-seeking Help seeking	Talk to teacher/ counselor at school, talk to church leader, talk to father, pray	12	16	No association with age
S38a⁺	Frydenberg & Lewis, 1993	Social support General Questionnaire	*Help seeking Comfort seeking	Inclination to share the problem with others and enlist support; Talk to other people to help me sort it out	12	17	Increased with age
S38b⁺	Frydenberg & Lewis, 1993	Friends General Questionnaire	*Help seeking Comfort seeking	Engage in a particular intimate relationship; Spend more time with boy/girl friend	12	17	No association with age
S39	Ebata & Moos, 1994	Guidance/support SI, Questionnaire	*Help seeking Comfort seeking	Talked with a parent or another family member about the problem	12	18	r with age = .21, $p < .05$
S40a1⁺	Frydenberg & Lewis, 2000	Social support General Questionnaire	*Help seeking Comfort seeking	Inclination to share the problem with others and enlist support; Talk to other people to help me sort it out	12	18	Age 12-14 stability, and age 14-16 increase
S40a2⁺							

Table 7 continues on the next page.

	S40b1	Frydenberg & Lewis, 2000	Social action General Questionnaire	Help seeking Comfort seeking Instrumental action	Let others know what is of concern and enlisting support by writing petitions or organizing an activity such as a meeting or a rally; Join with people how have the same concern	12	18	Age 12-14 decrease, and age 14-16 stability
	S40b2							
	S40c1	Frydenberg & Lewis, 2000	Professional help General Questionnaire	*Help seeking Comfort seeking	Use of a professional advisor, such as teacher or counselor; Discuss the problem with qualified people	12	18	Decline from age 12-14, increase from 14-16
	S40c2							
	S40d⁺	Frydenberg & Lewis, 2000	Friends General Questionnaire	*Help seeking Comfort seeking	Engage in a particular intimate relationship; Spend more time with boy/girl friend	12	18	No association with age
	S41a⁺	Irion & Blanchard-Fields, 1987	Seeking social support SI: Threat, Challenge Questionnaire	*Help seeking Comfort seeking	Ways of Coping Questionnaire, no example items provided	12?	70?	Young adults (<i>M</i> age 20) used more than adolescents (<i>M</i> age 16) in threat situations, but no age difference in challenge situations
	S41b⁺							
	S42a^e	Griffith et al., 2000	Approach SI: Family, school, peers Questionnaire	Problem-solving Support-seeking Behavioral distraction Accommodation	Cognitive approach: logical analysis, positive appraisal Behavioral approach: guidance/ support seeking, problem solving Seeking alternative rewards Think of different ways to deal with the problem Talk with a friend about the problem Think about how this situation could change my life for the better Do more fun activities Make new friends	13	18	Family: Increase 9 th graders more than 7 th graders School: ns No grade differences Peers: Increase 7 th graders less than 9 th and 12 th graders
	S42b^e							
	S42c^e							
	S43^e	Groër et al., 1992	Stress-recognition General Written response	Support seeking Expression	Talking to someone, writing, drawing or other creative activity	13	18	No age changes Low (2-7%) Longitudinal
	S44a⁺	Stern & Zevon, 1990	Seek social support, SI: School or work Questionnaire	*Help seeking Comfort seeking	Talked to someone about the feelings, accepted sympathy from someone, asked someone for advice	13	20	No association with age
	S44b⁺	Stern & Zevon, 1990	Seek social support, SI: Interpersonal Questionnaire	*Help seeking Comfort seeking	Talked to someone about the feelings, accepted sympathy from someone, asked someone for advice	13	20	No association with age

Table 7 continues on the next page.

S45a ^a	Phelps & Jarvis, 1994	Factor 1 Self-Identified Questionnaire	Help seeking Comfort seeking Problem-solving Instrumental action	I concentrate my efforts on doing something about it, I think hard about what steps to take, I put aside other activities to concentrate on, I ask people who had similar experiences	14	18	No association with age
S45b ^p	Phelps & Jarvis, 1994	Factor 3 Self-Identified Questionnaire	Help seeking Comfort seeking Venting	I discuss my feelings with someone, I get upset and let my emotions out	14	18	No association with age
S46 ^p	Blanchard-Fields & Irion, 1988	Emotion-focused coping S-I: Questionnaire	*Comfort seeking	Ways of Coping Questionnaire	14	46	r with age = $-.25$, $p < .05$

¹ Label used by the study authors for the way of coping measured in the study.

² Gen = General, Mult = Multiple, SI = Self-Identified, Dist = Distress, Ac = Academic, Med = Medical, Pers = Interpersonal, Unc = Uncontrollable

³ Quest = Questionnaire, Int = Interview, T-rate = Teacher rating, P-rate = Parent rating, Obs = Observation, Writ = Written response

⁴ Coping family according to the coding system used for all studies in this review.

* = measures that included only the support-seeking family (contact seeking, comfort seeking help seeking, assistance).

+ measures that included only the support-seeking family (contact seeking, comfort seeking help seeking, assistance).

^a measures that combined problem-solving with support-seeking (referred to as active or approach).

^e measures that combined emotion management with support-seeking.

^p measures that combined emotion-focused coping with support-seeking.

Table 8

Summary of Results for the Coping Family of Escape, Studies of Children and/or Adolescents Aged 4 or Older

Study number	Author, year (see Appendix A)	Coping category ¹ Stressor ² Method ³	Coping family(ies) ⁴	Description / sample items	Min age	Max age	Results
E1^{+b}	Baumgartner & Strayer, 2008	Flee Peer provocation Observation	*Escape	Escape the protagonist by leaving the arena of social interaction	3	5	No age differences
E2a^t	Eisenberg et al., 1994	Distraction/ Avoidance Gen, P-,T-Rating	Behavioral distraction Escape vs. Opposition	Keeps busy so not to think about the problem	4	6	Common (28%) Decrease with age (footnote only)
E2b^t	Fabes & Eisenberg, 1992	Avoidance	^{BE} Escape	Attempts to avoid or get away from the provocateur (e.g., leaving the area to play somewhere else).	4	6	$r = -.38$ for boys No association for girls.
E3a^{+b}		Interpersonal anger Observation					
E3b^{+b}							
E4^t	Bush et al, 1986	Distress Medical, waiting for doctor Observation	Escape, Delegation, Social isolation Helplessness Submission Venting (opposition)	Cry; diffuse motor such as running around, pacing, flailing arms, kicking, arching, repetitive behaviors; verbalizing fear, distress, anger, anxiety; withdrawal such as silent and immobile, no eye contact, curled-up	4	10	No association with age
E5^d	Losoya et al., 1988	Behavioral avoidance Behavioral distraction Pers conflict, T-rating	Behavioral escape Behavioral distraction	Leaves or avoids; keeps busy to not think about the problem	4	12	Increased with age
E6a^t	Altshuler & Ruble, 1989	Complete avoidance: Escape Uncontrollable Negative- Medical Interview	Behavioral escape Cognitive escape Opposition Venting	Leave, sleep/close eyes, try to get out of it/argue, go somewhere else	5	11	Negative events, decrease with age. Young kids: behavioral distraction = escape Rarely mentioned by 10-11 year old children.

Table 8 continues on the next page.

E6b^{+c}	Altshuler & Ruble, 1989	Complete avoidance: Denial Uncontrollable Negative- Medical Interview	^{CE} Cognitive escape	Deny situation exists, don't think about it/ forget it	5	11	No age differences Rarely mentioned at any age
E7a^t	Altshuler et al., 1995	Escape Medical Unc Obs	Behavioral escape Opposition	Stalls, behaves aggressively, adopts refusal position, requires restraint, request termination of procedure	5	11	No association with age. Kids are all using behavioral distraction
E7b^d	Altshuler et al., 1995	Escape Medical Unc Hypothetical Interview	Behavioral escape Cognitive escape Opposition	Leave, sleep/close eyes, try to get out of it, argue, go somewhere else	5	11	$r = -.38$
E7c^t	Altshuler et al., 1995	Escape Medical Unc Retrospective Interview	Behavioral escape Cognitive escape Opposition	Leave, sleep/close eyes, try to get out of it, argue, go somewhere else	5	11	No association with age. Kids are all using behavioral distraction
E8a^d	Garber et al., 1995	Behavioral avoidance Interpersonal fight Academic game Questionnaire	Behavioral Escape Behavioral distraction Social isolation	Engage in an alternative behavior that gets away from the situation, do something else, go home	5	15	K-3 grade students used more than 7-8 grade students in interpersonal situation
E8b^d							K-3 grade students used more than 4-8 grade students in achievement situation after adjusting for gender and depression
E9a^{+b}	Bernzweig et al., 1993	Avoidant actions Own distress: night fear, peers Mother Questionnaire	^{BE} Behavioral escape	Efforts to avoid a problem situation by leaving the situation (e.g., Go under the covers and stick fingers in ears; stay away from children or leave the scene)	6	8	No difference K vs. 2 nd grade Moderate usage
E9b^{+b}	Bernzweig et al., 1993	Avoidant actions Other child's distress: night fear, peers Mother Questionnaire	^{BE} Behavioral escape	Efforts to avoid a problem situation by leaving the situation (e.g., Stay away from child and leave the room)	6	8	No differences K vs. 2 nd grade Low usage

Table 8 continues on the next page.

1								
2								
3								
4	E9c^d	Bernzweig et al., 1993	Distracting and avoidant actions Own distress: night fear, peers Child Interview	Behavioral escape Behavioral distraction Behavioral avoidance	Using distracting stimuli such as entertainment, continuing to play with friends, engaging in solitary activity such as reading, efforts to avoid a problem by leaving such as leaving the room.	6	8	No difference K vs. 2 nd grade Combined freq- high Individual frequencies for dist and escape- low 2 nd grade more than K
5								
6								
7								
8								
9								
10	E9d^{+c}	Bernzweig et al., 1993	Cognitive avoidance Own distress: night fear, peers Child Interview	Cognitive escape Cognitive avoidance	Efforts to avoid thinking about the problem or ways to ignore it (e.g., that doesn't scare me).	6	8	Rarely used
11								
12								
13								
14	E9e^d	Bernzweig et al., 1993	Distracting and avoidant actions Other child's distress: night fear, peers Child Interview	Behavioral escape Behavioral distraction Behavioral avoidance	Using distracting stimuli such as entertainment, continuing to play with friends, engaging in solitary activity such as reading, efforts to avoid a problem by leaving such as leaving the room	6	8	No age differences Low usage
15								
16								
17								
18								
19	E10^d	Wertlieb et al., 1987	Intrapsychic Self-Identified Interview	Cognitive distraction Behavioral escape	Think about something fun, get tired and fall asleep, make up imaginary friend	6	9	Higher at age 10 than 7
20								
21								
22	E11a^d	Rossman, 1992	Distraction/avoidance Distress Interview	Cognitive escape Behavioral escape Behavioral distraction Focus on the positive	Magic or pretend, hobby/game, think positive, pretend hero to solve problem, get away, book to take mind off it.	6	12	r with age = $-.19$, $p < .05$
23								
24								
25								
26	E11b^t	Rossman, 1992	Distress Distress Interview	Escape Distress	bite nails, suck thumb, cry, go hide.	6	12	6-7 > 8-9 or 10-12 No correlation with age
27								
28								
29	E11c^d	Rossman, 1992	Use of peers Distress Interview	Behavioral escape Behavioral distraction Comfort seeking Help seeking	Play with someone, talk to friends, friend to fix it, but also included doing something active, watch TV, use medicine/drugs.	6	12	No association with age reported
30								
31								
32	E12^d	Compas et al., 1996	Emotion-focused Parent cancer Interview	Behavioral escape Cognitive distraction Behavioral distraction Support seeking Emotional regulation	Avoid or distract oneself from the parent's cancer or feelings about the cancer. Young children tried to do things they liked to do: playing with toys, TV, drawing. Adolescents spent time away from home, doing homework. Many emotion-focused responses also included information seeking	6	32	r with age = $.27$, $p < .05$
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 8 continues on the next page.

E13^{+m}	Vierhaus & Lohaus, 2009	Avoidant coping Anger, anxiety Questionnaire Longitudinal	*Escape	I try to avoid the problem I get out of the way I try to shirk	7	10	Linear decreases
E14a^{+c}	Eschenbeck et al., 2007	Avoidant coping Ac, Pers Questionnaire	*Cognitive Escape	I tell myself it doesn't matter	7	16	Social and academic: 5&6 less than 3&4
E14b^{+c}							Academic: 5&6 use less than 7&8
E15a^{+m}	Thomsen et al, 2002	Disengagement coping Abdominal pain Parent-report Questionnaire	*Escape Avoidance Wishful thinking	avoidance (my daughter tries to forget all about it), denial (when my son gets a stomachache, he says to himself, "this isn't real"), wishful thinking (my daughter deals with her stomachaches by wishing they would just go away)	7	18	No association with age reported Average usage was 16%
E15b^t	Thomsen et al, 2002	Involuntary disengagement Abdominal pain Parent-report Questionnaire	Emotional numbing Helplessness Escape Inaction	emotional numbing (my daughter doesn't feel like herself when she has a stomachache, it's like she's far away), cognitive interference (my son's mind just goes blank when he has a stomachache, he can't think at all), escape (my daughter just has to get away from everyone when she has stomachaches she can't stop herself), inaction (my son just freezes when he has a stomachache, he can't do anything).	7	18	No association with age reported Average usage was 18%
E16^{+b}	Kliwer, 1991	Avoidant actions Multiple Questionnaire	^{BE} Avoidant actions Prevention Escape	Walked away from the group...	8	11	No age difference
E17^{+m}	Ryan, 1989	Avoidant activities SI: Distress Focus groups, written responses	Behavioral escape Cognitive escape	Behaviors other than isolating behaviors that are deliberate attempts to avoid dealing with the stressor (run away, try to forget about it, ignore it, change the subject, don't worry about it, lie)	8	12	10 year-old less than 9 year-olds

Table 8 continues on the next page.

1								
2								
3								
4	E18^{+m}	Hampel & Petermann, 2005	Passive avoidance SI: Interpersonal, academic Questionnaire	*Escape Avoidance	I'd like to get out of here now! I'd like to stay in bed! I'd like to stay away from the situation! I'd like to pretend to be ill!	8	14	No age differences
5								
6	E19a^d	Kliewer & Sandler, 1993	Cognitive and behavioral avoidance General Child Questionnaire	Cognitive escape Behavioral distraction Cognitive distraction	Cognitive avoidance, behavioral avoidance Distracting actions, cognitive avoidance	8	14	β with age = -.24, p <.05; control for gender and social competence
7								
8	E19b^d	Kliewer & Sandler, 1993	Passive coping (Avoidance) General Teacher-rating	Cognitive escape Cognitive distraction Behavioral distraction	Distracting actions, cognitive avoidance	8	14	No association with age
9								
10	E20a^d	Thurber & Weisz, 1997	Primary control, low homesickness group Homesickness Quest, Interview	Problem-solving Comfort seeking Instrumental action Behavioral escape	I went to someone who could talk with me and help me feel better, like a leader or one of my friends, I did something to try to get back home, like run away, or write to my parents and tell them to come get me.	8	16	Decreased with age
11								
12	E20b^d	Thurber & Weisz, 1997	Primary control, high homesickness group Homesickness Quest, Interview	Problem-solving Comfort seeking Instrumental action Behavioral escape	I went to someone who could talk with me and help me feel better, like a leader or one of my friends, I did something to try to get back home, like run away, or write to my parents and tell them to come get me.	8	16	Decreased with age
13								
14	E21^d	Brown et al., 1986	Catastrophizing Multiple + S-I Written response	Behavioral Escape Support seeking	I want to run away, Mommy come and get me, I knew I shouldn't have come	8	18	No association with age
15								
16	E22^t	Olson, et al., 1993	Catastrophizing Multiple Questionnaire	Escape Rumination	Focus on negative affect or fear, anxious anticipation, escape or avoidance, worry/rumination, self-denigration/self-blame, fear of unlikely consequence, feelings toward health care provider, fear of their response toward health care provider	8	18	Decreased with age
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 8 continues on the next page.

E23 ^{+m}	De Boo & Wicherts, 2009	Avoidance strategies General Questionnaire	*Behavioral escape Cognitive escape Avoidance	Avoidant actions: You stay away from the problem Repression: You just forget about it Wishful thinking: You imagine how you would like things to be	9	12	No differences
E24 ^{+c}	Spirito et al 1991	Wishful thinking Self-Identified Kidcope Questionnaire	^{CE} Cognitive escape	I wished the problem had never happened, I wished I could make things better	9	14	Age 9 - 13 > 14
E25a ^{+m}	Fear et al., 2009	Disengagement coping Family, depression Child Quest	*Behavioral escape Cognitive escape	Avoidance, denial, wishful thinking	9	15	No association with age Proportion scores
E25b ^{+m}	Fear et al., 2009	Disengagement coping Family, depression P-rate Quest	*Behavioral escape Cognitive escape Avoidance	Avoidance, denial, wishful thinking	9	15	$r = .19, p < .05$ Proportion scores
E26 ^d	Hoffman, et al., 1992	Cognitively-oriented efforts SI: felt pressured or uncomfortable Questionnaire	Cognitive escape Cognitive distraction Cognitive restructuring Accommodation	Altering or minimizing appraisals of threat or misfortune. (concentrated on good things that might come out of situation, tried not to think too much about it, accepted the situation because nothing to do)	10	13	Increased with age
E27 ^{+c}	Roeker et al., 1996	Avoidance/distancing/d enial, Interpersonal conflict Questionnaire	^{CE} Cognitive escape	Make believe nothing happened	10	13	No significant age difference reported
E28a ^t	Compas, et al., 1988	Emotion-focused SI: social, academic Open-ended, written	Self-soothing Cognitive escape Aggression	“calmed myself down”, “ignored the situation”, “hit the other person” “yelled at other person” “threw things”	10	14	8 th grade higher than 6 th or 7 th grade (main effect) girls- increase academic boys-increase social
E28b ^t							
E29 ^{+m}	Hampel & Petermann, 2006	Passive avoidance SI: Pers, peers Questionnaire	*Escape Avoidance	I'd like to get out of here now! I'd like to stay in bed! I'd like to stay away form the situation! I'd like to pretend to be ill!	10	14	No grade differences

Table 8 continues on the next page.

1								
2								
3								
4	E30a^t	Brodzinsky et al., 1992	Behavioral avoidance Self-Identified Questionnaire	Behavioral avoidance Other blame Social isolation Cognitive avoidance	I stayed away from things that reminded me, I tried not to feel anything – go numb, I went to sleep so not think about it, I was mean to someone even though they didn't deserve it, I decided to stay away from people and be by myself	10	15	Lower in grade 8 than in grade 6
5								
6								
7								
8								
9								
10								
11	E30b^d	Brodzinsky et al., 1992	Cognitive avoidance Self-Identified Questionnaire	Cognitive escape Cognitive distraction Behavioral distraction Helplessness	I tried not thinking about problem, I went on with things as if nothing wrong, I pretended the problem wasn't important, I knew I had lots of feelings, but didn't pay attention, I tried to get away by doing other things, I tried to pretend that the problem didn't happen, I hoped that things would work out so didn't do anything, I realized there was nothing I could do – so just wait until over	10	15	Lower in grade 8 than in grade 6
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22	E31a^t	Seiffge-Krenke et al., 2009	Withdrawal SI: Multiple (school, future, parents, peers, leisure, romantic, self) Questionnaire	Escape Avoidance Venting Helplessness Substance use	7 strategies that characterized efforts to retreat from or avoid the stressor as well as behaviors intended to release emotional tension (shouting or slamming doors) (I try to forget about the problem with alcohol and drugs, I withdraw because I cannot change anything anyway)	12	15	Linear increase (latent growth curve model) Not common Longitudinal
23								
24								
25								
26								
27								
28								
29								
30								
31	E31b^t	Seiffge-Krenke et al., 2009	Withdrawal SI: Multiple (school, future, parents, peers, leisure, romantic, self) Questionnaire	Escape Avoidance Venting Resignation Substance use	7 strategies that characterized as efforts to retreat from or avoid the stressor as well as behaviors intended to release emotional tension (shouting or slamming doors) (I try to forget about the problem with alcohol and drugs, I withdraw because I cannot change anything anyway)	16	19	No linear changes Not common Longitudinal
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 8 continues on the next page.

E32 ^t	Herman-Stahl et al., 1995	Withdrawal General Questionnaire	Cognitive escape Avoidance Venting Substance use	I try to let my feelings out (with load music, riding my motorbike, wild dancing etc.) I let out my feelings by shouting crying, banging doors etc. I try not to think about the problem I try to forget my problem with alcohol or drugs I withdraw because I cannot change anything anyway	12	17	No age differences
E33a ^d	Frydenberg & Lewis, 2000	Wishful thinking General Questionnaire	Escape Optimism	Based on hope and anticipation of a positive outcome; Hope for the best	12	18	No change with age
E33b ^d	Frydenberg & Lewis, 2000	Ignore the problem General Questionnaire	Escape Denial	A conscious blocking out of the problem and resignation coupled with an acceptance that there is no way of dealing with it; Ignore the problem	12	18	No change with age
E34a ^d	Irion & Blanchard-Fields, 1987	Distancing SI: Threat, Challenge Questionnaire	Behavioral distraction Cognitive distraction Behavioral escape Cognitive escape	Ways of Coping Questionnaire, no items provided	12?	70?	Young adults (M age 20) less than adolescents (M age 16) in threat situations, but no age difference in challenge situations
E34b ^d							
E35a ^t	Griffith et al., 2000	Avoidance SI: Family, school, peers Questionnaire	Behavioral escape Cognitive escape Helplessness Opposition	Cognitive avoidance: cognitive avoidance, resigned acceptance Behavioral avoidance: emotional discharge Put off thinking about the problem Lose hope that things could ever be the same Take it out on other people when you feel angry or sad	13	18	Family: ns No grade differences School: 9 th graders more than 7 th and 12 th graders Peers: ns No grade differences
E35b ^t							
E35c ^t							

Table 8 continues on the next page.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49

E36a^{+c}	Stern & Zevon, 1990	Wishful thinking SI: school or work WOC Quest	^{CE} Escape	Wished that the situation would go away, daydreamed, hoped a miracle would happen	13	20	No significant age difference reported
E36b^{+c}	Stern & Zevon, 1990	Detachment, SI: school or work WOC Quest	Escape Accommodation	Tried to forget the whole thing, went on as if nothing had happened, went along with fate	13	20	No significant age difference reported
E36c^d	Stern & Zevon, 1990	Wishful thinking SI: interpersonal WOC Quest	^{CE} Escape	Wished that the situation would go away, daydreamed, hoped a miracle would happen	13	20	Older less than younger age group
E36d^d	Stern & Zevon, 1990	Detachment SI: interpersonal WOC Quest	Escape Accommodation	Tried to forget the whole thing, went on as if nothing had happened, went along with fate	13	20	Older less than younger age group
E37^t	Phelps & Jarvis, 1994	Factor 2 Self-Identified Questionnaire	Cognitive escape Passivity/helplessness	Denial – I pretend that it hasn't really happened Behavioral disengagement – I just give up trying to reach my goal Alcohol-drug disengagement – I used alcohol or drugs to help me get through it	14	18	No grade differences

¹ Label used by the study authors for the way of coping measured in the study.
² Gen = General, Mult = Multiple, SI = Self-Identified, Dist = Distress, Ac = Academic, Med = Medical, Pers = Interpersonal, Unc = Uncontrollable
³ Quest = Questionnaire, Int = Interview, T-rate = Teacher rating, P-rate = Parent rating, Obs = Observation, Writ = Written response
⁴ Coping family according to the coding system used for all studies in this review.
^{BE}Behavioral escape only, ^{CE}Cognitive escape only, ^{BCE}Cognitive and behavioral escape only.
+ measures that included only the escape family.
^c measures that included only cognitive escape.
^m measures that mixed behavioral and cognitive escape.
^b measures that included only behavioral escape.
^t measures that combined maladaptive coping (e.g., aggression, isolation, helplessness) and escape.
^d measures that combined distraction and escape.

Table 9

Summary of Results for Studies of Accommodation, Rumination, and Opposition Coping in Children and/or Adolescents Aged 4 or Older

Study number	Author, year (see Appendix A)	Coping category ¹ Stressor ² Method ³	Coping family(ies) ⁴	Description / sample items	Min age	Max age	Results
A1	Eisenberg et al., 1994	Cognitive restructuring Distraction Gen, P-,T-Rating	Accommodation Distraction	Tries to think about the situation in a positive way Keeps busy so not to think about the problem	4	6	Decrease with age (footnote only)
A2^{+P}	Losoya et al., 1988	Cognitive restructuring Pers, T-rating	*Accommodation	Tries to think about the situation in a positive way	4	12	Increases rapidly with age
A3	Altshuler & Ruble, 1989	Direct emotion manipulation Med-Unc, Int	Accommodation Distraction, Venting, Support-seeking	Do something to relax, think about relaxing, act the way you want to feel, think about or get reward after, cry, pray, tell someone how you feel, express feelings KidCope (Spirito et al., 1988)	5	11	No age differences
A4a^{+P}	Brown et al., 1992	Cognitive restructuring Leukemia Questionnaire	*Accommodation	KidCope (Spirito et al., 1988)	6	17	$r = .47, p < .05$
A4b⁺	Brown et al., 1992	Wishful thinking Leukemia Questionnaire	*Accommodation	KidCope (Spirito et al., 1988)	6	17	No association with age reported
A4c	Brown et al., 1992	Resignation Leukemia Questionnaire	Accommodation Helplessness	KidCope (Spirito et al., 1988)	6	17	$r = .67, p < .01$
A5^P	Vierhaus & Lohaus, 2009	Palliative coping Anger, anxiety Questionnaire	Distraction Accommodation	I think of something nice I try to calm down I do something to relax	7	10	Linear increases
A6^{+P}	Curry & Russ, 1985	Focus on positive Dental, Interview	*Accommodation	Attention to positive factors	8	10	Longitudinal r with age = .39, $p < .05$
A7⁺	Kliewer, 1991	Positive reinterpretation and growth Multiple, Quest	*Accommodation	I try to look for something good in what is happening	8	11	No grade effects

Table 9 continues on the next page.

1								
2								
3								
4	A8⁺	Hampel & Petermann, 2005	Minimization SI: Interpersonal, academic Questionnaire	*Accommodation	I say to myself: It isn't so serious! I keep in mind: It isn't a big deal! I say to myself: It isn't as bad as all that! I keep in mind: Life will be better tomorrow!	8	14	No age differences
5								
6								
7								
8	A9a	Thurber & Weisz, 1997	Secondary control, low homesickness group Homesickness Quest, Interview	Accommodation Emotion regulation Mental escape Support seeking Wishful thinking Behavioral distraction	I tried to think about the good side of things, just changed how I felt, tried to be happy and have fun, stay not that long so be home soon, tried to forget about being homesick, thought about people who care about me, wished things were different, did something fun to forget, did something to feel closer to home	8	16	Quadratic trend: decrease 8-13 and increase 14-16
9								
10								
11								
12								
13								
14								
15								
16	A9b	Thurber & Weisz, 1997	Secondary control, high homesickness group Homesickness Quest, Interview	Accommodation Emotion regulation Mental escape Support seeking Wishful thinking Behavioral distraction	I tried to think about the good side of things, just changed how I felt, tried to be happy and have fun, stay not that long so be home soon, tried to forget about being homesick, thought about people who care about me, wished things were different, did something fun to forget, did something to feel closer to home	8	16	<i>r</i> with age = -.15, <i>p</i> < .05
17								
18								
19								
20								
21								
22								
23								
24	A10	DeBoo & Wicherts, 2009	Positive cognitive reframing strategies General Questionnaire	Accommodation Optimism Efficacy	Positive thinking: You remind yourself that you are better off than a lot of other people Optimistic thinking: You tell yourself that you know what to do Control: You tell yourself that you can handle the problem	9	12	No differences
25								
26								
27								
28								
29								
30	A11⁺	Spirito et al., 1991	Cognitive restructuring Self-Identified Questionnaire	*Accommodation	KidCope (Spirito et al., 1988)	9	14	Decrease with age: Ages 11-14 lower than ages 9-10
31								
32								
33								
34	A12a	Fear et al., 2009	Secondary control coping Family, depression Child Quest	Distraction Accommodation	Cognitive restructuring, positive thinking, acceptance, distraction	9	15	No association with age Proportion scores
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Table 9 continues on the next page.

A12b	Fear et al., 2009	Secondary control coping Family, depression P-rate Quest	Distraction Accommodation	Cognitive restructuring, positive thinking, acceptance, distraction	9	15	No association with age Proportion scores
A13⁺	Hampel & Petermann, 2006	Minimization SI: Pers, peers Questionnaire	*Accommodation	I say to myself: It isn't so serious! I keep in mind: It isn't a big deal! I say to myself: It isn't as bad as all that! I keep in mind: Life will be better tomorrow!	10	14	No grade differences
A14^P	Seiffge-Krenke et al., 2009	Internal SI: Multiple (school, future, parents, peers, leisure, romantic, self) Questionnaire	Problem-solving Accommodation	6 strategies based on cognitive processes, such as thinking about possible solutions, recognizing one's own limitations, and being willing to accept compromises (I accept my limits, I think about the problem and try to find different solutions)	12	15	Linear increase (latent growth curve model) Common Longitudinal
A15⁺	Tolan et al., 2002	Positive thinking General, Questionnaire	*Accommodation	Improve self, think good things about life, try to see good in difficulties	12	16	Increase with age: Ages 14-16 higher than ages 12-13
A16a⁺	Frydenberg & Lewis, 2000	Focus on the positive General Questionnaire	*Accommodation	Positive and cheerful outlook on current situation, seeing oneself as fortunate. Look on the bright side of things and think of all that is good.	12	18	No association with age
A16b	Seiffge-Krenke et al., 2009	Internal SI: Multiple (school, future, parents, peers, leisure, romantic, self) Questionnaire	Problem-solving Accommodation	6 strategies based on cognitive processes, such as thinking about possible solutions, recognizing one's own limitations, and being willing to accept compromises (I accept my limits, I think about the problem and try to find different solutions)	16	19	Linear increase (latent growth curve model) Common Longitudinal
A17a^P	Garnefski et al., 2002	Acceptance General, questionnaire	Accommodation Helplessness	I think that I have to accept that this has happened I think that I have to accept the situation I think that I cannot change anything about it I think that I must learn to live with it	12	71	Adults (age 18-71) show more than adolescents (ages 12-16) Medium common

Table 9 continues on the next page.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49

A17b ^{+p}	Garnefski et al., 2002	Positive reappraisal General, questionnaire	*Accommodation	I think I can learn something from the situation I think that I can become a stronger person as a result of what has happened I think that the situation also has its positive sides I look for the positive sides to the matter	12	71	Adults (age 18-71) show more than adolescents (ages 12-16) Common
A17c ^p	Garnefski et al., 2002	Putting into perspective General, questionnaire	*Accommodation	I think that it all could have been much worse I think that other people go through much worse experiences I think that it hasn't been too bad compared to other things I tell myself that there are worse things in life	12	71	Adults (age 18-71) show more than adolescents (ages 12-16) Common
A18 ^p	Griffith et al., 2000	Approach SI: Family, school, peers Questionnaire	Problem-solving Support-seeking Behavioral distraction Accommodation	Cognitive approach: logical analysis, positive appraisal Behavioral approach: guidance/ support seeking, problem solving Seeking alternative rewards Think of different ways to deal with the problem Talk with a friend about the problem Think about how this situation could change my life for the better Do more fun activities Make new friends	13	18	Family: Increase 9 th graders more than 7 th graders School: ns No grade differences Peers: Increase 7 th graders less than 9 th and 12 th graders
A19	Stern & Zevon, 1990	Focus on positive Self-Identified Questionnaire	Accommodation Distraction	Tried to look on the bright side, tried to do something creative	13	20	No association with age

¹ Label used by the study authors for the way(s) of coping measured in the study.

² Gen = General, Mult = Multiple, SI = Self-Identified, Dist = Distress, Ac = Academic, Med = Medical, Pers = Interpersonal, Unc = Uncontrollable

³ Quest = Questionnaire, Int = Interview, T-rate = Teacher rating, P-rate = Parent rating, Obs = Observation, Writ = Written response

⁴ Coping family according to the coding system used for all studies in this review.

+ measures that included accommodation family only.

^p Accommodation items combined with problem-solving, support-seeking, distraction or emotion regulation.

APPENDIX A

Samples Sizes and Data Collection Procedures used in the 58 Included Studies

Author, year	<i>N</i>	Data Collection Procedure
Altshuler & Ruble, 1989	24	Interviewed at hospital while waiting for routine check-up or at school. Most low- to low-middle SES. Uncontrollable event scenarios related to waiting were used – 2 positive and 2 negative. Negative scenarios were medical situations. 3 questions: what could ___ do to change ___ thinking? What could ___ do to change what ___ is feeling about it? What could ___ do to change what is happening?
Altshuler et al., 1995	44	Coping interview: Knowledge of coping strategies measured as reports of behavioral and cognitive options available to a hypothetical child in a hypothetical situation. What could ___ do about ___?, what could ___ do to change what ___ is feeling about it? What could ___ do to change what is happening? What could ___ do to change what ___ is thinking about it?
Ayers et al., 1996	Study 1: 217 Study 2: 303	Study 1: Children's Coping Strategies Checklist (CCSC) in general (what the individual usually does to deal with stressors across situations). 11 coping dimensions. Study 2: Completed the Children of Alcoholics Life Events Schedule. Also completed the general CCSC and situation-specific CCSC (i.e., the How I Coped Under Pressure Scale, HICUPS, <i>n</i> = 230).
Band & Weisz, 1988	73	Interviews to elicit reports of coping with various types of stressors and children's goals. "Things that make kids your age feel bad, unhappy, or scared." Tell about a time when you felt this way." Asked to consider this in 6 different domains: Separation from friend, going to doctor for a shot, adult mad at you, kid said mean things to you, getting a grade didn't like, accident/hurt self. Tell the details of event, how they felt, what did and thought when ___ happens? How did you think that ___ would help or make things better? Did it work?
Band & Weisz, 1990	64 being treated for diabetes	Children described three things they think or do to help themselves, which were coded as primary or secondary control. Primary control = efforts to modify or change objective circumstances directly. Secondary control = efforts to modify or influence the impact of objective circumstances on one's subjective psychological state (e.g., by adjusting one's affect, expectations, or mood, so as to achieve a goodness of fit with circumstances as they are). All were rated from 1 (primary) to 5 (secondary). Relinquished control was also coded for items such as "giving up" or "doing nothing". Rating how much each of these strategies would help them also assessed coping efficacy.

Author, year	<i>N</i>	Data Collection Procedure
Baumgartner & Strayer, 2008	150	Observation of naturally occurring responses to peer initiated conflict. Stressors were physical attacks, object struggles, verbal aggression, and disruptive aggression (similar protocol to Fabes & Eisenberg, 1992). Five categories of reactions were observed including counterattack, protest, flee, negotiate, and seek help.
Bernzweig et al. 1993	105	Structured interview with children and mothers about responses when child is distressed and when another same-sex child is distressed. Child asked about three situations: child crying and upset because accidentally broke toy, scared at night because of strange noises, crying because peer made fun of and rejected child. Child asked whether ever happened, and to think and tell all the things she/he did and thought.
Blanchard-Fields & Irion, 1988	40	Lazarus' ways of coping questionnaire. Focused on a stressful situation in the past month. 67 coping responses coded 0 or 1. Appraisal of "could change and do something about it" or "must accept and get used to it".
Braungart-Rieker & Stifter, 1996	87	At five months of age infants participated in an arm restraint task; at 10 months completed a toy-removal task. Behaviors were rated during these 2-minute tasks for reactivity and regulation. Reactivity was rated from 0 (mild whimper or fuss) to 4 (shrieking, hysterical crying) every 10 seconds.
Brodzinsky et al., 1992	498	Coping Scale for Children and Youth. Dealing with "hard problem" in the past few months. Rate each of 44 items from never (0) to very often (3).
Brown et al., 1986	487	Written responses to a questionnaire eliciting cognitions in three stressful situations. Situations were getting a shot at the dentist, giving a class report, and a self-identified stressful situation. Example: 1. "What I'd like you to do is pretend that you are at the dentist. You are sitting in the dental chair and you see that he is going to give you a shot. Please write down all the things that might be going through your mind if you were really about to get a shot. What kind of things do you say to yourself? 2. Now the dentist gives you a shot. What are you thinking about and what do you say to yourself as he gives you the shot? Coping and catastrophizing were coded.

Author, year	<i>N</i>	Data Collection Procedure
Brown et al., 1992	55 with leukemia	Completed the Kidcope (Spirito et al., 1991), which assessed 10 coping categories.
Bull & Drotar, 1991	39 with cancer	Completed the Children's Stress Inventory to assess coping with general life stressors and a cancer-related stress and coping measure (McCabe & Weisz, 1988). Interviewers asked children to identify five personal situations they regarded as stressful or "hard" and to say what they did or thought about in order to cope. Responses coded into "coping units." Each unit coded into the focus of coping (self, environment, other), the function of coping (problem-solving or emotion management), and the mode of coping (information seeking, support seeking, direct action, inhibition of action, intrapsychic coping).
Bush et al., 1986	50 from a pediatric surgery	Videotaped observations of 5 minutes in doctor's office prior to doctor entering. Coded child and mother coping-related behaviors:
Compas et al., 1988	130	Open-ended instrument developed for study – one self-identified recent interpersonal and one academic stressor in the past 3 months. Described why each was upsetting and rated control from complete to no control. Generated list of all possible ways they could have handled/dealt with the event and checked what they used. Classified as problem-focused or emotion-focused.
Compas et al., 1996	134 from cancer clinics	Structured interviews: open-ended "everything you have done, thought, or felt to make things better or easier for yourself." Classified as problem- or emotion-focused. Following open-ended, described types of coping and asked about use of problem- and emotion-focused, as well as dual-focused strategies.
Cummings, 1987	43	Asked what felt like during the anger event – categorized as 1) avoidant – continue playing and avoid, 2) mediation – wanted to intervene, 3) aroused – emotional arousal – wanted to run, hit; 4) other – didn't know, response not addressing the question.

Author, year	<i>N</i>	Data Collection Procedure
Curry & Russ, 1985	30	Developed Behavioral coping observation scale (BCOS) and the Cognitive Coping Interview (CCI). Scores on BCOS for 3 major behavioral coping categories – scored for total frequency and number of different categories. Children were observed during dental treatment. Children completed the interview immediately following treatment.
De Boo & Wicherts, 2009	430	Completed the Child Coping Strategies Checklist (Ayers et al., 1996). Responded to 54 statements following “When I have a problem...” Subscales submitted to factor analyses and 5 factors provided the best fit. Factors were labelled problem-focused coping, positive cognitive restructuring, distraction, avoidance, and support seeking.
Ebata & Moos, 1991	190 with rheumatic disease, conduct problems or depression	Completed the Coping Responses Inventory-Youth Form developed for this study based on previous research and 40 interviews with adolescents. 48-item scale with 8 dimensions; completed after reported the most important problem faced in the previous year. Differentiated approach and avoidant efforts, as well as cognitive vs. behavioral approaches.
Ebata & Moos, 1994	259	Same as above.
Eisenberg et al., 1994	103	Children were observed at 2 times – semester 1 and semester 2 of the school year. Coded anger incidents, regulation (attentional control and coping), and emotionality. Teachers and mothers also reported children’s general coping with 13 items (reflecting 13 subscales) from CCSC. Teachers were also presented with 3 scenarios and asked to rate (1 to 7) the likelihood of the children’s responding in each of 9 ways (the first 9 above) as well as “doing nothing.”-Child hurt or angry because -a peer purposefully knocked over a block tower -excluded from play -made fun of by peers.

Author, year	<i>N</i>	Data Collection Procedure
Eschenbeck et al., 2007	1990	Completed a questionnaire about responses to a social and an academic stressor. Five coping categories of seeking social support, problem-solving, avoidant coping, palliative emotion regulation, and anger-related emotion regulation.
Fabes & Eisenberg, 1992	69	Observed each day for at least 3 months during children's free-play periods at University preschool. Recorded behaviors with clear cues of anger, noted factors causing anger, and reaction of angered child immediately. Reactions coded into 7 <i>behavioral</i> coping categories. For each codable coping response, each received a proportion score ranging from 0 (no reference to the category) to 1 (sole reference to the category). In the case of 2 categories, each was assigned .5, etc. There were few instances of multiple coping responses.
Fear et al., 2009	108 with a depressed parent	Children and their parents reported on children's coping using the Responses to Stress Questionnaire (Connor-Smith et al., 2000). Coping was specific to family stressors in the last 6 months. Coping categories were primary control coping (problem solving, emotional expression, emotion modulation), secondary control coping (cognitive restructuring, positive thinking, acceptance, distraction), and disengagement coping (avoidance, denial, wishful thinking).
Frydenberg & Lewis, 1993	673	Completed the Adolescent Coping Scale (ACS; Frydenberg & Lewis, 1993). 80-item checklist to measure 18 coping responses in general, plus scores for solving the problem, reference to others, and displacement-avoidance.
Frydenberg & Lewis, 2000	168	Same as above.

Author, year	<i>N</i>	Data Collection Procedure
Gamble, 1994	146	Completed Children and Adolescents' Problem-solving Inventory (constructed for this study). Completed while thinking about (1) conflict with mother, (2) conflict with friend, (3) experience of academic or athletic failure. Think of time when happened in the last 2 weeks. List of stress events that could be considered were given - were developed from Gamble & Rossman (1989).
Garber et al., 1995	275	Measured children's affective reactions and 6 child-initiated strategies (assessed with about 100 items) in response to an interpersonal fight (child having a fight with a friend) OR an achievement game situation (child doing very poorly on a game) with the Child Affect Questionnaire. Child imagined that he/she was in the situation and indicated what he/she would do if this had happened to him/her (open-ended responses).
Garnefski et al. 2002	487 adolescents, 630 adults in GP's office	Adolescents completed the Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al. 2001) in their classrooms. The CERQ contains 36 items about "what people think after the experience of threatening or stressful events."
Griffith et al., 2000	375	Completed the Youth CRI-Y (Moos, 1990). Responded about family events, school events, and peer events. Participants provided with a list of possible events (taken from Compas et al., 1987) and asked to select one recent experience in each domain. The CRI-Y included 48 items with 8 coping categories reflecting approach and avoidance strategies.
Groër et al., 1992	167	Open-ended answers to question, "how you cope with stress?" Overall, 101 identified at least one coping responses; most wrote down one only. Coding conducted as described in Dise-Lewis (1985). Coping factors found including aggression, stress-recognition, active distraction, passive distraction, self-destructive, and endurance.

Author, year	<i>N</i>	Data Collection Procedure
Hampel & Petermann, 2005	1123	Completed the German Coping Questionnaire for Child and Adolescents (SVF-KJ; Hampel et al., 2001). Participants answer items on SVF-KJ thinking about two self-generated common stressors in the areas of interpersonal conflict and academic stress.
Hampel & Petermann, 2006	286	Same as above.
Herman-Stahl et al., 1995	603	Completed coping measure described by Seiffge-Krenke & Shulman (1987). Confirmed 3-factor structure of active/internal coping, passive/avoidant responses, and social support seeking.
Hoffman et al., 1992	119	Coping assessed with 29 items of Jakoby's Adolescent Coping Questionnaire (1990). Sorted items into the 3 types listed above. Only included items with complete agreement about type.
Irion & Blanchard-Fields, 1987	96	Completed Lazarus' Ways of Coping Questionnaire. Measure complete 2 times - once for a stressful "threat" and once for a "challenge."
Kavšek & Seiffge-Krenke, 1996	728	Completed the Coping Across Situations Questionnaire (Seiffge-Krenke, 1989). Assessed 20 coping strategies in 8 problem areas of school, <i>future</i> , parents, teacher, peers, opposite sex, self, and <i>future</i> (note - <i>future</i> is listed twice in the paper). Three coping factors emerged in earlier studies: 1. Active coping by means of social resources; I discuss the problem with my parents/other adults, I try to get help from institutions, I try to solve problems with the help of my friends. 2. Internal coping; I accept my limits, I think about problems and try to find different solutions, I compromise. 3. Withdrawal; I try to let my aggression out (with loud music, riding my motorbike, wild dancing, sports, etc.), I try to forget my problems with alcohol and drugs, I withdraw because I cannot change anything anyway.

Author, year	<i>N</i>	Data Collection Procedure
Kliewer, 1991	100	2nd and 5th graders completed the Nowicki-Strickland Personal Reaction Scale. Assess children's beliefs about control over events in their environments. 5th graders completed the Monitoring and Blunting Scale for Children. 56 items about 4 stressful experiences – doctor appt, roller coaster broken down, bad report card, storm at school. Stress and coping interviews 3 times over a 7- to 8-week period. Completion of the Kidcope questionnaire provided the majority of items that assessed coping. Also assessed coping efficacy.
Kliewer & Sandler, 1993	225	Children completed the Coping Strategies Checklist, 55 items, 13 subscales, Four coping factors identified. Teachers' reports of coping: 13-item measure with one item per subscale. Four factors identified.
Losoya et al., 1998	93	Coping was rated by teachers – 3 scenarios about everyday conflicts and rated likelihood (1 to 7) that child would engage in 9 types of coping or “do nothing”
Mangelsdorf et al., 1995	75 infants	Videotaped interacting with a female stranger in the lab; each limited to 3 stranger-infant interactions except in the “standard stranger” condition. Mothers were present and allowed to go to 6-month-olds if they cried. Coding was a modified version of one developed by Hornik and Gunnar (1987). Coders recorded frequency and duration of behaviors. Four types of coping behaviors (lasting longer than 3 seconds) and three types of coping events (lasting less than 3 seconds) were coded.
Newman et al., 2001	128	Created 10 vignettes about aggressive incidents. Example: “When you get to class, a student approaches you and tells you to give him/her your lunch money. You say ‘no,’ but he/she don't leave you alone.” Coded open-ended responses into 1 of 5 categories - Help-seeking, assertiveness (physical or verbal), aggressiveness (physical or verbal), passivity (acquiesce or ignore), politeness (polite request and share or take turns).

Author, year	<i>N</i>	Data Collection Procedure
Olson et al., 1993	175 chronically ill and 145 from community	Children completed questionnaires that assessed cognitive coping strategies by responding to three types of common stressors (dental injection, report to the class, recent personal event). Open-ended format to respond to questions: "What is going through your mind?" "What things do you say to yourself?" Responses were scored as coping or catastrophizing:
Phelps & Jarvis, 1994	484	Used the COPE (Carver et al., 1989) questionnaire developed for college students.
Phipps et al., 1995	66 children with cancer and 414 school children	Completed the Children's Behavioral Style scale (Miller, 1987) to assess blunting (taking mind off stressor) and monitoring (thinking about / problem solving). Responded to items after imagining 4 stress invoking scenarios.
Roecker et al., 1996	417	Questionnaires in 2 sessions, 2 days apart. Items read aloud for 4th and 5th grade students. Scales used: Children's Perceptions of Interparental Conflict (CPIC; Grych, Seid, & Fincham, 1992), Discord Control and Coping Questionnaire (DCCG; Rossman & Rosenberg, 1992), Self-Report Coping Survey (SRCS; Causey & Dubow, 1992); "When the adults in my home argue, fight, or disagree, I..." CPIC (range 1 to 3) assessed frequency, intensity, lack of resolution, perceived threat to self, self-blame about interparental conflict.
Rossman, 1992	345 selected for stress	Interviews of children about what did when felt bad or upset – what happened, who was there, what did to feel better, and effect on their feelings (no better to a lot better).

Author, year	<i>N</i>	Data Collection Procedure
Ryan, 1989	103	Group discussions and questionnaires: 1. The last time you thought something bad was going to happen, what did you do? 2. Think of the last thing that made you feel bad, nervous, or worried. What did you do? What made you feel better? 3. When it was all over what did you do? 4. When something happens that makes you feel bad, nervous, or worried, what do you usually do that helps you the most? 5. What do you do that doesn't help much, but you do it anyway? 193 strategies were identified in discussions, 518 strategies were identified from the questionnaires. 12 categories of coping plus an "other" category were used to organize the strategies. 66% of the items on the questionnaire were not named during the group discussion.
Seiffge-Krenke et al., 2009	200	Completed the Coping Across Situations Questionnaire (Seiffge-Krenke, 1995). Included seven potentially stressful domains of parents, peers, leisure, romantic relationships, self, future and school. Included 20 items (yes or no), which collapsed to 3 categories of coping – active, internal and withdrawal.
Spirito et al., 1991	676	Completed the Kidcope modified for younger children by including 15 items to assess 10 coping strategies. Asked to write down a problem they had experienced during the prior month and then rate each item for use (yes or no) and efficacy. Also completed the Kidcope questionnaire with standardized scenarios.
Stern & Zevon, 1990	73	Participants completed the Ways of Coping Scale after identifying and writing about a recent encounter with a stressful experience.
Thomsen et al., 2002	174 with recurrent abdominal pain	Coping and involuntary responses to stress were measured with the Responses to Stress Questionnaire (Connor-Smith et al, 2000) completed by parents about abdominal pain ("stomach-ache"). Included 10 categories of coping and 9 categories of involuntary responses to stress. Factor analyses confirmed five factors.
Thurber & Weisz, 1997	1032	Coping was assessed with the Ways of Coping with Homesickness scale based on the KIDCOPE (Spirito et al., 1988) and an interview supplement. Included 14 items rated for frequency and effectiveness, a 15th item was open-ended. Items were classified as primary control goals, secondary control goals, and no goals (relinquished control; 3 items). Used proportional frequency scores.

Author, year	<i>N</i>	Data Collection Procedure
Tolan et al., 2002	372	Coping assessed with the A-COPES questionnaire (Patterson & McCubbin, 1987). Relative reliance on different coping responses “when you face difficulties and feel tense”.
Vierhaus & Lohaus, 2009	348	Viewed a set of 6 vignettes inducing anger or anxiety – morning before a hard test, dental chair wait, dissatisfaction with personal competence, ill and missed topics at school and will have to do a lot of work to catch up. Completed 15 items to assess coping categories of problem solving, seeking social support, palliative coping, externalizing coping, and avoidant coping.
Wertlieb et al., 1987	176 with a marital separation or divorce in the last 4 years	Child Stress Inventory used. Semi-structured interviews of child’s report of 5 stressful experiences and coping efforts. If could not identify 5, prompted to assist. Followed with questions to assess child’s appraisal and responses. Coded into coping units: implicit behavioral description obviously representing the child’s management of some aspect of the stress being reported. Each unit coded by focus, function, and mode. Proportion scores were used with nonparametric and other appropriate statistical tests.
Zimmer-Gembeck & Locke, 2007	487	Completed the Children’s Coping Strategies Checklist (Sandler et al., 1994) about a recent problem at school, and repeated the measure while thinking about a recent problem at home.

References for Studies Included in Current Review

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
- Altshuler, J. L., & Ruble, D. N. (1989). Developmental changes in children's awareness of strategies for coping with uncontrollable stress. *Child Development, 60*, 1337-1349.
- Altshuler, J. L., Genevro, J. L., Ruble, D. N., Bornstein, M. H. (1995). Children's knowledge and use of coping strategies during hospitalization for elective surgery. *Journal of Applied Developmental Psychology, 16*, 53-76.
- Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M. W. (1996). A dispositional and situational assessment of children's coping: Testing alternative models of coping. *Journal of Personality, 64*, 923-958.
- Band, E. B., & Weisz, J. R. (1988). How to feel better when it feels bad: Children's perspectives on coping with everyday stress. *Developmental Psychology, 24*, 247-253.
- Band, E. B., & Weisz, J. R. (1990). Developmental differences in primary and secondary control coping and adjustment to diabetes. *Journal of Clinical Child Psychology, 19*, 150-158.
- Baumgartner, E., & Strayer, F. F. (2008). Beyond fight or flight: Developmental changes in children's coping with peer conflict. *Acta Ethologica, 11*, 16-25.
- Bernzweig, J., Eisenberg, N., & Fabes, R. A. (1993). Children's coping in self- and other-relevant contexts. *Journal of Experimental Child Psychology, 55*, 208-226.
- Blanchard-Fields, F., & Irion, J. C. (1988). Coping strategies from the perspective of two developmental markers: Age and social reasoning. *Journal of Genetic Psychology, 149*, 141-151.
- Braungart-Rieker, J. M., & Stifter, C. A. (1996). Infants' responses to frustrating situations: Continuity and change in reactivity and regulation. *Child Development, 67*, 1767-1779.

- 1
2
3
4 Brodzinsky, D. M., Elias, M. J., Steiger, C., Simon, J., Gill, M., & Hitt, J. C. (1992). Coping
5
6 scale for children and youth: Scale development and validation. *Journal of Applied*
7
8 *Developmental Psychology, 13*, 195-214.
9
- 10 Brown, J. M., O'Keeffe, J., Sanders, S. H., & Baker, B. (1986). Developmental changes in
11
12 children's cognition to stressful and painful situations. *Journal of Pediatric Psychology,*
13
14 *11*, 343-357.
15
16
- 17 Brown, R. T., Kaslow, N. J., Hazzard, A. P., Madan-Swain, A., Lambert, R., & Baldwin, K.
18
19 (1992). Psychiatric and family functioning in children with leukemia and their parents.
20
21 *Journal of the American Academy of Children and Adolescent Psychiatry, 31*, 767-782.
22
23
- 24 Bull, B. A., & Drotar, D. (1991). Coping with cancer in remission: Stressors and strategies
25
26 reported by children and adolescents. *Journal of Pediatric Psychology, 16*, 767-782.
27
28
- 29 Bush, J. P., Melamed, B. G., Sheras, P. L., & Greenbaum, P. E. (1986). Mother-child patterns of
30
31 coping with anticipatory medical stress. *Health Psychology, 5*, 137-157.
32
33
- 34 Compas, B. E., Malcarne, V. L., & Fondacaro, K. M. (1988). Coping with stressful events in
35
36 older children and young adolescents. *Journal of Consulting and Clinical Psychology, 56*,
37
38 405-411.
39
- 40 Compas, B. E., Worsham, N. L., Ey, S., & Howell, D. C. (1996). When Mom or Dad has cancer:
41
42 II. Coping, cognitive appraisals, and psychological distress in children of cancer patients.
43
44 *Health Psychology, 15*, 167-175.
45
46
- 47 Cummings, E. M. (1987). Coping with background anger in childhood. *Child Development, 58*,
48
49 976-984.
50
51
- 52 Curry, S. L., & Russ, S. W. (1985). Identifying coping strategies in children. *Journal of Clinical*
53
54 *Child Psychology, 14*, 61-69.
55
56
57
58
59
60

- 1
2
3 De Boo, G. M., & Wicherts, J. M. (2009). Assessing cognitive and behavioral coping strategies
4
5 in children. *Cognitive Therapy Research*, 33, 1-20.
6
7
8 Ebata, A. T., & Moos, R. H. (1991). Coping and adjustment in distressed and health adolescents.
9
10 *Journal of Applied Developmental Psychology*, 12, 33-54.
11
12
13 Ebata, A. T., & Moos, R. H. (1994). Personal, situational, and contextual correlates of coping in
14
15 adolescents. *Journal of Research on Adolescence*, 4, 99-125.
16
17
18 Eisenberg, N., Fabes, R. A., Nyman, M., Bernzweig, J., & Pinuelas, A. (1994). The relations of
19
20 emotionality and regulation to children's anger-related reactions. *Child Development*, 65,
21
22 109-128.
23
24
25 Eschenbeck, H., Kohlmann, C.-W., & Lohaus, A. (2007). Gender differences in coping strategies
26
27 in children and adolescents. *Journal of Individual Differences*, 28, 18-26.
28
29
30 Fabes, R.A., & Eisenberg, N. (1992). Young children's coping with interpersonal anger. *Child*
31
32 *Development*, 63, 116-128.
33
34
35 Fear, J. M., Champion, J. E., Reeslund, K. L., Forehand, R., Colletti, C, Roberts, L., & Compas,
36
37 B. E. (2009). Parental depression and interparental conflict: Children and adolescents'
38
39 self-blame and coping responses. *Journal of Family Psychology*, 23, 762-766.
40
41
42 Frydenberg, E., & Lewis, R. (1993). Boys play sport and girls turn to others: Age, gender and
43
44 ethnicity as determinants of coping. *Journal of Adolescence*, 16, 253-266.
45
46
47 Frydenberg, E., & Lewis, R. (2000). Teaching coping to adolescents: When and to whom?
48
49 *American Educational Research Journal*, 37, 727-745.
50
51
52 Gamble, W. C. (1994). Perceptions of controllability and other stressor event characteristics as
53
54 determinants of coping among young adolescents and young adults. *Journal of Youth and*
55
56 *Adolescence*, 23, 65-84.
57
58
59
60

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
- Garber, J., Braafeldt, N., & Weiss, B. (1995). Affect regulation in depression and nondepressed children and young adolescents. *Development and Psychopathology*, 7, 93-115.
- Garnefski, N., Legerstee, J., Kraaij, V., van der Kommer, T., & Teerds, J. (2002). Cognitive coping strategies and symptoms of depression and anxiety: A comparison between adolescents and young adults. *Journal of Adolescence*, 25, 603-611.
- Griffith, M. A., Dubow, E. F., & Ippolito, M. F. (2000). Developmental and cross-situational differences in adolescents' coping strategies. *Journal of Youth and Adolescence*, 29, 183-204.
- Groër, M. W., Thomas, S. P., & Shoffner, D. (1992). Adolescent stress and coping: A longitudinal study. *Research in Nursing and Health*, 15, 209-217.
- Hampel, P., & Petermann, F. (2005). Age and gender effects on coping in children and adolescents. *Journal of Youth and Adolescence*, 34, 78-83.
- Hampel, P., & Petermann, F. (2006). Perceived stress, coping, and adjustment in adolescents. *Journal of Adolescent Health*, 38, 409-415.
- Herman-Stahl, M. A., Stemmler, M., & Peterson, A. C. (1995). Approach and avoidant coping: Implications for adolescent mental health. *Journal of Youth and Adolescence*, 24, 649-665.
- Hoffman, M. A., Levy-Shiff, R., Sohlberg, S. C., & Zarizki, J. (1992). The impact of stress and coping: Developmental changes in the transition to adolescence. *Journal of Youth and Adolescence*, 21, 451-469.
- Irion, J. C., & Blanchard-Fields, F. (1987). A cross-sectional comparison of adaptive coping in adulthood. *Journal of Gerontology*, 42, 502-504.

1
2
3 Kavšek, M. J., & Seiffge-Krenke, I. (1996). The differentiation of coping traits in adolescence.

4
5
6 *International Journal of Behavioral Development, 19*, 651-668.

7
8 Kliever, W. (1991). Coping in middle childhood: Relations to competence, type A behavior,

9
10 monitoring, blunting, and locus of control. *Developmental Psychology, 27*, 689-697.

11
12 Kliever, W., & Sandler, I. N. (1993). Social competence and coping among children of divorce.

13
14
15 *American Journal of Orthopsychiatry, 63*, 432-440.

16
17 Losoya, S., Eisenberg, N., & Fabes, R. A. (1998). Developmental issues in the study of coping.

18
19
20 *International Journal of Behavioral Development, 22*, 287-313.

21
22 Mangelsdorf, S. C., Shapiro, J. R., & Marzolf, D. (1995). Developmental and temperamental

23
24 differences in emotion regulation in infancy. *Child Development, 66*, 1817-1828.

25
26 Newman, R. S., Murray, B., & Lussier, C. (2001). Confrontation with aggressive peers at school:

27
28 Students' reluctance to seek help from the teacher. *Journal of Educational Psychology,*

29
30
31 *64*, 398-410.

32
33 Olson, A. L., Johansen, S. G., Powers, L. E., Pope, J. B., & Klein, R. B. (1993). Cognitive coping

34
35 strategies of children with chronic illness. *Developmental and Behavioral Pediatrics, 14*,

36
37
38 217-223.

39
40 Phelps, S. B., & Jarvis, P. A. (1994). Coping in adolescence: Empirical evidence for a

41
42 theoretically based approach to assessing coping. *Journal of Youth and Adolescence, 23*,

43
44
45 359-371.

46
47 Phipps, S., Fairclough, D. L., & Mulhern, E. K. (1995). Avoidant coping in children with cancer.

48
49
50 *Journal of Pediatric Psychology, 20*(2), 217-232.

51
52 Roecker, C. E., Dubow, E. F., & Donaldson, D. (1996). Cross-situational patterns in children's

53
54 coping with observed interpersonal conflict. *Journal of Clinical Child Psychology, 25*,

55
56
57 288-299.

- Rossmann, B. B. R. (1992). School-age children's perceptions of coping with distress: Strategies for emotion regulation and the moderation of adjustment. *Journal of Clinical Psychology and Psychiatry and the Allied Disciplines*, 33, 1373-1397.
- Ryan, N. M. (1989). Stress-coping strategies identified from school age children's perspective. *Research in Nursing & Health*, 111-122.
- Seiffge-Krenke, I., Aunola, K., & Nurmi, J.-E. (2009). Changes in stress perception and coping during adolescence: The role of situational and personal factors. *Child Development*, 80, 259-279.
- Spirito, A., Stark, L. J., Grace, N., & Stamoulis, D. (1991). Common problems and coping strategies reported in childhood and early adolescence. *Journal of Youth and Adolescence*, 20, 531-544.
- Stern, M., & Zevon, M. A. (1990). Stress, coping, and family environment: The adolescent's response to naturally occurring stressors. *Journal of Adolescent Research*, 5, 290-305.
- Thomsen, A. H., Compas, B. E., Colletti, R. B., Stanger, C., Boyer, M. C., & Konik, B. S. (2002). Parent reports of coping and stress responses in children with recurrent abdominal pain. *Journal of Pediatric Psychology*, 27, 215-226.
- Thurber, C. A., & Weisz, J. R. (1997). "You can try or you can just give up": The impact of perceived control and coping style on childhood homesickness. *Developmental Psychology*, 33, 508-517.
- Tolan, P. H., Gorman-Smith, D., Henry, D., Chung, K., & Hunt, M. (2002). The relation of patterns of coping of inner-city youth to psychopathology symptoms. *Journal of Research on Adolescence*, 12, 423-449.

1
2
3 Vierhaus, M., & Lohaus, A. L. (2009). Children's perceptions of relations between anger or
4
5 anxiety and coping: Continuity and discontinuity of relational structures. *Social*
6
7 *Development, 18*, 747-763.
8
9

10 Wertlieb, D., Weigel, C., & Feldstein, M. (1987). Measuring children's coping. *American*
11
12 *Journal of Orthopsychiatry, 57*, 548-560.
13
14

15 Zimmer-Gembeck, M. J., & Locke, E. M. (2007). The socialization of adolescent coping:
16
17 Relationships at home and school. *Journal of Adolescence, 30*, 1-16.
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

APPENDIX B

*Findings about Developmentally-graded Ways of Coping (with detailed citations)**Problem-solving*

As can be seen in Table 5, the 41 studies that examined problem-solving included 59 age comparisons or correlations with age. As whole, the pattern of findings suggested increases in problem-solving with age: 25 comparisons revealed increases (PS2a, 4, 6, 9, 10a, 12, 13, 14, 18, 19, 24, 27a, 27b, 29a2, 30a, 31a, 32a, 32b, 33a, 33b, 34a, 35, 36a, 36c, 39), 15 reported decreases (PS3b, 5a, 10b, 11, 17a, 17b, 21a, 21b, 23b, 26, 28, 29b, 31b, 40, 41), and 19 found no differences or associations (PS1, 2b, 3a, 7, 8, 15, 16, 20, 22, 23a, 25a, 25b, 29a1, 30b, 34b, 36b, 37a, 37b, 38). At the same time, a closer analysis using the strategies from the developmental framework brought additional clarity to the pattern of findings. It was especially helpful to organize the studies according to the content of scales, the age groups included in the comparisons, and the nature of the stressor. The overall pattern of findings is graphically summarized in Figure 1.

“Pure” problem-solving measures. Studies were examined that relied on measures consisting only of items from the problem-solving family (i.e., instrumental action, cognitive problem-solving, planning) (PS3a, 3b, 6, 7, 8, 9, 10a, 10b, 13, 15, 18, 20, 23a, 23b, 26, 28, 29a1, 29a2, 30a, 30b, 31a, 32a, 32b, 33a, 33b, 34a, 34b, 35, 37a, 37b, 39). When the 31 comparisons from these studies were tallied, 15 showed increases (PS6, 9, 10a, 13, 18, 29a2, 30a, 31a, 32a, 32b, 33a, 33b, 34a, 35, 39), 5 found decreases (PS3b, 23b, 28, 10b, 26), and 11 reported no differences (P3a, 7, 8, 15, 20, 23a, 29a1, 30b, 34b, 37a, 37b). The 15 comparisons that documented age-related increases in “pure” problem-solving coping utilized a variety of methods (i.e., questionnaire, interview, written responses) and found increases between middle childhood,

1
2
3 in early, mid, and late adolescence, and in adolescence compared to young adulthood (ages 6-16,
4 7-10, 7-16, 8-11, 8-18, 14-16, 12-17, 12-18, 12-21, 14-16, and 16-28).

5
6
7
8 Next, the domain of the stressor was examined. All the studies that found increases
9 examined coping in general or with multiple and/ or self-identified stressors. In contrast, 8 of the
10 16 comparisons that found no differences or decreases examined the use of problem-solving in
11 the interpersonal domain or with relatively uncontrollable problems (e.g., parental cancer) (no
12 differences: PS3a: interpersonal; 7: leukemia; S8: parent cancer; 23a: parent conflict; 30b: home;
13 37b: interpersonal; decrease: PS23b: friend conflict, 26: peer). We also considered the age groups
14 and gaps used in the studies relying on “pure” measures. Five of the comparisons that found no
15 differences or decreases included age gaps that encompassed multiple developmental periods
16 (PS3a: ages 5-15; 3b: ages 5-15; 7: 6-17; 8: ages 6-32; 15: 8-14; 37a: ages 13-20; 37b: ages 13-
17 20).

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32 *Problem-solving and support-seeking.* In trying to make sense of the findings for scales
33 that combined problem-solving with ways of coping from other families, we used the coding
34 system to examine whether age differences depended on the specific ways of coping that were
35 included. The most common combination was adding support-seeking to problem-solving,
36 referred to as “active” or “approach” coping. Of the 12 age comparisons using this combination
37 (PS1, 2a, 2b, 4, 5a, 11, 21a, 21b, 22, 38, 40, 41), 2 showed increases (PS2a, 4), 6 showed
38 decreases (PS5a, 11, 21a, 21b, 40, 41), and 4 showed no association (PS1, 2b, 22, 38). However,
39 patterns were more discernable when the *nature* of the support-seeking and the nature of the
40 stressor were considered. Both of the studies that found increases included items that tapped
41 problem-focused support-seeking, such as seeking instrumental help or advice, and examined
42 differences from early to middle childhood (between ages 5-11, 6-8). In contrast, 8 of the 10
43 comparisons that showed decreases or no differences included measures that tapped the use of
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 emotion-focused support-seeking (e.g., comfort seeking) when coping with distress or pain (PS1,
4 5a, 11, 41) or dealing with uncontrollable stressors (PS2b: waiting for surgery) or interpersonal
5
6 problems (21a, 40: self-identified, mostly interpersonal; 21b: parental grounding).
7
8
9

10 *Problem-solving combined with coping from other families.* Problem-solving was also
11 combined with other ways of coping. Eight comparisons combined problem-solving with other
12 cognitive strategies such as distraction, focus on the positive, or negotiation (PS12, 14, 19, 24,
13 27a, 27b, 36a, 36b), and all found increases (from 6-12, 8-10, 8-18, 10-14, 12-14, 13-18, and 16-
14 19). Two comparisons combined problem-solving with emotion management (25a, 25b), and
15 both found no differences (ages 13-18). Two comparisons combined problem-solving with
16 ambition and commitment (referred to as working hard, PS29b, 31b) and both found decreases
17 during adolescence (ages 12-16 and 12-17). Two comparisons combined problem-solving with
18 escape (referred to as Primary Control coping, PS17a, 17b) and both found decreases (from 8-
19 16). Hence, differentiating studies by carefully coding the families of coping included in each
20 measure provided a clearer picture of age differences and changes.
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35

36 *Summary.* Increases in problem-solving as a coping strategy in response to stress were
37 consistently found when measures focused exclusively on problem-solving, examined smaller
38 age gaps (less than five years), and considered problem-solving as an all-purpose strategy for
39 dealing with multiple, general, or self-identified stressors. Increases in problem-solving were also
40 found for scales that combined problem-solving with other families when the additional items
41 marked families appropriate to the developmental level: Increases were found during childhood
42 and early adolescence for scales that added items tapping *instrumental* support-seeking, and
43 increases were found during adolescence for scales that added items tapping other cognitive
44 strategies, such as distraction or focus on the positive. In general, few differences in problem-
45 solving coping were found across age gaps that encompassed multiple developmental periods or
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 that focused on problem-solving as a strategy for dealing with interpersonal or uncontrollable
4
5 stressors. Decreases were often found when problem-solving measures added items from families
6
7 that are likely decreasing across childhood and adolescence, such as escape or the use of
8
9 emotion-focused support-seeking for dealing with distress.
10
11

12 *Distraction*

14
15 Forty-three studies included measures of distraction as a way of coping with distress or
16
17 problems. Regarding age differences prior to preschool age, there were increases in behavioral
18
19 distraction in very young children. Focusing on children in their first year (Braungart-Rieker &
20
21 Stifter, 1996; Mangelsdorf, Shapiro, & Marzolf, 1995), studies revealed that escape via gaze
22
23 aversion declined with age, while distraction by turning to other objects increased between 6
24
25 months and 12 months of age, as would be expected given infants' increasing abilities to
26
27 locomote and coordinate behaviors.
28
29
30

31 Findings for distraction from 41 studies focusing on children age four and older are
32
33 summarized in Table 6. As a whole, the pattern of findings from 64 age comparisons or
34
35 correlations with age suggested increases or stability in use of distraction coping: 25 comparisons
36
37 revealed increases (D2, 3, 4b, 5a2, 5c1, 8a, 8c, 11, 12, 13, 14, 15, 17, 19, 22, 23, 27, 31, 33a,
38
39 33b, 34b, 37, 38a, 38b, 39b1) and 25 found no differences or associations (D4a, 5a1, 5b, 5c2, 7,
40
41 8b, 9b, 16, 18a, 18b, 21a, 24, 25b, 26a, 26b, 30, 32, 34a, 35, 36b, 38b, 39a2, 39b2, 40, 41)
42
43 whereas 14 reported decreases (D1, 6a, 6b, 9a, 9c, 10a, 10b, 20, 21b, 25a, 28, 29, 36a, 39a1).
44
45
46 However, a closer analysis, using criteria from the developmental framework, revealed additional
47
48 order in this collection of findings. The most important consideration was whether the measures
49
50 focused only on distraction or combined distraction with ways of coping from other families.
51
52 Findings are summarized graphically in Figure 2.
53
54
55
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42

“Pure” distraction measures. In terms of scale content, 27 comparisons were identified that relied on measures focusing *only* on distraction (D2, 4a, 4b, 5a1, 5a2, 5b, 5c1, 5c2, 11, 17, 18b, 19, 20, 22, 24, 25a, 25b, 29, 32, 33a, 34a, 35, 37, 39a1, 39b1, 39a2, 39b2). Of these 27 comparisons, all but 4 (25a, 20, 29, 39a1) showed increases (11 comparisons: D2, 4b, 5a2, 5c1, 11, 17, 19, 22, 33a, 37, 39b1) or found no differences (12 comparisons: D4a, 5a1, 5b, 5c2, 18b, 24, 25b, 32, 34a, 35, 39a2, 39b2). Studies were further distinguished based on the means of distraction included in the measures: behavioral (the earliest form of distraction), cognitive (a later form), or a combination of behavioral and cognitive distraction. Fourteen of the 27 comparisons focused only on *behavioral* distraction (D2, 4a, 5a1, 5a2, 5b, 18b, 19, 24, 33a, 34a, 39a1, 39b1, 39a2, 39b2). Of these, five revealed increases (D2, 5a2, 19, 33a, 39b1) starting at the youngest ages and continuing across adolescence (ages 4-10, 5-11, 9-11 vs. 12, 12-18, 13-18). The other eight showed no difference or association with age (D4a, 5a1, 5b, 18b, 24, 34a, 39a2, 39b2) across approximately the same age ranges (ages 5-11, 8-11, 9-12, 12-18, 13-18). However, the basis for stability could be identified in five comparisons because these studies also reported mean levels (D4a, 5a, 5b, 39a2, 39b2). All five comparisons found no age differences because behavioral distraction was already the most commonly used strategy starting at the earliest ages considered (age 5) and remained at this high level until the oldest ages (age 18).

43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Four of the 27 comparisons focused on only *cognitive* distraction (D4b, 5c1, 5c2, 17) and all four considered uncontrollable medical stressors. Three of these found increases during childhood (D4b, 5c1, 17: ages 5-11, 5-11, 8-10) and 1 found no age difference (D5c2). Increases were found in comparisons of cognitive distraction that asked about *hypothetically* possible ways of coping (D4b, 5c1) or in situations in which behavioral distraction was not possible (i.e., D17: during a dental exam). No differences were found in a study focusing on cognitive distraction in a situation where behavioral distraction was possible (i.e., D5c2: waiting for surgery). In this

1
2
3 situation, children rarely reported using cognitive distraction, and this held true across the age
4
5 range examined in the study (ages 5-11).
6
7

8 Eight of the 27 comparisons involved measures that mixed cognitive *and* behavioral
9
10 distraction in their coding systems (D22) or questionnaires (D20, 25a, 25b, 29, 32, 35) or did not
11
12 specify what kind of distraction was used (D11). Three of these comparisons found no
13
14 differences (D25b, 32, 35), two found increases (D11, 22), and three found decreases (D20, 25a,
15
16 29). No differences were found during adolescence (ages 9-14, 12-17, 12-18) when distraction
17
18 was among the most common strategies used to deal with uncontrollable stressors (such as being
19
20 grounded by a parent, D25b) or in general (D32, 35). The increases were found between ages 6
21
22 and 18 when youth were dealing with leukemia (D11) or were requested to write down all the
23
24 strategies they could think of for dealing with a self-identified stressor and a set of uncontrollable
25
26 stressors (getting a shot at the dentist, giving a school report) (D22). All three studies that found
27
28 decreases looked at coping with interpersonal (20, 29) or self-identified stressors (usually
29
30 interpersonal, D25a) from ages 8 to 14.
31
32
33
34
35

36 One study (D5) shed light on the use of behavioral and cognitive distraction as ways of
37
38 coping with uncontrollable stressors (in this case waiting for pediatric surgery). In semi-
39
40 structured interviews, children from ages 5 to 11 were asked to name things a hypothetical child
41
42 could do, observations were conducted in the waiting room, and children's retrospective reports
43
44 were collected one week later about what they actually did. Observations showed behavioral
45
46 distraction to be the most common coping strategy across all ages. In the hypothetical scenarios,
47
48 children named behavioral distraction frequently and this did not differ across age; older children
49
50 were more likely to name cognitive distraction as a *possible* strategy. In their retrospective
51
52 accounts of what they actually did, however, children rarely reported using cognitive distraction
53
54 as a strategy at any age. At the same time, older children were more likely to report using
55
56
57
58
59
60

behavioral distraction than younger children. It may be that, although younger children actually use behavioral distraction, they only begin to intentionally deploy it as a strategy somewhat later during middle childhood.

In terms of the domain of the stressor, studies that examined only distraction tended to focus on using it to cope with distress (D9, 19, 37), uncontrollable stressors (D2, 4, 5, 11, 17, 22, 25b), or serious problems (D33a). However, studies that found no association with age were more likely to examine coping in general or with multiple different kinds of stressors (D18b, 24, 25b, 32, 34a, 35, 39a2, 39b2). In terms of the method of data collection (i.e., observation, questionnaire), in general, three of the four studies that found increases in cognitive distraction used open-ended formats in which students volunteered strategies (i.e., interview or open-ended written responses; D4b, 5c1, 17, 22). Comparisons involving questionnaires were more likely to find no differences (D18b, 24, 25b, 32, 34a, 35, 39a2, 39b2) or decreases (D19a, 20, 29).

Distraction as accommodation. In trying to make sense of the findings for scales that combined distraction with other ways of coping, we used the coding system to examine whether age differences depended on the specific ways of coping that were added. Twelve comparisons combined distraction with other ways of coping from the accommodation family, such as focus on the positive (D18a, 26a, 26b, 27, 31, 33b, 34b, 38a, 38b, 38c, 40, 41). Six found increases (D27, 31, 33b, 34b, 38a, 38c) and six no differences (D18a, 26a, 26b, 38b, 40, 41). In two of these comparisons, focus on the positive was combined with *behavioral* distraction (D40, 41) and showed no differences across adolescence (ages 13-20, 14-18). In five comparisons, focus on the positive was combined with *cognitive* distraction: four found increases across adolescence (27, 31, 33b, 34b: ages 10- 14, 12-16, 12-18, 12-18), and one found no differences at earlier ages (D18a: ages 8-11).

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Distraction as emotion management. Nine comparisons considered distraction as part of emotion management, combining it with calming and relaxation (13), with instrumental action (D9b), with instrumental action, self-reliance, and comfort-seeking (D8a, 8b, 15, 23), with comfort- and help-seeking (D9b, 12, 14), or with self-soothing (D9c). Six of these comparisons showed increases (D8a, 12, 13, 14, 15, 23), one a decrease (D9c), and three no differences (D8b, 9b, 30). All of the comparisons that showed increases included *cognitive* distraction whereas all of the comparisons that showed no differences combined these strategies only with *behavioral* distraction. One study (D12) explicitly stated that emotion-focused strategies for dealing with a parent's cancer moved from behavioral to cognitive over the age range studied (ages 6-32).

Distraction as avoidance. Fifteen comparisons considered distraction as part of avoidance coping, combining it with behavioural or cognitive avoidance (D3, 8c, 10a, 10b, 16, 21a, 21b, 28, 36a, 36b) or escape and social isolation (D1, 6a, 6b, 7, 9a). Of these, two found increases (D3, 8c), nine found decreases (D1, 6a, 6b, 9a, 10a, 10b, 21b, 28, 36a), and four found no differences (D7, 16, 21a, 36b). In both of the comparisons that found increases (D3, 8c), distraction was combined with avoidance and described as a strategy used to avoid problems at younger ages (ages 4-12, 7-10). However, five other comparisons that combined distraction with avoidance found decreases (D10a, 10b, 21b, 28, 36) and three found no differences (D16, 21a, 36) at slightly older ages (ages 7-17, 8-14, 12-14, 16-20). None of the comparisons that combined distraction with escape found increases; they revealed decreases (D1, 6a, 6b, 9a) or no differences (D7).

Summary. A focus on comparisons that included “pure” measures of distraction revealed that behavioural distraction was a way of coping commonly used to deal with uncontrollable events and to manage emotions starting at the youngest ages studied, and it remained an important general purpose strategy across childhood and adolescence. Behavioral distraction was

1
2
3 also likely to show increases in use across this age range in situations in which it was not already
4 high, perhaps reflecting more intentional deployment as children reached late childhood and early
5
6 high, perhaps reflecting more intentional deployment as children reached late childhood and early
7
8 adolescence. Children also showed increasing *awareness* of cognitive distraction as a possible
9
10 strategy, although they only used it more frequently in stressful situations where behavioural
11
12 distraction was not an option (e.g., during a dental procedure). Studies were more likely to find
13
14 increases when children were asked open-ended questions about the strategies they use;
15
16 questionnaires were more likely to show no differences.
17
18

19
20 Comparisons involving measures that combined distraction with other *accommodative*
21
22 strategies (such as focus on the positive) generally found age differences commensurate with the
23
24 kind of distraction that was included: stability if the distraction was *behavioural* or increases if
25
26 the distraction was *cognitive*. Studies that combined distraction with other forms of *emotion*
27
28 *management* (such as comfort-seeking or instrumental action) also found age differences
29
30 corresponding to the kind of distraction included: Studies that showed no differences combined
31
32 these strategies only with *behavioural* distraction whereas all of the studies that showed increases
33
34 included *cognitive* distraction.
35
36
37

38
39 The most heterogeneous pattern of findings came from studies that considered distraction
40
41 as part of “avoidance” coping, combining it with avoidance, escape or social isolation. Increases
42
43 were found in studies that considered avoidance an adaptive prevention strategy and assessed it
44
45 with teacher-ratings or interviews; other comparisons also revealed decreases and no differences.
46
47 The only comparisons in which decreases with age were consistently found were ones in which
48
49 distraction was combined with escape. One factor likely contributing to this heterogeneous
50
51 pattern has been uncovered in subsequent studies: Confirmatory structural analyses have shown
52
53 that “distraction” is not a part of escape or avoidance coping (e.g., Ayers, Sandler, West, &
54
55 Roosa, 1996; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000).
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

For Peer Review

Support-seeking

Findings from 48 studies utilizing measures with some support seeking content showed that social support seeking was common, multidimensional, and complex. In particular, conclusions about age patterns depended on the span of ages under investigation as well as the characteristics of the supportive presence and the nature of the support sought. Additionally, age-related increases in support seeking were more likely to be found when specific stress domains were identified.

In two studies of infants and toddlers, support seeking was a frequent coping strategy, as would be expected. Behaviors included reliance on attachment figures to regulate responses to stressful events and using directed vocalization to gain assistance (e.g., get Mom to do something). These strategies increased with age and become more direct between about 5 and 18 months of age (Braungart-Rieker & Stifter, 1996; Mangelsdorf et al., 1995). As described by Barrett and Campos (1991), sometime early in the second half of the first year of life, infants develop the ability to direct their facial responses in ways that elicit support or guide the instrumental actions of others. Other adaptive strategies for support seeking also emerge around this time, such as seeking eye contact with caregivers when soothing or other forms of assistance are desired (Kopp, 1989).

Findings for support-seeking from 46 studies focusing on children age 4 and older are summarized in Table 7. As can be seen, the 46 studies included 79 age comparisons or correlations with age. As a whole, the pattern of findings suggested decreases or stability in use of support-seeking coping with age: 37 comparisons revealed no differences or associations (S1, 2, 3b, 4, 5, 7b, 8a, 11b, 16, 19, 23, 24a, 24b, 26, 28a, 28b, 28c, 28d, 29, 30a, 30b, 31, 32a, 35, 37a, 37b, 38b, 40a1, 40b2, 40d, 41b, 42b, 43, 44a, 44b, 45a, 45b) and 22 found decreases (S3a, 6a, 8b, 9a, 9b, 10a, 10b, 11a, 17, 18, 20b, 21a, 21b, 22, 25a, 25b, 30c, 30d, 32b1, 34, 40b1, 40c1,

46), whereas only 20 reported increases (S6b, 7a, 9c, 12, 13, 14, 15, 20a, 27, 32b2, 33, 36a, 36b, 38a, 39, 40a2, 40c2, 41a, 42a, 42c). However, a closer analysis revealed additional coherence in this set of findings. The most important considerations were the developmental levels included in the comparisons and whether the measures employed in the studies focused only on support-seeking or combined support-seeking with ways of coping from other families. These findings also are graphically depicted in Figure 3.

“Pure” support-seeking measures. In terms of scale content, 43 comparisons were identified that relied on measures focusing *only* on support-seeking; the majority of these (38) mixed help-seeking and comfort-seeking in their measures. Of these 43 comparisons, 23 showed no differences (S1, 3b, 5, 8a, 16, 19, 23, 28a, 28b, 28c, 28d, 29, 30a, 30b, 32a, 37b, 38b, 40a1, 40d, 41b, 44a, 44b), 12 found decreases (S2, 6a, 8b, 9a, 9b, 10b, 20b, 21a, 21b, 22, 32b1, 34), and 8 found increases (S6b, 12, 14, 20a, 30b2, 38a, 40a2, 41a). The pattern of findings became clearer when developmental level was considered.

Ten comparisons focused on *middle childhood* (ages 7 to 12): Six of these revealed decreases (S6a, 8b, 10b, 20b, 22, 32b1), three found no differences (S5, 19, 29), and only one found an increase (S20a). Decreases were found all across this age range (ages 5-8, 7-10, 7-11, 8-10, 8-12, 10-12) and across stressors involving achievement (S8b), peers (S20b, 32b1), distress (S22), self-identified issues (S10b), and uncontrollable problems (S6a). Ten comparisons spanned from *childhood to adolescence* (ages 5-15, 7-16, 8-14, 9-14, 10-13), (S8a, 16, 23, 24b, 28a, 28b, 30a, 30b, 32a, 34). All but one (S34) found no age differences in support-seeking.

Fourteen comparisons included *adolescents* (ages 12 to 24). Of these, 9 found no differences (28c, 28d, 37b, 38b, 40a1, 40d, 41b, 44a, 44b) and 5 found increases (S32b2, 38a, 39, 40a2, 41a); none found decreases. The stabilities were found all across this age range (12-16, 12-17, 12-18, 13-20, 14-24, 16-20) and across a range of stressors, including interpersonal (S44b),

1
2
3 school (S44a), self-identified (41b), multiple different stressors (S28c, 28d), and in general
4
5 (S37b, 38b, 40a1, 40d). The five comparisons that found increases were also across the entire age
6
7 range (ages 11-13, 12-17, 12-18, 14-16, 16-20) and across different stressors (S32b2: peer; 38a:
8
9 general; 39, 41a: self-identified; 40a2: general).
10
11

12 *Sources of support.* One of our expectations was that children would increasingly turn to
13
14 peers as sources of support across later childhood and early adolescence, especially for dealing
15
16 with issues in which peers are perceived to have expertise, such as homework and social
17
18 problems. However, few of the measures distinguished the source of social support. Most
19
20 combined support from parents and other family members with support from friends, and
21
22 sometimes from teachers or other adults; often the referent was “someone,” as in “I talked to
23
24 someone about it.” One study that did distinguish peers from adults as sources of support (S5)
25
26 found that younger children (ages 5-6) preferred adults to peers, but by primary school (ages 7-8),
27
28 children began to prefer peers to adults. However, by the end of childhood (ages 10-11), children
29
30 began to prefer adults to peers in dealing with uncontrollable stressors (such as medical
31
32 situations). Two additional comparisons that explicitly targeted friends as sources of support
33
34 (S38b, 40d) found no association with age across ages 12 to 18. However, in these latter studies,
35
36 the stressors were not distinguished; they examined coping in general.
37
38
39
40
41
42

43 In one notable study (S39), approach coping in the form of talking with adults for
44
45 guidance to solve a problem was positively correlated with age (12 to 18 years). In an additional
46
47 study (36a, 36b), support-seeking was combined with information seeking from professionals;
48
49 this was a common strategy during adolescence and showed linear increases between ages 12 to
50
51 15 as well as ages 16 to 19. An additional study that examined seeking guidance from
52
53 professionals (without combining it with general support-seeking, S40c) found that this strategy
54
55 was not very common during adolescence, but increased in use from age 14 to 16 (S40c2). Taken
56
57
58
59
60

1
2
3 together, these comparisons suggest that young people may continue to seek help and
4
5 information from adults, and this might even increase with age, whereas emotional support
6
7 seeking from adults may decline as emotional self-regulation and emotional support seeking from
8
9 peers increases.
10

11
12 *Support-seeking as part of active coping.* Support-seeking was combined with ways of
13
14 coping from several other families. The most common was to include support-seeking with
15
16 instrumental action or problem-solving, often referred to as “approach” or “active” coping (see
17
18 section on problem-solving and support-seeking). Of 12 comparisons using this combination, 2
19
20 found increases (S7a, 9c), 6 found decreases (S10a, 11a, 17, 18, 30c, 30d), and 4 found no
21
22 differences (S2, 7b, 31, 45a). Both increases were found in combinations that were labeled as
23
24 “adaptive approach” (S7a) or “direct problem-solving” (S9c), suggesting that problem-solving
25
26 predominated. All six of the decreases focused on using a combination of support-seeking and
27
28 problem-solving to cope with distress (S11a), pain (S18), cancer (S17), or self-identified, mostly
29
30 interpersonal, problems (S10a, 30c, 30d).
31
32
33
34
35

36
37 *Support-seeking as part of emotion management.* In 11 comparisons, support-seeking was
38
39 combined with other constructive strategies for emotion management, such as problem-solving
40
41 and negotiation (S13, 24a, 27, 33, 37a, 42a, 42b, 42c) or distraction (S11b, 15, 43). Six of these
42
43 studies found increases in these combinations (S13, 15, 27, 33, 42a, 42c) from childhood to
44
45 adolescence (ages 6-12, 7-12, 8-18, 10-14, 13-18) and five found no differences (S11b, 24a, 37a,
46
47 42b, 43) across the same age range (ages 6-12, 8-14, 12-16, 13-18).
48
49

50
51 *Support-seeking as part of emotion-focused coping.* In six comparisons, support-seeking,
52
53 usually in the form of comfort-seeking, was combined with other strategies used to deal with
54
55 distress, such as escape (S25a, 25b, 26), social isolation (S35), and venting (S45b, 46). Three of
56
57 these comparisons (S25a, 25b, 46) found decreases across adolescence (ages 8-16) or larger age
58
59
60

1
2
3 ranges (ages 14-46), whereas three comparisons (S26, 35, 45) found no differences across
4
5 approximately the same ages (8-18, 10-15, 14-18). None found increases.
6
7

8 *Summary.* A focus on comparisons that included “pure” measures of support-seeking,
9
10 which typically combined help- and comfort-seeking, revealed that, as would be expected, this
11
12 was the most frequently used strategy for coping with problems and distress for young children.
13
14 Although support-seeking remained a common coping strategy, its use decreased during
15
16 childhood (ages 7-12), and then levelled off during adolescence. A recent study of utilization of
17
18 attachment figures in middle childhood produced a similar pattern of findings (Kerns, Tomich, &
19
20 Kim, 2006). Although children in third and sixth grades indicated that they would typically turn
21
22 to parents when sick, scared, or sad (85-98% of the time), the sixth graders (compared to third
23
24 graders), reported lower levels of reliance on their mothers and fathers in times of stress.
25
26
27
28

29 There were some indications that the preferred source of support shifted from adults to
30
31 peers starting in late childhood and early adolescence, even though adolescents continued to rely
32
33 on adults for guidance and to deal with uncontrollable stressors. Another recent study provides
34
35 some additional insight into sources of support (Crystal, Kakinuma, DeBell, Azuma, &
36
37 Miyashita, 2008). Using an open-ended format to ask children in grades 6, 8, and 10 whom they
38
39 rely on to help them with certain tasks (e.g., cheering them up when they are upset, helping fix a
40
41 problem, homework), researchers distinguished among self, family, and peers, ranging from 0
42
43 (not mentioned as a source of support) to 1 (mentioned at least once). Although youth most
44
45 frequently identified family at all ages, significant grade differences were found for each source
46
47 of support. Adolescents relied more on themselves ($M_s = .13, .17, .21$, for grades 6, 8, and 10,
48
49 respectively) and on their peers ($M_s = .13, .20, .29$) in later compared to earlier grades, whereas
50
51 those in later compared to earlier grades relied less on their family members ($M_s = .78, .65, .56$).
52
53
54
55
56
57
58
59
60

1
2
3 Distinguishing ways of coping combined with support-seeking revealed some coherence
4
5 in the pattern of findings. When support-seeking was combined with adaptive problem-solving,
6
7 this combination showed increasing use during the ages when problem solving is increasing
8
9 (ages 5-11), but decreases predominated from ages 7 to 14 when this combination was aimed at
10
11 coping with interpersonal problems or with uncontrollable stressors, pain, or distress, perhaps
12
13 reflecting the fact that these latter stressors were found to be increasingly dealt with using
14
15 distraction across this age range. Increases or no differences were found from childhood to
16
17 adolescence when support-seeking was combined with other adaptive strategies of “emotion
18
19 management” (such as distraction or negotiation). However, comparisons involving “emotion-
20
21 focused coping” which combined support-seeking with escape, venting, or emotion suppression,
22
23 revealed lower levels with increasing age or no differences across the same age range.
24
25
26
27
28

29 *Escape*

30
31 Findings for escape and age from 37 studies are summarized in Table 8. Taken together,
32
33 the 64 age comparisons or correlations with age included in these studies suggested a pattern of
34
35 no differences or lower levels of escape coping with increasing age: 32 comparisons found no
36
37 differences (E1, 3b, 4, 6b, 7a, 7c, 9a, 9b, 9c, 9e, 11c, 15a, 15b, 16, 18, 19b, 21, 23, 25a, 27, 28b,
38
39 29, 31b, 32, 33a, 33b, 34b, 35a, 35c, 36a, 36b, 37), 22 revealed decreases (E2, 3a, 6a, 7b, 8a, 8b,
40
41 11a, 11b, 13, 14a, 17, 19a, 20a, 20b, 22, 24, 30a, 30b, 34a, 35b2, 36c, 36d), and only 10 reported
42
43 increases in escape with age (E5, 9d, 10, 12, 14b, 25b, 26, 28a, 31a, 35b1). At the same time, a
44
45 closer examination of the findings, based on the criteria from the developmental framework,
46
47 suggested additional order. It was useful to consider the content of scales, the age groups
48
49 included in the comparisons, and the nature of the stressor.
50
51
52
53
54

55 “Pure” escape measures. Only 22 comparisons relied on measures including only the
56
57 escape family (i.e., attempts to leave the distressing environment or to avoid direct action to
58
59
60

1
2
3 resolve a problem; E1, 3a, 3b, 6b, 9a, 9b, 9d, 13, 14a, 14b, 15a, 16, 17, 18, 23, 24, 25a, 25b, 27,
4
5 29, 36a, 36c). Overall, these comparisons suggested no differences (13 comparisons: E1, 3b, 6b,
6
7 9a, 9b, 15a, 16, 18, 23, 25a, 27, 29, 36a) or less use of escape with increasing age (6
8
9 comparisons: E3a, 13, 14a, 17, 24, 36c); only 3 comparisons showed more escape in older
10
11 compared to young children (9d, 14b, 25b). Most studies focused on cognitive escape (e.g.,
12
13 wishful thinking, minimization, denial; 8 comparisons: E6b, 9d, 14a, 14b, 24, 27, 36a, 36c) or a
14
15 combination of behavioural and cognitive (or unspecified modes) of escape (8 comparisons: E13,
16
17 15a, 17, 18, 23, 25a, 25b, 29). Six comparisons focused exclusively on behavioural escape; five
18
19 of these examined young children (ages 3-5, 4-6, 6-8) using observations (E1, 3a, 3b) or maternal
20
21 rating (9a, 9b).

22
23
24
25
26
27 In general, studies reporting mean levels suggested that, on the one hand, escape is the
28
29 most common coping strategy of those that are described as maladaptive (compared to, for
30
31 example, opposition, social isolation, or catastrophizing). On the other hand, compared to more
32
33 adaptive strategies, such as problem-solving, distraction, or support-seeking, escape is not a very
34
35 common way of coping in childhood or adolescence. One possible developmental period when
36
37 escape seems to be more common was during early childhood (ages 3-5, 6-8) when behavioural
38
39 escape or avoidance was frequently used in response to one's own distress (E9a) or to peer
40
41 provocation (E1).

42
43
44
45 In eleven of the 22 comparisons using measures of "pure" escape, a pattern of no age
46
47 differences in low levels of usage was found: during early childhood (E3b: ages 4-6; 6b: 5-11;
48
49 9b: 6-8), middle childhood: (E16: ages 8-11; 18: 8-14; 23: 9-12) from childhood to adolescence
50
51 (E15a: ages 7-18; 25a: 9-15; 27: 10-13; 29: 10-14) and during adolescence (36a: ages 13-20).
52
53 Comparisons that found decreases in use of escape were concentrated during late childhood (ages
54
55 7-10, 8-11, 9-10, and 9-14) and applied to dealing with social stressors (E14a, 36c) or one's own
56
57
58
59
60

1
2
3 distress (E13, 17). The few comparisons showing increases in escape were found during early
4
5 adolescence (ages 9-15, 10-13) in studies that included cognitive escape (e.g., “I tell myself it
6
7 doesn’t matter”) (E9d, 14b, 25b), although overall use still remained low.
8
9

10 *Escape as part of maladaptive coping.* Twenty comparisons combined escape coping
11
12 with maladaptive coping from other families (e.g., aggression, isolation, venting, helplessness,
13
14 passivity, rumination; E2, 4, 6a, 7a, 7b, 7c, 11b, 15b, 22, 28a, 28b, 30a, 31a, 31b, 32, 35a, 35c,
15
16 35b1, 35b2, 37). The pattern of age-related decreases for comparisons involving additional
17
18 maladaptive ways of coping was more pronounced than for those comparisons focusing only on
19
20 escape: 8 comparisons showed lower levels in older compared to younger children or adolescents
21
22 (E2, 6a, 7b, 11b, 22, 31b, 32, 35b), 8 found no differences (E4, 7a, 7c, 15b, 28b, 35a, 35c, 37),
23
24 and 8 showed more escape in older compared to younger children or adolescents (E28a, 30a,
25
26 35b1, 37). Again, levels of usage were generally low, except for behavioral indicators observed
27
28 in young children in uncontrollable situations (E4).
29
30
31
32
33

34 Age-related declines in escape were concentrated in childhood, starting earlier than
35
36 declines found with measures tapping only escape (E2: ages 4-6; 6a: 5-11; 7b: 5-11; 11b: 6-12;
37
38 22: 8-18). Comparisons finding no age differences were distributed across early childhood (E4:
39
40 ages 4-10), childhood (7a, 7c: ages 5-11), from childhood to adolescence (E15b: ages 7-18; 28b:
41
42 10-14) and adolescence (E35a, 35b: ages 13-18; 37: 14-18). The four comparisons showing age-
43
44 related increases in escape combined with other maladaptive forms of coping were found during
45
46 early adolescence (E28: ages 10-14; 30a: 10-15; 31a: 12-15; 35b1: 12-15), notably in the
47
48 academic domain (E28, girls; 35b1). Four of these comparisons combined escape with substance
49
50 use as well as with other maladaptive forms of coping (E31a, 31b, 32, 37). One of these
51
52 comparisons found a longitudinal increase in early adolescence (E31a: 12-15), two comparisons
53
54 showed decreases (E32: ages 12-17; 31b: 16-19), and one found no differences (E37: age 14-18).
55
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Escape combined with distraction. Measures that combined escape with distraction as a form of “avoidance” coping were used in eighteen comparisons (E5, 8a, 8b, 9c, 9e, 10, 11a, 11c, 12, 19a, 19b, 26, 30b, 33b, 34a, 34b, 36b, 36d). Comparisons utilizing this combination were the ones most likely to show more use in older compared to younger children or adolescents (5 comparisons: E5, 10, 12, 26, 30), although this finding was still less common than the finding of an age-related declines in escape (6 comparisons: E8a, 8b, 11a, 19a, 34a, 36d) and no differences (7 comparisons: E9c, 9e, 11c, 19b, 33b, 34b, 36b). Some of the increases were found in domains in which increasing use of distraction was found, namely, dealing with distress (E26) and uncontrollable stressors (E12, parental cancer), although other comparisons involving distress showed no differences (E9c, 9e, 11c) or decreases (11a).

Decreases in combinations of escape and distraction were concentrated during the transition to adolescence (E8a, 8b: ages 5-8 vs. 12-15; 11a: 6-12; 19a: 8-14). However, comparisons that found no differences also examined youth during the same age range (E11c: 6-12; 19b: 8-14; 33b: 12-18) as well as younger children (E9c, 9e: 6-8) and older adolescents (E34b: adolescents vs. adults; 36b: 13-20). Three studies combined escape with adaptive forms of coping besides distraction, referring to them as primary control coping (combining escape with problem-solving, direct action, comfort-seeking, E20), catastrophizing (combining escape with support-seeking, E21), and wishful thinking (combining cognitive escape with optimism, E33a). These unusual combinations showed a decrease (E20a) or no age differences (E21, 33a) across childhood to adolescence (ages 8-16, 8-18, 12-18).

Summary. Although it was the most common maladaptive way of coping, the use of escape to deal with stress was generally infrequent across childhood and adolescence. The only exception might be the use of behavioral escape in early childhood to deal with peer provocation or uncontrollable stressors. Few age differences or changes in escape were found when measures

1
2
3 tapped only the escape family. When age differences were revealed, however, they were
4
5 predominantly decreases in escape concentrated during late childhood, when escape was used
6
7 increasingly less often to deal with one's own distress or with interpersonal stressors. The few
8
9 comparisons that found increases in escape typically involved the increasing use of cognitive
10
11 modes of escape during early adolescence.
12
13

14
15 When escape was combined with other maladaptive strategies (such as helplessness,
16
17 rumination, aggression, or venting), usage was still low, but the pattern of decreases was more
18
19 pronounced and apparent already starting in early childhood. "Avoidance" aggregates which
20
21 combined escape with a more adaptive form of coping, namely, distraction, were the only escape
22
23 combinations likely to show increases, but increases in this kind of "avoidance" were still less
24
25 common than decreases (concentrated during the transition to adolescence) and no differences
26
27 (distributed across the entire age range). Aggregates that combined escape with substance use did
28
29 not show clear age-graded patterns, but a longitudinal study suggested an increase with age
30
31 during early adolescence.
32
33
34
35

36
37 A general pattern could be discerned across the studies, although the tendency to examine
38
39 escape in combination with a range of disparate coping strategies makes these conclusions
40
41 tentative, so we do not illustrate these patterns in a figure. Overall, the studies suggested a
42
43 relatively low and steady usage of escape across childhood and adolescence (except behavioral
44
45 escape during preschool). However, for pure escape measures, decreasing escape was associated
46
47 with increasing age starting in late childhood, and for more maladaptive combinations, decreases
48
49 were seen starting already in early childhood. The only increases were found in cognitive forms
50
51 of escape during early adolescence. Although higher levels in older compared to younger age
52
53 groups were sometimes found for combinations that included distraction along with escape, it is
54
55 likely that these combinations will no longer be used in future studies, since structural analyses
56
57
58
59
60

confirm that distraction and escape are not part of the same higher-order family of coping (Ayers et al., 1996; Connor-Smith et al., 2000).

For Peer Review