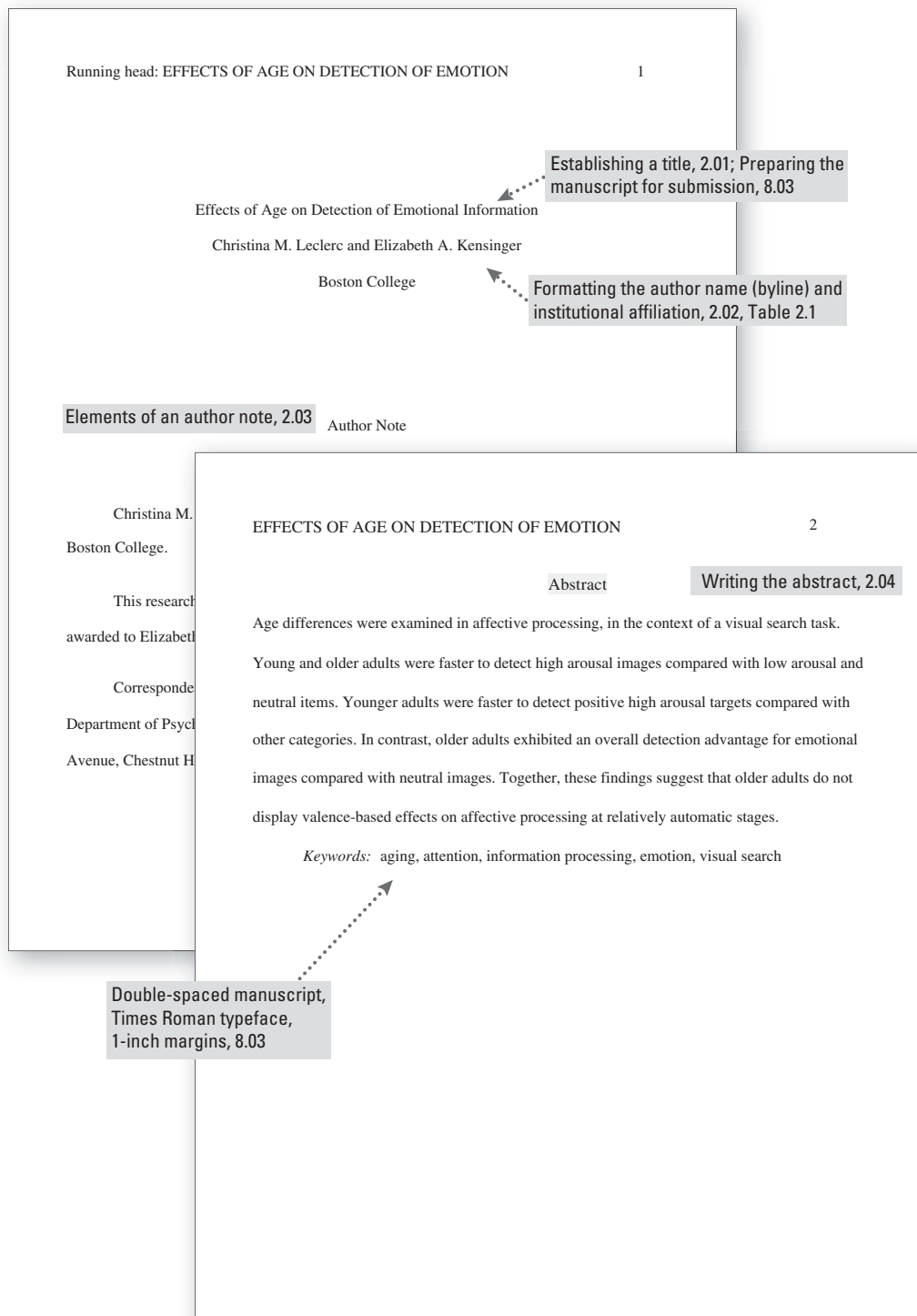


Figure 2.1. Sample One-Experiment Paper (The numbers refer to numbered sections in the *Publication Manual*.)



Paper adapted from "Effects of Age on Detection of Emotional Information," by C. M. Leclerc and E. A. Kensinger, 2008, *Psychology and Aging*, 23, pp. 209–215. Copyright 2008 by the American Psychological Association.

Figure 2.1. Sample One-Experiment Paper (continued)

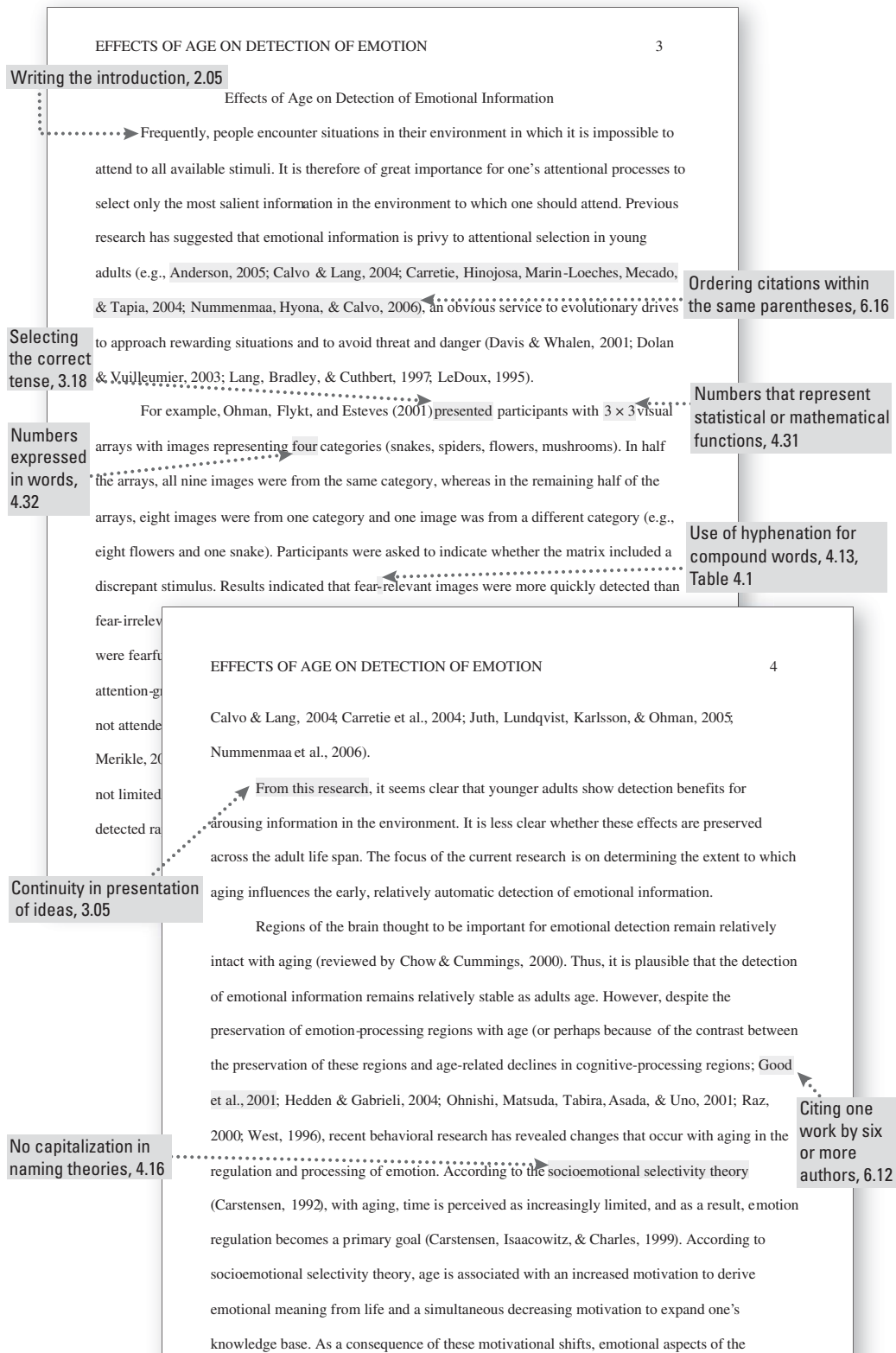


Figure 2.1. Sample One-Experiment Paper (continued)

EFFECTS OF AGE ON DETECTION OF EMOTION 5

To maintain positive affect in the face of negative age-related change (e.g., limited time remaining, physical and cognitive decline), older adults may adopt new cognitive strategies. One such strategy, discussed recently, is the positivity effect (Carstensen & Mikels, 2005), in which older adults spend proportionately more time processing positive emotional material and less time processing negative emotional material. Studies examining the influence of emotion on memory (Charles, Mather, & Carstensen, 2003; Kennedy, Mather, & Carstensen, 2004) have found that compared with younger adults, older adults recall proportionally more positive information and proportionally less negative information. Similar results have been found when examining eye-tracking patterns: Older adults looked at positive images longer than younger adults did, even when no age differences were observed in looking time for negative stimuli (Isaacowitz, Wadlinger, Goren, & Wilson, 2006). However, this positivity effect has not gone uncontested; some researchers have found evidence inconsistent with the positivity effect (e.g., Grühn, Smith, & Baltes, 2005; Kensinger, Brierley, Medford, Growdon, & Corkin, 2002).

Based on this previously discussed research, three competing hypotheses exist to explain age differences in emotional processing associated with the normal aging process. First,

emotional information m

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The primary goal

To do so, we employed a

EFFECTS OF AGE ON DETECTION OF EMOTION

rapidly detect emotional information. We hypothesized that on the whole, older adults would be slower to detect information than young adults would be (consistent with Hahn, Carlson, Singer, & Gronlund, 2006; Mather & Knight, 2006); the critical question was whether the two age groups would show similar or divergent facilitation effects with regard to the effects of emotion on item detection. On the basis of the existing literature, the first two previously discussed hypotheses seemed to be more plausible than the third alternative. This is because there is reason to think that the positivity effect may be operating only at later stages of processing (e.g., strategic, elaborative, and emotion regulation processes) rather than at the earlier stages of processing involved in the rapid detection of information (see Mather & Knight, 2005, for discussion). Thus, the first two hypotheses, that emotional information maintains its importance across the life span or that emotional information in general takes on greater importance with age, seemed particularly applicable to early stages of emotional processing.

Indeed, a couple of prior studies have provided evidence for intact early processing of emotional facial expressions with aging. Mather and Knight (2006) examined young and older adults' abilities to detect happy, sad, angry, or neutral faces presented in a complex visual array. Mather and Knight found that like younger adults, older adults detected threatening faces more quickly than they detected other types of emotional stimuli. Similarly, Hahn et al. (2006) also found no age differences in efficiency of search time when angry faces were presented in an array of neutral faces, compared with happy faces in neutral face displays. When angry faces, compared with positive and neutral faces, served as nontarget distractors in the visual search arrays, however, older adults were more efficient in searching, compared with younger adults,

Using the colon between two grammatically complete clauses, 4.05

- Capitalization of words beginning a sentence after a colon. 4.14

Hypotheses and their correspondence to research design. Introduction. 2.05

- Using the semicolon to separate two independent clauses not joined by a conjunction, 4.04

Using the comma between elements in a series, 4.03

Punctuation with citations in parenthetical material, 6.21

Citing references in text, inclusion of year within paragraph, 6.11, 6.12

Prefixes and
suffixes that
do not require
hyphens,
Table 4.2

Figure 2.1. Sample One-Experiment Paper (continued)

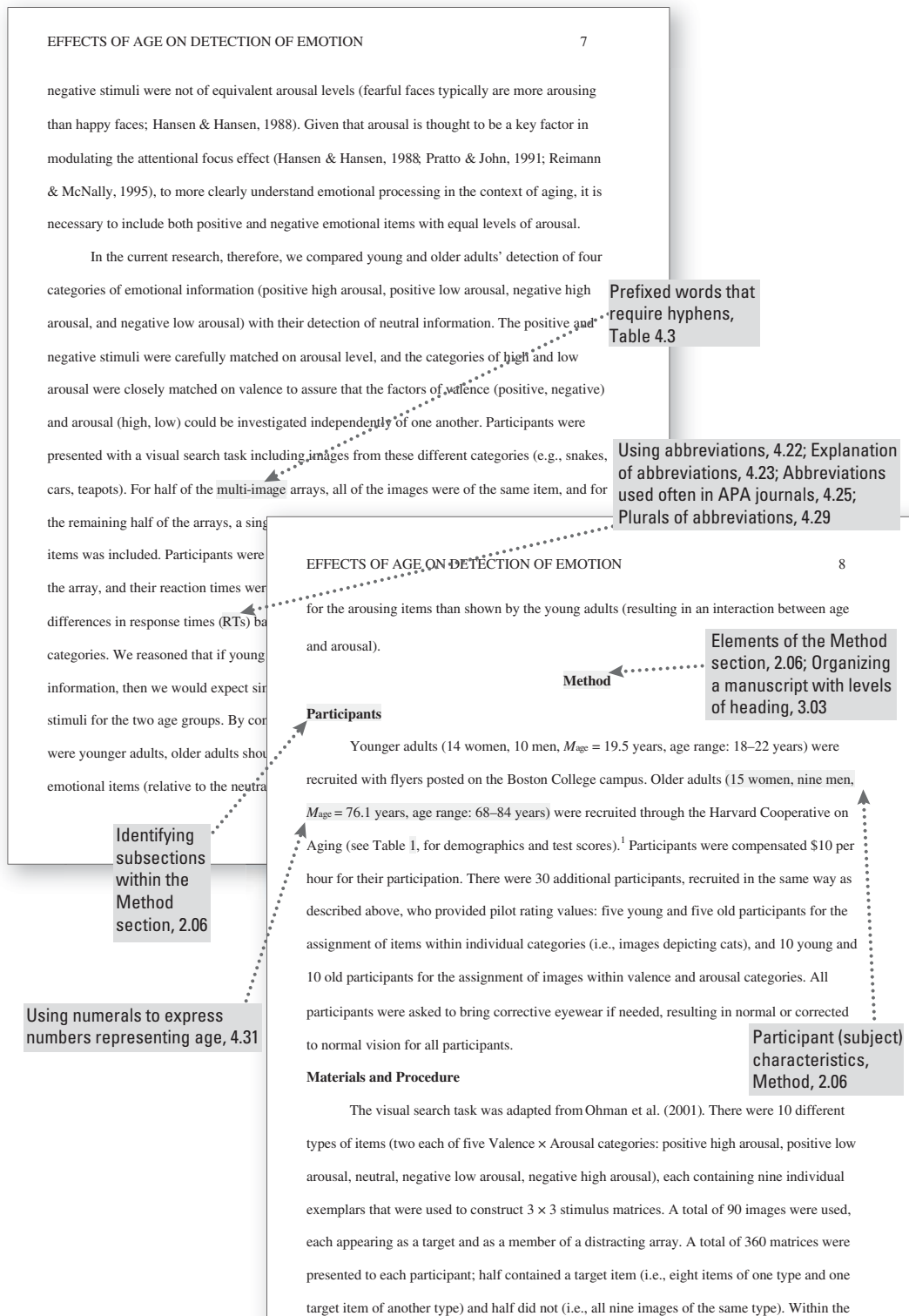


Figure 2.1. Sample One-Experiment Paper (continued)

matrix. Within the 180 target trials, each of the five emotion categories (e.g., positive high arousal, neutral, etc.) was represented in 36 trials. Further, within each of the 36 trials for each emotion category, nine trials were created for each of the combinations with the remaining four other emotion categories (e.g., nine trials with eight positive high arousal items and one neutral item). Location of the target was randomly varied such that no target within an emotion category was presented in the same location in arrays of more than one other emotion category (i.e., a negative high arousal target appeared in a different location when presented with positive high arousal array images than when presented with neutral array images).

The items within each category of grayscale images shared the same verbal label (e.g., mushroom, snake), and the items were selected from online databases and photo clipart packages. Each image depicted a photo of the actual object. Ten pilot participants were asked to write down the name corresponding to each object; any object that did not consistently generate the intended response was eliminated from the set. For the remaining images, an additional 20 pilot participants rated the emotional valence and arousal of the objects and assessed the degree of visual similarity among objects within a set (i.e., how similar the mushrooms were to one another) and between objects across sets (i.e., how similar the mushrooms were to the snakes).

Valence and arousal ratings. Valence and arousal were judged on 7-point scales (1 = *negative valence or low arousal* and 7 = *positive valence or high arousal*). Negative objects received mean valence ratings of 2.5 or lower, neutral objects received mean valence ratings of 3.5 to 4.5, and positive objects received mean valence ratings of 5.5 or higher. High arousal objects received mean arousal ratings greater than 5, and low arousal objects (including all neutral stimuli) received mean arousal ratings of less than 4. We selected categories for which both young and older adults agreed on the valence and arousal classifications, and stimuli were

Latin abbreviations, 4.26

Numbers expressed in words at beginning of sentence, 4.32

10

positive high arousal
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between-categories
exemplars (e.g., a set
the rest of the
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sual dimensions in
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lar the mushrooms
equated on within-
s well as for the

Italicization of anchors of a scale, 4.21

overall similarity of the object categories ($p s > .20$). For example, we selected particular mushrooms and particular cats so that the mushrooms were as similar to one another as were the cats (i.e., within-group similarity was held constant across the categories). Our object selection also assured that the categories differed from one another to a similar degree (e.g., that the mushrooms were as similar to the snakes as the cats were similar to the snakes).

Procedure

Each trial began with a white fixation cross presented on a black screen for 1,000 ms; the matrix was then presented, and it remained on the screen until a participant response was recorded. Participants were instructed to respond as quickly as possible with a button marked *yes* if there was a target present, or a button marked *no* if no target was present. Response latencies and accuracy for each trial were automatically recorded with E-Prime (Version 1.2) experimental

Figure 2.1. Sample One-Experiment Paper (continued)

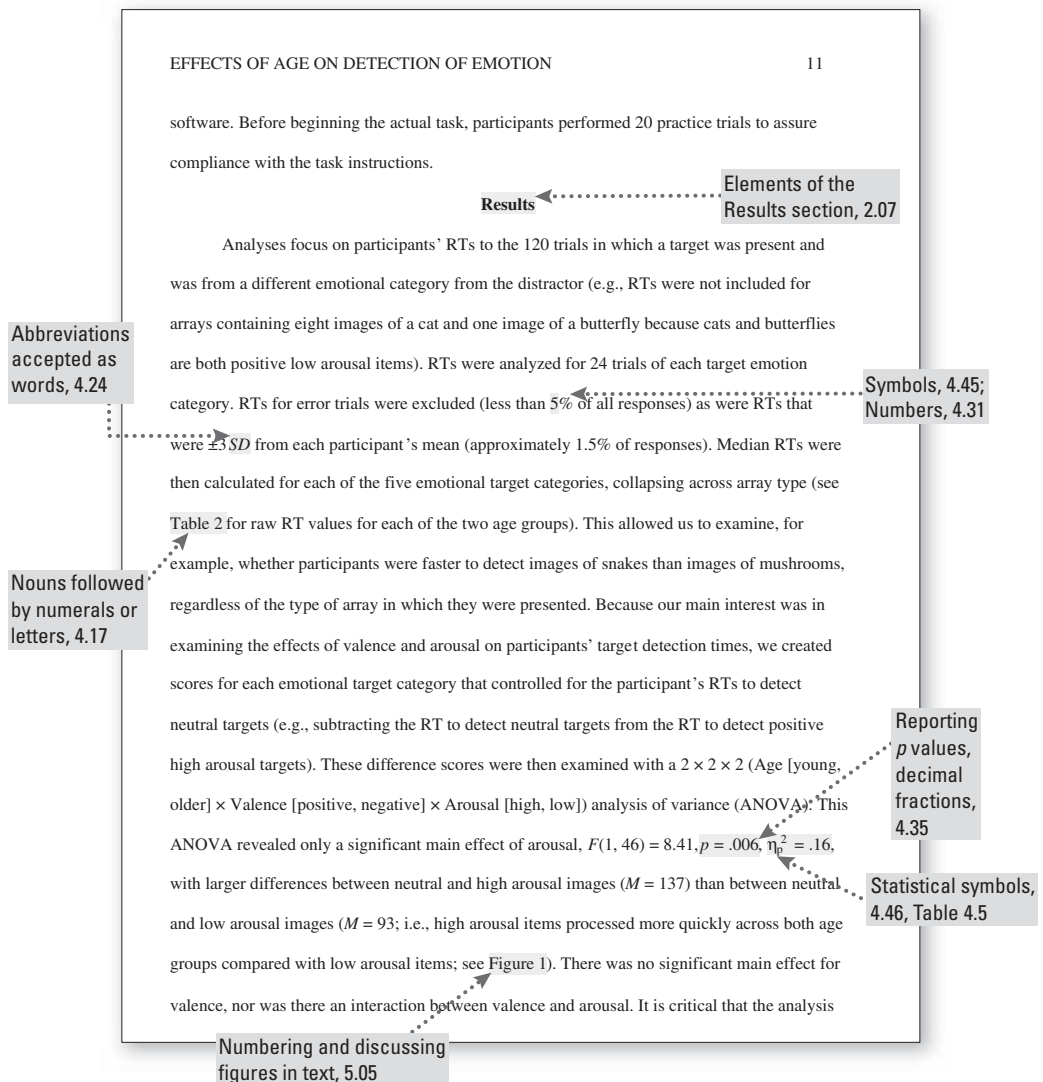


Figure 2.1. Sample One-Experiment Paper (continued)

revealed only a main effect of age but no interactions with age. Thus, the arousal-mediated effects on detection time appeared stable in young and older adults.

The results described above suggested that there was no influence of age on the influences of emotion. To further test the validity of this hypothesis, we submitted the RTs to the five categories of targets to a 2×5 (Age [young, old] \times Target Category [positive high arousal,

Statistics
in text, 4.44

positive low arousal, neutral, negative low arousal, negative high arousal]) repeated measures ANOVA.² Both the age group, $F(1, 46) = 540.32, p < .001, \eta_p^2 = .92$, and the target category,

Spacing, alignment,
and punctuation of
mathematical copy, 4.46

$F(4, 184) = 8.98, p < .001, \eta_p^2 = .16$, main effects were significant, as well as the Age Group \times Target Category interaction, $F(4, 184) = 3.59, p = .008, \eta_p^2 = .07$. This interaction appeared to

Capitalize effects
or variables when
they appear with
multiplication
signs, 4.20

reflect the fact that for the younger adults, positive high arousal targets were detected faster than targets from all other categories, $t_s(23) < -1.90, p < .001$, with no other target categories differing significantly from one another (although there were trends for negative high arousal and negative low arousal targets to be detected more rapidly than neutral targets ($p < .12$). For older adults, all emotional categories of targets were detected more rapidly than were neutral targets, $t_s(23) > 2.56, p < .017$, and RTs to the different emotion categories of targets did not differ significantly from one another. Thus, these results provided some evidence that older adults may show a broader advantage for detection of any type of emotional information, whereas young adults' benefit may be more narrowly restricted to only certain categories of emotional information.

Elements of the
Discussion section, 2.08

Discussion

As outlined previously, there were three plausible alternatives for young and older adults' performance on the visual search task: The two age groups could show a similar pattern of enhanced detection of emotional information, older adults could show a greater advantage for

Figure 2.1. Sample One-Experiment Paper (continued)

emotional detection than young adults, or older adults could show a greater facilitation than young adults only for the detection of positive information. The results lent some support to the first two alternatives, but no evidence was found to support the third alternative.

In line with the first alternative, no effects of age were found when the influence of valence and arousal on target detection times was examined; both age groups showed only an arousal effect. This result is consistent with prior studies that indicated that arousing information can be detected rapidly and automatically by young adults (Anderson, Christoff, Panitz, De Rosa, & Gabrieli, 2003; Ohman & Mineka, 2001) and that older adults, like younger adults, continue to display a threat detection advantage when searching for negative facial targets in arrays of positive and neutral distractors (Hahn et al., 2006; Mather & Knight, 2006). Given the

Clear statement of support or nonsupport of hypotheses, Discussion, 2.08

relative preservation of
& Bennett, 2004; Jenni
to take advantage of the

However, despite
age groups, the present
age-related enhancement
the five categories of ex
high arousal images (as
advantage for detecting
suggests a broader influ
for the hypothesis that a

It is interesting t
that the positivity effect

Use of an em dash to indicate an interruption in the continuity of a sentence, 4.06;
Description of an em dash, 4.13

processing, given that no effects of valence were observed in older adults' detection speed. In the present study, older adults were equally fast to detect positive and negative information, consistent with prior research that indicated that older adults often attend equally to positive and negative stimuli (Rosler et al., 2005). Although the pattern of results for the young adults has differed across studies—in the present study and in some past research, young adults have shown facilitated detection of positive information (e.g., Anderson, 2005; Calvo & Lang, 2004; Carretie et al., 2004; Juth et al., 2005; Nummenmaa et al., 2006), whereas in other studies, young adults have shown an advantage for negative information (e.g., Armony & Dolan, 2002; Hansen & Hansen, 1988; Mogg, Bradley, de Bono, & Painter, 1997; Pratto & John, 1991; Reimann & McNally, 1995; Williams, Mathews, & MacLeod, 1996)—what is important to note is that the older adults detected both positive and negative stimuli at equal rates. This equivalent detection of positive and negative information provides evidence that older adults display an advantage for the detection of emotional information that is not valence-specific.

Thus, although younger and older adults exhibited somewhat divergent patterns of emotional detection on a task reliant on early, relatively automatic stages of processing, we found no evidence of an age-related positivity effect. The lack of a positivity focus in the older adults is in keeping with the proposal (e.g., Mather & Knight, 2006) that the positivity effect does not arise through automatic attentional influences. Rather, when this effect is observed in older adults, it is likely due to age-related changes in emotion regulation goals that operate at later stages of processing (i.e., during consciously controlled processing), once information has been attended to and once the emotional nature of the stimulus has been discerned.

Although we cannot conclusively say that the current task relies strictly on automatic processes, there are two lines of evidence suggesting that the construct examined in the current

Figure 2.1. Sample One-Experiment Paper enntinued)

research examines relatively automatic processing. First, in their previous work, Ohman et al. (2001) compared RTs with both 2×2 and 3×3 arrays. No significant RT differences based on the number of images presented in the arrays were found. Second, in both Ohman et al.'s (2001) study and the present study, analyses were performed to examine the influence of target location on RT. Across both studies, and across both age groups in the current work, emotional targets were detected more quickly than were neutral targets, regardless of their location. Together, these findings suggest that task performance is dependent on relatively automatic detection processes rather than on controlled search processes.

Although further work is required to gain a more complete understanding of the age-related changes in the early processing of emotional information, our findings indicate that

young and older adults
study provides further
of emotional images and
(Fleischman et al., 2004)
although there is evidence
information (e.g., Carstensen
present results suggest
tasks require relatively

Use of parallel construction
with coordinating conjunctions
used in pairs, 3.23

Discussion section ending
with comments on
importance of findings, 2.08

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Construction of an accurate and
complete reference list, 6.22;
General description of references, 2.11

Figure 2.1. Sample One-Experiment Paper (continued)

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Charles, S. T., Mather, M., & Carstensen, L. L. (2003). Aging and emotional memory: The

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Davis, M., & Whalen

Grühn, D., Smith, J., & Baltes, P. B. (2005). No aging bias favoring memory for positive material: Evidence from a heterogeneity-homogeneity list paradigm using emotionally toned words. *Psychology and Aging*, *20*, 579–588. doi:10.1037/0882-7974.20.4.579

Hahn, S., Carlson, C., Singer, S., & Gronlund, S. D. (2006). Aging and visual search: Automatic

doi:

Kensinger, E. A., Brierley, B., Medford, N., Growdon, J. H., & Corkin, S. (2002). Effects of normal aging and Alzheimer's disease on emotional memory. *Emotion*, *2*, 118–134. doi:

10.1037/1528-3542.2.2.118

Digital object identifier as article identifier, 6.31; Example of reference to a periodical, 7.01

Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (1997). Motivated attention: Affect, activation, and action. In P. J. Lang, R. F. Simons, & M. Balaban (Eds.), *Attention and orienting: Sensory and motivational processes* (pp. 97–135). Mahwah, NJ: Erlbaum.

Example of reference to a book chapter, print version, no DOI, 7.02, Example 25

Leclerc, C. M., & Hess, T. M. (2005, August). *Age differences in processing of affectively primed information*. Poster session presented at the 113th Annual Convention of the American Psychological Association, Washington, DC.

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Figure 2.1. Sample One-Experiment Paper (continued)

Article with more than seven authors, 7.01, Example 2

EFFECTS OF AGE ON DETECTION OF EMOTION

20

Nummenmaa, L., Hyona, J., & Calvo, M. G. (2006). Eye movement assessment of selective attentional capture by emotional pictures. *Emotion*, 6, 257–268. doi:10.1037/1528-3542.6.2.257

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EFFECTS OF AGE ON DETECTION OF EMOTION

21

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EFFECTS OF AGE ON DETECTION OF EMOTION

22

Footnotes

Placement and format of footnotes, 2.12

¹Analyses of covariance were conducted with these covariates, with no resulting influences of these variables on the pattern or magnitude of the results.

²These data were also analyzed with a 2 × 5 ANOVA to examine the effect of target category when presented only in arrays containing neutral images, with the results remaining qualitatively the same. More broadly, the effects of emotion on target detection were not qualitatively impacted by the distractor category.

Figure 2.1. Sample One-Experiment Paper (continued)

EFFECTS OF AGE ON DETECTION OF EMOTION

23

Table 1

Participant Characteristics

Measure	Younger group		Older group		<i>F</i> (1, 46)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Years of education	13.92	1.28	16.33	2.43	18.62	<.001
Beck Anxiety Inventory	9.39	5.34	6.25	6.06	3.54	.066
BADS-DEX	20.79	7.58	13.38	8.29	10.46	.002
STAI-State	45.79	4.44	47.08	3.48	1.07	.306
STAI-Trait	45.64	4.50	45.58	3.15	0.02	.963
Digit Symbol Substitution	49.62	7.18	31.58	6.56	77.52	<.001
Generative naming	46.95	9.70	47.17	12.98	.004	.951
Vocabulary	33.00	3.52	35.25	3.70	4.33	.043
Digit Span-Backward	8.81	2.09	8.25	2.15	0.78	.383
Arithmetic	16.14	2.75	14.96	3.11	1.84	.182
Mental Control	32.32	3.82	23.75	5.13	40.60	<.001
Self-Ordered Pointing	1.73	2.53	9.25	9.40	13.18	.001
WCST perseverative errors	0.36	0.66	1.83	3.23	4.39	.042

Selecting effective presentation, 4.41; Logical and effective table layout, 5.08

EFFECTS

Table 2

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Note. The Beck Anxiety Inventory is from Beck et al. (1988); the Behavioral Assessment of the Dysexecutive Syndrome—Dysexecutive Questionnaire (BADS-DEX) is from Wilson et al.

(1996); the State-Trait Anxiety Inventory (STAI) measures are from Spielberger et al. (1970);

and the Digit Symbol Substitution, Digit Span-Backward, and Arithmetic Wechsler Adult

Intelligence Scale—III and Wechsler Memory Scale—III measures are from Wechsler (1997).

Generative naming scores represent the total number of words produced in 60 s each for letter

F, *A*, and *S*. The Vocabulary measure is from Shipley (1986); the Mental Control measure is

from Wechsler (1987); the Self-Ordered Pointing measure was adapted from Petrides and Milner

(1982); and the Wisconsin Card Sorting Task (WCST) measure is from Nelson (1976).

All values represent raw, nonstandardized scores.

Elements of table notes, 5.16

Figure 2.1. Sample One-Experiment Paper (continued)

Principles of figure use and construction, types of figures; standards, planning, and preparation of figures, 5.20–5.25



Figure 1. Mean difference values (ms) representing detection speed for each target category subtracted from the mean detection speed for neutral targets. No age differences were found in the arousal-mediated effects on detection speed. Standard errors are represented in the figure by the error bars attached to each column.

Figure legends and captions, 5.23

Figure 2.2. Sample Two-Experiment Paper (The numbers refer to numbered sections in the *Publication Manual*. This abridged manuscript illustrates the organizational structure characteristic of multiple-experiment papers. Of course, a complete multiple-experiment paper would include a title page, an abstract page, and so forth.)



Figure 2.2. Sample Two-Experiment Paper (continued)

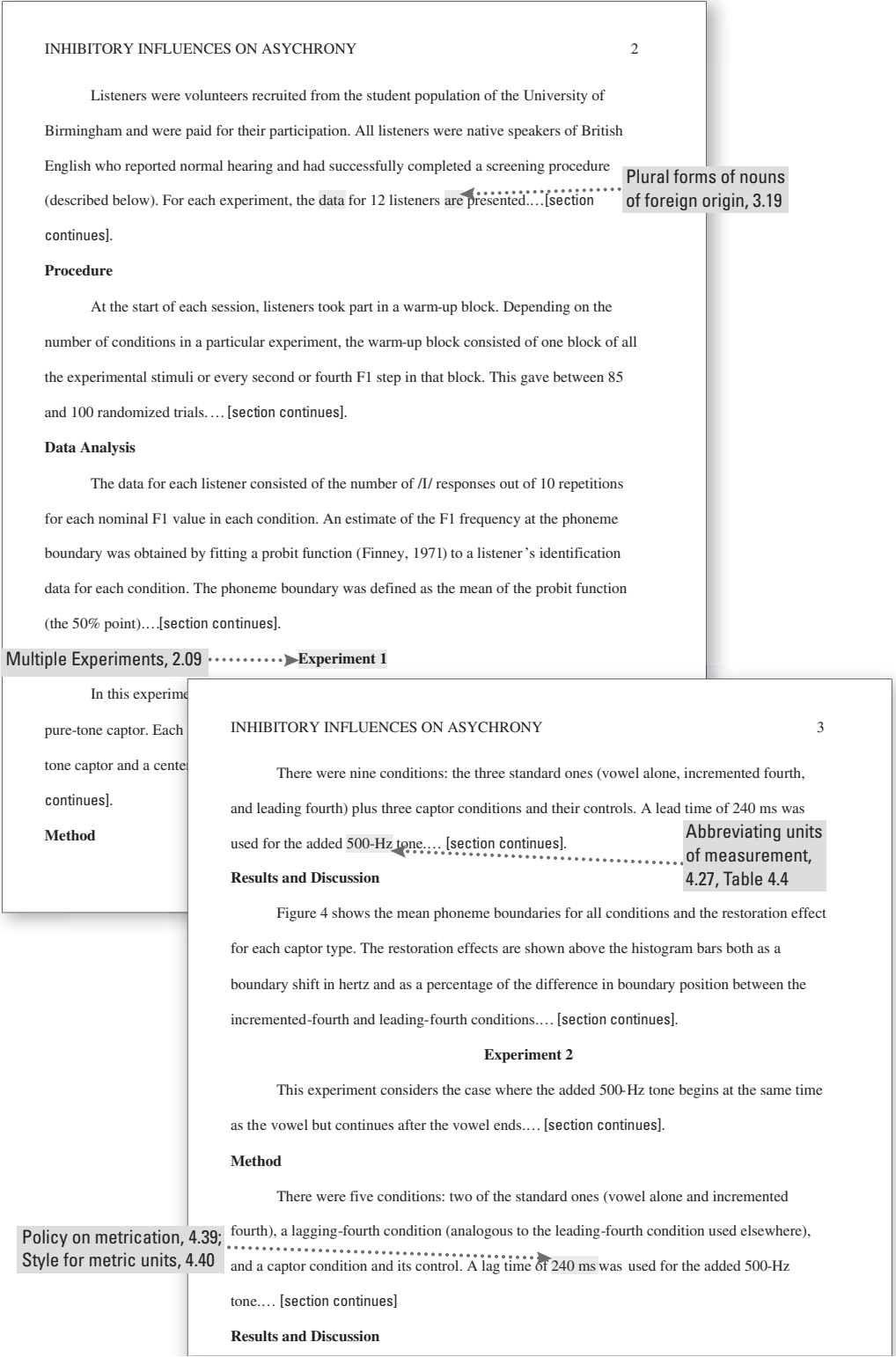


Figure 2.2. Sample Two-Experiment Paper (continued)

INHIBITORY INFLUENCES ON ASYNCHRONY

4

1984; Roberts & Holmes, 2006). This experiment used a gap between captor offset and vowel onset to measure the decay time of the captor effect ...[section continues].

Method

There were 17 conditions: the three standard ones (vowel alone, incremented fourth, and leading fourth), five captor conditions and their controls, and four additional conditions (described separately below). A lead time of 320 ms was used for the added 500-Hz tone. The captor conditions were created by adding a 1.1-kHz pure-tone captor, of various durations, to each member of the leading-fourth continuum....[section continues].

Results

Figure 6 shows the mean phoneme boundaries for all conditions. There was a highly significant effect of condition on the phoneme boundary values, $F(16, 176) = 39.10, p < .001$. Incrementing the level of the fourth harmonic lowered the phoneme boundary relative to the vowel-alone condition (by 58 Hz, $p < .001$), which indicates that the extra energy was integrated into the vowel percept...[section continues].

Discussion

The results of this experiment show that the effect of the captor disappears somewhere between 80 and 160 ms after captor offset. This indicates that the captor effect takes quite a long time to decay away relative to the time constants typically found for cells in the CN using physiological measures (e.g., Needham & Paolini, 2003)...[section continues].

Summary and Concluding Discussion

Darwin and Sutherland (1984) first demonstrated that accompanying the leading portion of additional energy in the F1 region of a vowel with a captor tone partly reversed the effect of the onset asynchrony on perceived vowel quality. This finding was attributed to the formation of

Use of statistical term rather than symbol in text, 4.45

5

a perceptual group between the leading portion and the captor tone, on the basis of their common onset time and harmonic relationship, leaving the remainder of the extra energy to integrate into the vowel percept... [section continues].

[Follow the form of the one-experiment sample paper to type references, the author note, footnotes, tables, and figure captions.]

1

A Meta-Analytic Review

• Italicize key terms, 4.21

Description of meta-analysis, 1.02;
Guidelines for reporting meta-analysis,
2.10; see also Appendix

Second, ... [section continues].

Selection Criteria

We used the following criteria to select studies for inclusion in the meta-analysis.

Identification of elements in a series within a sentence, 3.04

For descriptive purposes, we recorded (a) the year and (b) source (i.e., journal article, unpublished dissertations and theses, or other unpublished document) of each report as well as (c) the sample composition (i.e., high-school students, university students, or other) and (d) the country in which the study was conducted.

We also coded each experiment in terms of[section continues].

Studies were coded independently by the first author and another graduate student.

Paper adapted from "The Sleeper Effect in Persuasion: A Meta-Analytic Review," by G. Kumkale and D. Albarracín, 2004, *Psychological Bulletin*, 130, pp. 143–172. Copyright 2004 by the American Psychological Association.

was satisfactory (Orwin, 1994). We resolved disagreements by discussion and consultation with colleagues. Characteristics of the individual studies included in this review are presented in Table 1. The studies often contained several independent datasets such as different messages and different experiments. The characteristics that distinguish different datasets within a report appear on the second column of the table.

Dependent Measures and Computation of Effect Sizes

We calculated effect sizes for (a) persuasion and (b) recall–recognition of the message content. Calculations were based on the data described in the primary reports as well as available responses of the authors to requests of further information...[section continues].

Analyses of Effect Sizes

There are two major models used in meta-analysis: *fixed-effects* and *random-effects*...[section continues].

To benefit from the strengths of both models, we chose to aggregate the effect sizes and to conduct analyses using both approaches...[section continues].

Results

The data analysis included a description of the experiments we summarized, an estimation of overall effects, moderator analyses, and tests of mediation.

Sample of Studies and Datasets

Descriptive characteristics of the datasets included in the present meta-analysis appear in Table 2...[section continues].

Overview of the Average Effect Sizes

A thorough understanding of the sleeper effect requires examining (a) the between-condition differences at each time point as well as (b) the within-condition changes that take

Figure 2.3. Sample Meta-Analysis (continued)

Moderator Analyses

Although overall effects have descriptive value, the variability in the change observed in discounting-cue conditions makes it unlikely that the same effect was present under all conditions. Therefore, we tested the hypotheses that the sleeper effect would be more likely (e.g., more consistent with the absolute pattern in Panel B1 of Figure 1) when...[section continues].

Format for references included in a meta-analysis with less than 50 references, 6.26

References

References marked with an asterisk indicate studies included in the meta-analysis.

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