

# Translating the evidence of psychological meta-analyses into plain language - Study 6<sup>1</sup>

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## Background

Scientific articles are often hard to understand for non-scientists. This is partly due to the fact that such articles use technical terms and statistical concepts without explaining them, since they are considered to be common knowledge for their scientific audience. Additionally, researchers may tend to pay more attention to the scientific relevance of their findings and less attention to their practical relevance to the broader public when discussing them in scientific publications. To address these problems, plain language summaries (PLS)—easily comprehensible research summaries that complement scientific abstracts—were introduced. However, empirically validated guidelines on how to write such PLS focus mostly on biomedical research, for example, the Cochrane guidelines (Jellicic Kadic et al., 2016; Santesso et al., 2008). With the aim to develop empirically validated guidelines for writing PLS in psychology, the Leibniz Institute for Psychology (ZPID) started the project “PLan Psy”. This project aims to find a standardized way to translate findings of psychological

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<sup>1</sup> *Note:* This study protocol is strongly based on study protocols of the first, second and third empirical studies of project PLan Psy and, where appropriate, text passages were adopted from these protocols without modification.

Kerwer, M., Stoll, M., & Chasiotis, A. (2021). Translating the evidence of psychological meta-analyses into plain language. PsychArchives.  
<https://doi.org/10.23668/PSYCHARCHIVES.4471>

Kerwer, M., Stoll, M., Jonas, M., Benz, G., & Chasiotis, A. (2021). Translating the evidence of psychological meta-analyses into plain language - Study 2. PsychArchives.  
<https://doi.org/10.23668/PSYCHARCHIVES.4791>

Kerwer, M., Jonas, M., Stoll, M., Benz, G., & Chasiotis, A. (2021). Translating the evidence of psychological meta-analyses into plain language - Study 3. PsychArchives.  
<https://doi.org/10.23668/PSYCHARCHIVES.5181>

meta-analyses into PLS. The following protocol outlines the design of the sixth empirical study of PLan Psy, which will investigate psychology-specific aspects of how to optimally communicate meta-analytical evidence to laypersons via an experimental design.

## Research Question

We will conduct an experimental study which systematically varies (1) whether a *causality statement* is presented, (2) whether a *disclaimer* is presented, (3) whether *CAMA-specific PLSs* are presented, and (4) whether PLSs were written based on the new or old *guideline version* for writing PLS on psychological meta-analyses developed in project PLan Psy (see *Independent Variables*) with respect to relevant outcomes (i.e., knowledge on the relationship between PLS and meta-analyses, on the extent of evaluation, on the differentiation between PLS and meta-analysis authors, on funding, on conflict of interest, on causality, and on CAMA, user experience and epistemic trustworthiness, see *Dependent Variables*).

## Hypotheses

First, we will compare readers' knowledge on the relationship between PLS and meta-analysis after reading a PLS based on the new guideline containing a disclaimer with PLSs based on the old and new guideline without a disclaimer. We hypothesize the following pattern of effects:

**H1a:** If a PLS based on the new guideline contains a disclaimer, readers will score significantly higher on a knowledge item concerning the relationship between PLS and meta-analysis compared to a PLS based on the old guideline.

**H2b:** If a PLS based on the new guideline contains a disclaimer, readers will score significantly higher on a knowledge item concerning the relationship between PLS and meta-analysis compared to a PLS based on the new guideline without a disclaimer.

Second, we will compare readers' knowledge on the PLSs extent of evaluation after reading a PLS based on the new guideline containing a disclaimer with a PLS based on the old and new guideline without a disclaimer. Specifically, we make the following assumptions:

**H2a:** If a PLS based on the new guideline contains a disclaimer, readers will score significantly higher on a knowledge item concerning the extent of evaluation compared to a PLS based on the old guideline.

**H2b:** If a PLS based on the new guideline contains a disclaimer, readers will score significantly higher on a knowledge item concerning the extent of evaluation compared to a PLS based on the new guideline without a disclaimer.

Third, we will compare readers' ability to differentiate between PLS and meta-analysis authors after reading a PLS based on the new guideline containing a disclaimer compared to a PLS based on the old and new guideline without a disclaimer. Here, we hypothesize:

**H3a:** If a PLS based on the new guideline contains a disclaimer, readers will score significantly higher on a knowledge item concerning the differentiation between PLS and meta-analysis authors compared to a PLS based on the old guideline.

**H3b:** If a PLS based on the new guideline contains a disclaimer, readers will score significantly higher on a knowledge item concerning the differentiation between PLS and meta-analysis authors compared to a PLS based on the new guideline.

Fourth, we will compare readers' knowledge on causality after reading a PLS based on the new guideline containing additional information on causality to PLS based on the old and new guideline without additional information. We postulate the following differences:

**H4a:** If a PLS based on the new guideline contains additional information on causality, readers will score significantly higher on a knowledge item concerning the causality of effects compared to a PLS based on the old guideline.

**H4b:** If a PLS based on the new guideline contains additional information on causality, readers will score significantly higher on a knowledge item concerning the causality of effects compared to a PLS based on the new guideline.

Fifth, we will compare readers' knowledge on CAMA (Community Augmented Meta-Analyses) between a PLS based on the new guideline containing additional information on CAMA (i.e., a PLS suggesting that the presented evidence stems from the PsychOpen CAMA platform, see Burgard et al., 2021) and regular PLS based on the old and new guideline without additional information, making the following assumptions:

**H5a:** If a PLS based on the new guideline contains additional information on CAMA, readers will score significantly higher on a knowledge item concerning CAMA compared to a regular PLS based on the old guideline.

**H5b:** If a PLS based on the new guideline contains additional information on CAMA, readers will score significantly higher on a knowledge item concerning CAMA compared to a regular PLS based on the new guideline.

Finally, we hypothesize that reading PLS based on the new guideline will not lead to a significant inferiority test and therefore no reduction in user experience compared to reading PLS based on the old guideline:

**H6:** Reading a PLS based on the new guideline will yield a significant non-inferiority test on user experience compared to reading a PLS based on the old guideline.

More information on the subsets of data on which these hypotheses will be tested is provided in the section *Analysis Plan*.

## Exploratory Research Questions

**RQ1:** Will scores on a knowledge item concerning funding differ if readers receive a PLS based on the new guideline compared to a PLS based on the old guideline?

**RQ2:** Will scores on a knowledge item concerning conflict of interest differ if readers receive a PLS based on the new guideline compared to a PLS based on the old guideline?

**RQ3a:** Will differences in the METI ratings of PLS authors (Expertise, Integrity, Benevolence) emerge if readers receive a PLS based on the new guideline compared to a PLS based on the old guideline?

**RQ3b:** Will differences in the METI ratings of meta-analysis researchers (Expertise, Integrity, Benevolence) emerge if readers receive a PLS based on the new guideline compared to a PLS based on the old guideline?

## Method

### Sample

A general population sample ( $N = 1,956$ , see *Sample Size Calculation*) will be recruited in this study via the panel provider *Bilendi & respondi*.

The following specific quotas apply for age, education level, and sex: The same proportion of participants will be recruited for age (18 - 44, 45 or older), sex (men, women), and education level ("Hauptschulabschluss", "Mittlere Reife", "Hochschulreife"). Thus, there will be 12 quota conditions and the sample size for each quota condition will be  $1,956/12 = 163$ . We experienced profound difficulties in filling the quota condition of young men with "Hauptschulreife" in previous studies. If we should experience difficulties in reaching the intended subsample size for this group after utilizing all available means of recruiting, we will reopen the other quota conditions until the overall target sample size is met to ensure sufficient statistical power.

Additionally, the following inclusion criteria apply in this study:

- Participants possess German language skills at native speaker level.
- Participants have successfully graduated from school.
- Participants are not currently studying psychology or holding a degree in psychology.
- Participants are interested in psychological research.
  - Item: "*Ich interessiere mich für psychologische Forschung.*"
  - Criterion: Agreement of "4" or higher on a 1 to 8 rating scale (based on the lowest medium value observed for this item across all quota conditions of the first study of project PLaN Psy)

### Design

Table 1 provides an overview of all study design conditions. This study employs a between-subjects design with four factors (i.e., independent variables) that are varied between the presented PLS conditions: (1) causality statement, (2) disclaimer, (3) CAMA-specific PLS, and (4) guideline version.

Each participant is randomly assigned to one condition and reads two PLSs of the same type, both structured according to the independent variable specification of the assigned condition (e.g., two PLSs that include a causality statement, no disclaimer, no CAMA-specific elements and were written based on the new guideline, see Table 1). For each participant, the same independent variable specification is applied for both presented PLSs. The PLSs used in this experiment were written by the authors of this study, in German language. The results and effects described in these PLSs are based on results and effects of actual meta-analyses on the topic of resilience (based on Färber & Rosendahl, 2018) and on the topic of the efficacy of different psychotherapy interventions for depression treatment (based on Barth et al., 2013). All participants read one PLS per topic during the study. Topic

order is randomized (i.e., whether participants read a PLS on psychotherapy or resilience first). All PLSs used in this study will be made available in a separate supplementary file.

## Procedure

The study will be conducted online using the survey software Unipark. At the beginning of the study, participants complete an informed consent form. Thereafter, inclusion criteria are checked and, if they are fulfilled, participants are randomly assigned to one of the 6 experimental conditions for presenting PLSs (see Table 1). Two thematically different PLSs will be presented to each participant (one on resilience and one on psychotherapy research) in a randomized order. The design and type of included information of these PLSs depend on the assigned experimental condition, which is the same for both PLSs. Participants read each of the two texts for at least 3 minutes and answer the outcome measures on the same webpage (see *Dependent Variables*). Specifically, knowledge items on the relationship between PLS and meta-analysis and on the extent of evaluation will be administered once, after reading through the first PLS. Knowledge items concerning the differentiation between PLS and meta-analysis authors, funding, conflict of interest, and causality will be presented twice, after reading through each individual PLS. Three knowledge items on CAMA PLS will be presented once, after the Färber and Rosendahl PLS in conditions 4, 5, and 6. After completing both PLSs, the METI (Hendriks et al., 2015, see below) will be probed, with half of the participants randomly rating the meta-analysis researchers and the other half rating the PLS authors. Finally, data on potential covariates and the awareness check will be collected. All study procedures were approved by the ethics committee of Trier University.

**Table 1.** Experimental Conditions

Condition	Guideline version	Causality Statement	Disclaimer	CAMA-specific PLS	Related Hypotheses
1	New	no statement included	no statement included	no	H1b, H2b, H3b, H4b
2	New	no statement included	statement included	no	H1a, H1b, H2a, H2b, H3a, H3b, H4b
3	New	statement included	no statement included	no	H1b, H2b, H3b, H4a, H4b
4	New	statement included	statement included	no	H1a, H1b, H2a, H2b, H3a, H3b, H4a, H4b, H5b
5	New	statement included	statement included	for PLS on resilience, but not for PLS on psychotherapy	H5a, H5b
6	Old	no statement included	no statement included	no	H1a, H2a, H3a, H4a, H5a

## Variables

### *Independent Variables*

Study materials for all experimental conditions will be made available in a separate supplementary file via PsychArchives.

### Causality Statement

The following causality statement conditions are investigated:

- No statement included. A PLS provides no additional information on the causality of effects from the original meta-analysis.
- Statement included. A PLS contains an additional statement (*Was sagen die Ergebnisse aus?*) detailing the causal direction of the effects that independent variables have on outcomes.

### Disclaimer

The following disclaimer statement conditions are compared:

- No statement included. A PLS contains no additional disclaimer on the extent of evaluation of the original meta-analysis by the PLS authors.
- Statement included: A PLS contains a disclaimer on the extent of evaluation (*Hinweise der KLARtext-Autor:Innen*), outlining that PLS authors only translated the original meta-analysis, did not conduct the meta-analysis themselves, did not rate the meta-analysis in terms of its correctness or the timeliness of its results, and did not verify the validity of the knowledge claims put forward in the meta-analysis.

### CAMA-Specific PLS

Two CAMA conditions are examined:

- No CAMA-specific PLS. The PLS based on Färber and Rosendahl contains no additional information on CAMA (i.e., does not suggest that the reported evidence stems from the PsychOpen CAMA platform, but from an ‘ordinary’ scientific publication).
- CAMA-specific PLS: The PLS based on Färber and Rosendahl refers to its underlying meta-analysis as CAMA (i.e., suggests that the reported evidence stems from the PsychOpen CAMA platform) and mentions concepts such as “living evidence” or the possibility to continuously update analysis results.

### Guideline Version

PLSs used in the present study fall into one of two conditions:

- Old guideline version. PLS were written based on the initially developed PLS guideline by Chasiotis et al. (2022a).
- New guideline version. PLS were written based on an updated version of the initial guideline created after evaluations from expert focus groups (Chasiotis et al., 2022b)

## Dependent Variables

### Knowledge Items

We created knowledge items covering the relationship between the PLS and the corresponding meta-analysis, extent of evaluation, differentiation between PLS and meta-analysis authors, funding, conflict of interest, causality, and living evidence in PsychOpen CAMA. See Appendix A for further details on answer format and item position.

### User Experience

The following user experience items will be subject to confirmatory analyses.

Accessibility: *“Die Sprache in dieser Zusammenfassung ist einfach zu lesen.”* This item will be measured on a rating scale ranging from 1 (“stimme gar nicht zu”) to 8 (“stimme voll und ganz zu”).

Understanding: *“Ich habe die Informationen aus dieser Zusammenfassung verstanden.”* This item will be measured on rating scales ranging from 1 (“stimme gar nicht zu”) to 8 (“stimme voll und ganz zu”).

Empowerment: *“Nach dem Lesen dieser Zusammenfassung kann ich bei diesem Thema mitreden.”* This item will be measured on rating scales ranging from 1 (“stimme gar nicht zu”) to 8 (“stimme voll und ganz zu”).

Unpublished confirmatory factor analyses of prior data from studies 1, 2, and 3 of project PPlan Psy indicated that a model which combined the three items accessibility, understanding, and empowerment into one latent factor that we title "user experience" fitted our data well. For that reason, we will merge these three dimensions into a single user experience index in this study.

### Epistemic Trustworthiness (METI): Benevolence and Integrity

As before in study 3, we will utilize the Muenster Epistemic Trustworthiness Inventory (METI, Hendriks et al., 2015) to assess participants' trustworthiness judgements. The outcomes will be subjected to exploratory analyses (RQ4a, RQ4b). As stated above, half of our participants will be randomly asked to rate the meta-analysis researchers, and half will be asked to rate the PLS authors.

In the METI, participants rate the epistemic trustworthiness of the scientists whose work is presented according to 14 adjective pairs on a semantic differential from 1-7 (e.g. 1 = “inkompetent”, 7 = “kompetent”) corresponding to the three dimensions Expertise (six items), Integrity (four items) and Benevolence (four items).

### Credibility of the presented evidence

The perceived credibility of the presented evidence will be assessed as agreement with the following statement on an 8-point Likert scale: *“Die Ergebnisse der vorgestellten Übersichtsarbeit sind vertrauenswürdig.”*

## Personal Relevance

We will measure perceived personal relevance of the PLS topic after each PLS by the following item: *“Diese Übersichtsarbeit zum Thema [Resilienz/Psychotherapieverfahren zur Behandlung von Depressionen] finde ich wichtig.”* Agreement to this statement will be assessed on 1 to 8 rating scales.

## Exploratory outcomes

Exploratory outcome variables will be dropout rate and epistemic emotions (as measured by the EES, Pekrun et al., 2017). The following epistemic emotions will be assessed: curiosity, boredom, confusion, and frustration.

## Other Variables

**Demographics.** Information on age, sex, and education will be collected (for quotas: “Hauptschulabschluss”, “Mittlere Reife”, “Hochschulreife”). Moreover, information on whether participants are holding a university degree and (if applicable) their study subject will be collected as a potential covariate.

**Awareness Check:** To ensure that participants read the presented texts and questions in a focused and thorough manner, we will use an awareness check based on Gamez-Djokic & Molden (2016). Participants will receive an introductory text to a short scenario (a famine in a village) and the instruction to leave the following question unanswered to demonstrate awareness. They are then presented with the question (*“Wäre es entsprechend Ihrer eigenen Meinung angemessen, das Floss zu nehmen und die anderen zurückzulassen?”*) and a Likert-scale ranging from 1-8 (1 = “Auf keinen Fall”, 8 = “Auf jeden Fall”). The awareness check is passed if participants do not select any answer option on the scale and simply click on continue.

**Covariates.** As a further potential covariate, we will assess if participants are working in a field in which they get in contact with science (*“Ich habe in meinem Beruf viel Kontakt zu Wissenschaftsthemen oder wissenschaftlichen Texten.”*). Agreement to this statement will be assessed on a rating scale that ranges from 1 to 8. Finally, we will also ask participants whether they took part in one of our prior studies on PLS in psychology (which is no exclusion criterion).

## Statistical Analysis

### Sample Size Calculation and Power Analysis

A power analysis was conducted using the software GPower (Faul et al., 2009). As a statistical test, we selected Mann-Whitney *U* on between-level factors (since, for example, H5 pertains to main effects on ordinal variables in a between design). The following parameters were specified: Small ( $d = .20$ ) effect,  $\alpha = .05$ , power of at least .80 with two groups, and an allocation ratio of 1. This power analysis indicated that a sample size of 325 participants was required to achieve a power of at least .80 to test the corresponding hypothesis. Since H5 will be tested based on the data of two design conditions (the smallest number of conditions for all hypotheses that are tested on non-repeated measures, see Table 1 for subsamples on which hypotheses are tested—for testing hypotheses with



repeated measures, the power will be higher), we decided to recruit at least 325 participants for each condition. Thus, a total sample size of 1,956 participants will be recruited.

### *Analysis Plan*

For dependent variables that are only measured once, data will be analyzed using Wilcoxon/ordinal logistic regressions. Repeated-measures data will be analyzed via mixed models. One-sided hypothesis tests will be conducted when appropriate, and the significance of effects will be tested at  $p < .05$ . To test H6 non-inferiority tests, as implemented in the R package equivUMP (Mildenberger, 2019), will be used. Equivalence limits will be set to .2.

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# Appendix A Knowledge Test Items

- **Relationship between PLS and meta-analysis**
  - Format: Forced choice (*richtig, falsch, weiß nicht*) with two correct (green) and six incorrect (red) answers.
  - Item position: Immediately (i.e., first knowledge item) after the first presented PLS
  - *Wie hängen der KLARtext und die Übersichtsarbeit zusammen?*
    - Der KLARtext fasst die Übersichtsarbeit zusammen.
    - Die Übersichtsarbeit fasst den KLARtext zusammen.
    - Die Autor:innen des KLARtextes waren auch die Autor:innen der Übersichtsarbeit.
    - Die Herausgeber:innen des KLARtextes sind auch die Herausgeber:innen der Übersichtsarbeit.
    - Der KLARtext gibt die Durchführung und die Ergebnisse der Übersichtsarbeit allgemeinverständlich wieder.
    - Die Übersichtsarbeit gibt die Durchführung und die Ergebnisse des KLARtextes allgemeinverständlich wieder.
    - Der KLARtext gibt die Durchführung und die Ergebnisse der Übersichtsarbeit für Wissenschaftler:innen wieder.
    - Die Übersichtsarbeit gibt die Durchführung und die Ergebnisse des KLARtextes für Wissenschaftler:innen wieder.
- **Knowledge on the extent of evaluation**
  - Format: Forced choice (*richtig, falsch, weiß nicht*) with two correct (green) and four incorrect (red) answers.
  - Item position: Once after the first presented PLS
  - *Was trifft auf KLARtexte zu?*
    - KLARtexte werden nur für besonders hochwertige Übersichtsarbeiten geschrieben.
    - KLARtexte prüfen alle Aussagen der Übersichtsarbeit auf ihre Korrektheit.
    - Die Inhalte der Übersichtsarbeit wurden durch das Leibniz-Institut für Psychologie geprüft.
    - Aussagen in KLARtexten werden durch Studien des Leibniz-Instituts für Psychologie abgesichert.
    - KLARtexte geben die Aussagen der Autor:innen einer Übersichtsarbeit wieder.
    - KLARtexte geben den Stand der Forschung zu einem bestimmten Zeitpunkt wieder.
- **Differentiation between PLS and meta-analysis authors**
  - Format: Forced choice (*richtig, falsch, weiß nicht*) with three correct (green) and three incorrect (red) answers
  - Item position: After each presented PLS (repeated measure)
  - *Wer ist im KLARtext mit "die Forschenden" gemeint?*
    - Barth et al.
      - Mitarbeiter:innen des Leibniz-Instituts für Psychologie
      - die Autor:innen, deren Einzelstudien in der Übersichtsarbeit berücksichtigt wurden

- die Autor:innen der Übersichtsarbeit
  - die Autor:innen des KLARtextes
  - Jürgen Barth und sieben weitere Forschende
  - Mitarbeiter:innen von der Universität Bern und zwei weiteren Instituten
- *Färber and Rosendahl*
  - Mitarbeiter:innen des Leibniz-Instituts für Psychologie
  - Francesca Färber und Jenny Rosendahl
  - Mitarbeiter:innen der Universität Jena
  - die Autor:innen, deren Einzelstudien in der Übersichtsarbeit berücksichtigt wurden
  - die Autor:innen der Übersichtsarbeit
  - die Autor:innen des KLARtextes
- **Knowledge on funding**
  - Format: Forced choice (*richtig, falsch, weiß nicht*) with one correct (green) and five incorrect (red) answers
  - Item position: After each presented PLS (repeated measure)
  - *Welche Aussagen zur Finanzierung werden im KLARtext gemacht ?*
    - *Barth et al.*
      - Die Übersichtsarbeit wurde durch das Leibniz-Institut für Psychologie finanziert.
      - Die berücksichtigten Einzelstudien wurden durch das Leibniz-Institut für Psychologie finanziert.
      - Es konnten keine Angaben dazu gefunden werden, wie die Erstellung der Übersichtsarbeit finanziert wurde.
      - Die berücksichtigten Einzelstudien wurden durch die Universität Bern und zwei weitere Institute finanziert.
      - Die Erstellung des KLARtextes wurde durch die Universität Bern und zwei weitere Institute finanziert.
      - Die Erstellung der Übersichtsarbeit wurde durch den Schweizerischen Nationalfonds finanziert.
    - *Färber and Rosendahl*
      - Die Übersichtsarbeit wurde durch das Leibniz-Institut für Psychologie finanziert.
      - Die berücksichtigten Einzelstudien wurden durch das Leibniz-Institut für Psychologie finanziert.
      - Die berücksichtigten Einzelstudien wurden durch die Universität Jena finanziert.
      - Es konnten keine Angaben dazu gefunden werden, wie die Erstellung der Übersichtsarbeit finanziert wurde.
      - Die Erstellung des KLARtextes wurde durch die Universität Jena finanziert.
      - Die Erstellung der Übersichtsarbeit wurde durch die Deutsche Forschungsgemeinschaft finanziert.
- **Knowledge on conflict of interest**
  - Format: Forced choice (*richtig, falsch, weiß nicht*) with one correct (green) and six incorrect (red) answers
  - Item position: After each presented PLS (repeated measure)
  - *Für wen liegt laut KLARtext ein Interessenkonflikt vor?*
    - *Barth et al.*
      - Für Mitarbeiter:innen des Leibniz-Instituts für Psychologie
      - Für die Universität
      - Für das Leibniz-Institut für Psychologie

- Für die Autor:innen, deren Einzelstudien in der Übersichtsarbeit berücksichtigt wurden
  - Für die Autor:innen des KLARtextes
  - Für die Autor:innen der Übersichtsarbeit
  - Für keine der Autor:innen der Übersichtsarbeit
- *Färber and Rosendahl*
  - Für Mitarbeiter:innen des Leibniz-Instituts für Psychologie
  - Für die Universität
  - Für das Leibniz-Institut für Psychologie
  - Für die Autor:innen, deren Einzelstudien in der Übersichtsarbeit berücksichtigt wurden
  - Für die Autor:innen des KLARtextes
  - Für die Autor:innen der Übersichtsarbeit
  - Für keine der Autor:innen der Übersichtsarbeit
- **Knowledge on causality**
  - Format: Forced choice (*richtig, falsch, weiß nicht*) with one correct (green) and five incorrect (red) answers.
  - Item position: After each presented PLS (repeated measure).
  - *Welche Aussage zu der Übersichtsarbeit stimmt?*
    - *Barth et al.*
      - Man kann sicher sagen, dass die Art der Psychotherapie die Ursache für den Behandlungserfolg ist.
      - Man kann nicht sicher sagen, dass die Art der Psychotherapie die Ursache für den Behandlungserfolg ist.
      - Man kann sicher sagen, dass die spätere Behandlung die Ursache für die Auswahl der Art der Psychotherapie war.
      - Man kann nicht sicher sagen, dass die spätere Behandlung die Ursache für die Auswahl der Art der Psychotherapie war.
      - Man kann sicher sagen, dass die Erfahrung der therapierenden Person die Ursache für den Behandlungserfolg ist.
      - Man kann nicht sicher sagen, dass die Erfahrung der therapierenden Person die Ursache für den Behandlungserfolg ist.
    - *Färber and Rosendahl*: Bei Menschen mit körperlichen Erkrankungen...
      - hängen die Anpassung an schwierige Umstände und das seelische Wohlbefinden zusammen.
      - hängen die Anpassung an schwierige Umstände und Achtsamkeit zusammen.
      - ist ein höheres seelisches Wohlbefinden die Ursache einer besseren Anpassung an schwierige Umstände.
      - ist eine bessere Anpassung an schwierige Umstände die Ursache eines höheren seelischen Wohlbefindens.
      - ist eine höhere Achtsamkeit die Ursache einer besseren Anpassung an schwierige Umstände.
      - ist eine bessere Anpassung an schwierige Umstände die Ursache einer höheren Achtsamkeit.
- **Knowledge on CAMA**
  - Item 1
    - Format: Forced choice (*richtig, falsch, weiß nicht*) with two correct (green) and six incorrect (red) answers.
    - Format: After the Färber and Rosendahl-PLS in conditions 4, 5 & 6.

■ Was stimmt?

- „Lebendige Evidenz“ bedeutet, dass fortlaufend neue Ergebnisse in eine Metaanalyse aufgenommen werden können.
- „Lebendige Evidenz“ bedeutet, dass die Darstellung der Ergebnisse spannend formuliert ist.
- „Lebendige Evidenz“ bedeutet, dass ein Zwischenbericht zu allerersten Ergebnissen einer noch in Arbeit befindlichen Metaanalysen gegeben wird.
- „Lebendige Evidenz“ bedeutet, dass es sich um Metaanalysen handelt, die besonders alltagsnahe Themen behandeln.
- In PsychOpen CAMA kann man die Ergebnisse einer Metaanalyse auslesen.
- In PsychOpen CAMA kann man Metaanalysen in einem Peer Review-Verfahren begutachten lassen.
- In PsychOpen CAMA werden ausschließlich Metaanalysen aufgenommen, die im weitesten Sinne etwas mit dem Thema Schlafqualität zu tun haben.
- In PsychOpen CAMA werden ausschließlich narrative Übersichtsarbeiten aufgenommen.

○ Item 2

- Format: Forced choice (*richtig, falsch, weiß nicht*) with one correct (green) and three incorrect (red) answers.
- Item position: After the Färber and Rosendahl-PLS in conditions 4, 5 & 6.
- Welche Aussage zu dem KLARtext, den Sie gerade gelesen haben, stimmt?
  - Die in der Übersichtsarbeit zu einer Metaanalyse zusammengefassten Studien stammen aus einer Recherche des Leibniz-Instituts für Psychologie.
  - PsychOpen CAMA beinhaltet die Ergebnisse der Übersichtsarbeit von Francesca Färber und Jenny Rosendahl und erweitert diese Ergebnisse.
  - Die Übersichtsarbeit von Francesca Färber und Jenny Rosendahl beinhaltet die Ergebnisse aus PsychOpen CAMA und erweiterte diese Ergebnisse.
  - Der KLARtext bezieht sich vorrangig auf Ergebnisse der Übersichtsarbeit von Francesca Färber und Jenny Rosendahl unabhängig von den Ergebnissen in PsychOpen CAMA.

○ Item 3

- Format: Single choice (*richtig, falsch, weiß nicht*) with one correct and one incorrect answer.
- Item position: After the Färber and Rosendahl-PLS in conditions 4, 5 & 6, always as the last item
  - Der KLARtext, den ich gerade gelesen habe, beruht auf lebendiger Evidenz.
    - richtig (only correct for Färber and Rosendahl in condition 5)
    - falsch (only incorrect for Färber and Rosendahl in condition 5)
    - weiß nicht