

Mode of Social Contact, Verbal Communication of Emotion, and Well-Being in Late Life

Corresponding Author: Dr Shiyang Zhang

This file contains all editorial decision letters in order by version, followed by all author rebuttals in order by version.

Version 0:

Decision Letter:

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Dear Dr Zhang,

Thank you for your patience during the peer-review process. Your manuscript titled "Mode of Social Contact, Verbal Communication of Emotion, and Well-Being in Late Life" has now been seen by 3 reviewers, whose comments are appended below. You will see that they find your work of some potential interest. However, they have raised quite substantial concerns that must be addressed. In light of these comments, we cannot accept the manuscript for publication, but would be interested in considering a revised version that fully addresses these serious concerns.

We hope you will find the Reviewers' comments useful as you decide how to proceed. Should additional work allow you to address these criticisms, we would be happy to look at a substantially revised manuscript. If you choose to take up this option, please highlight all changes in the manuscript text file, and provide a detailed point-by-point reply to the reviewers.

Please bear in mind that we will be reluctant to approach the reviewers again in the absence of substantial revisions.

Editorially, we consider it important that the revised manuscript addresses the reviewers' concerns regarding the mis-citation of literature (Reviewer 2), the use of causal language (Reviewer 2 and 3), and the interpretations that are drawn from the LIWC scores (Reviewer 1 and 3). Additional control analyses should be performed to assess the influence of words spoken as well as the influence of your selected control variables. Additional analyses that examine lagged relationships and additional data sources are encouraged but not a precondition for rereview. Please report any discrepancies from the preregistration and include information on ethics approval for the present analysis, including the name of the ethics-granting board, in your cover letter.

Please ensure you follow our statistical guidelines when reporting statistics (<https://www.nature.com/commpsychol/submit/submission-guidelines#statistical-guidelines>). Please note in particular our requirements for the reporting and interpretation of null-results. Non-significant findings derived from null-hypotheses significance tests should be reported in full, but may not be interpreted. Where you interpret null results, this interpretation must be based on Bayes Factors or equivalence tests.

I am attaching a checklist that details critical reporting requirements for the revised manuscript. Please attend to each item and ensure your manuscript is fully compliant. We are requesting that your manuscript aligns with these requirements as this facilitates the evaluation of your manuscript, reducing delays in re-review and potential future acceptance. If your revised manuscript is not aligned with these requests on major issues, such as those concerning statistics, it may be returned to you for further revisions without re-review. Additional information can be found in our style and formatting guide <[a href="https://www.nature.com/documents/commpsychol-style-formatting-guide-accept.pdf">Communications Psychology formatting guide](https://www.nature.com/documents/commpsychol-style-formatting-guide-accept.pdf).

If the revision process takes significantly longer than five months, we will be happy to reconsider your paper at a later date, provided it still presents a significant contribution to the literature at that stage.

We would appreciate it if you could keep us informed about an estimated timescale for resubmission, to facilitate our

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We are committed to providing a fair and constructive peer-review process. Please do not hesitate to contact us if you wish to discuss the revision in more detail.

Please use the following link to submit your

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Thank you for the opportunity to review your work.

Best regards,

Jennifer Bellinger

Jennifer Bellinger, PhD
Senior Editor
Communications Psychology

REVIEWER EXPERTISE:

Reviewer #1 socioemotional aging, intensive longitudinal designs
Reviewer #2 socioemotional aging, intensive longitudinal designs
Reviewer #3 text analysis

REVIEWER REPORTS:

Reviewer #1 (Remarks to the Author):

The authors used experience sampling and Electronically Activated Recorder (EAR) data from 266 older adults to examine associations between valence of spoken words, mode of communication (telephone vs. in-person), and mood. They found that more communication between two measurement waves was associated with more positive words for both communication modes, while the same association with negative words was only significant for in-person communication. The manuscript is well written and on an interesting topic. Despite these positive aspects, however, I have a number of concerns, which are listed below:

- (1) My main concern is related to the Linguistic Inquiry and Word Count (LIWC) approach. As I understand it, this method measures the valence of spoken language, but I am doubtful whether the scores obtained by this method can be referred to as "disclosing" or "sharing" positive or negative emotions, or talking about their own feelings. The finding that the negativity score of LIWC is not related to negative mood also supports this interpretation.
- (2) In a similar vein, the description of this method could be extended. For example, the authors note that "The LIWC-generated scores indicated the levels of communication of emotions, yet they did not represent the exact number of positive or negative words that participants used." But it is not clear what the scores mean and how they can be interpreted.
- (3) The findings are interpreted with regard to older adults, but without other age groups being included in this study it is less clear whether similar results would be found over the lifespan. The authors should discuss whether they expect the findings to generalize across age or be specific to older adults.
- (4) The study did not include data on written communication. Because written communication (e.g., texting) is becoming increasingly common in older adults, it would be interesting to address this issue as a future direction.

Reviewer #2 (Remarks to the Author):

The manuscript presents a compelling and innovative exploration of an interesting and highly relevant topic. One of its strengths is the utilization of a unique dataset characterized by high ecological validity. This is particularly commendable

given the inclusion of older adults in the sample. I also found the statistical approach generally adequate (although I have some isolated points that should be addressed in order to strengthen the robustness of the results and validity of conclusions drawn). The results provide several interesting insights with the potential to make important contributions to the literature. Despite these strengths, there are critical aspects that require attention. The general narrative is mostly coherent, but it suffers from imprecision in the line of argument and phrasing. A more rigorous articulation of the reasoning would enhance clarity and impact. In a related vein, the literature review appears superficial and lacks depth. More importantly, many references are either misplaced or outright incorrect, leading to a concerning level of misinformation. Addressing this issue is crucial for the manuscript to meet the scholarly standards of the discipline. I elaborate on these and additional issues below.

Literature review and integration of past research

The literature review is remarkably sketchy and imprecise. Several citations are associatively cited for complex lines of arguments and comprehensive claims but only support isolated aspects of this claim. This should be revised to avoid misleading citations. Other citations are outright wrong: They are cited for claims they do not even address. These should be corrected. I list some examples below that I caught in passing. I only spotted them because I am familiar with these papers. The density of mistakes among the references that I know makes me think there might be many more imprecisions and errors.

Using a daily diary design with college students, a study found that communicating negative emotions (anger, fear, sadness) was associated with shortening duration of such emotions [17]. Reference 17 is Brans et al., 2013. Please revise, this reference is misplaced. It describes a different study, with a different design and different results.

Troy et al., 2013 are cited as evidence for past findings that suggest that the emotional outcomes of communicating negative emotions may be complex” This paper is on reappraisal, not about communicating negative emotions.

“Regarding the characteristics of negative events, individuals were more likely to benefit from sharing uncontrollable stressors compared to controllable stressors [44].” --> please revise, this study is on cognitive reappraisal, not on social sharing.

“People who are married share more time in-person and may be more likely to share emotions with spouses [39].” --> please revise, this paper does not compare married to unmarried people, nor does it support the notion that people who are married share more time in-person.

“Compared to younger people, older adults tend to prioritize emotional well-being and report better mood [41]. --> please revise, this review is on age differences in emotion regulation strategies. Consider replacing it by references that directly address the claims you make (regarding age differences in emotional experiences and in emotion-regulation motivation).

“in sum, although older adults share positive emotions through both in-person and phone contact, it may be important for individuals to have in-person outlets and receive social support in-person when negative events happen [1,47] --> please revise, reference 47 is misplaced. It deals with expressive suppression in children and adolescents., not sharing emotions in older adults.

p. 4, “the availability of cues during in-person contact may enhance interpersonal recognition of positive and negative emotions (e.g., fear, happiness, disgust [13, 14]”. --> Reference 13 does not support this claim. Please revise or qualify.

Precision in lines of argument and hypotheses

„Older adults prioritize emotions in their relationships“ (p 2, line 14) – older adults prioritize emotion-regulation goals in relationships. This is different from seeking out emotions that can be negative (which is at odds with the hedonic motivation that is typical in old age)

Please check the manuscript for claims that seem justifiable but need referencing. Examples are, “Being able to receive reactions is important for emotional expression in an interpersonal context.” (p. 4/5)

p., 4 The authors hypothesize that older adults communicate emotions more often in person, compared to phone calls. In building this hypothesis, they cite findings by Lee Masson et al., 2018, [Ref 12] who report that people are more likely to engage in physical contact when they wish to communicate emotions. This finding does not warrant the hypothesis (or at least some implicit additional assumption is missing here and needs explication: Why is this result informative for the hypothesis? I did not understand this notion.). Please revise.

H2 and H3 (p. 5 and 6) are overlapping, please rephrase them to make them distinct. I was also confused that the hypotheses were introduced twice (on pages 1-6 and on p. 7), and the account of the three hypotheses on p. 7 does not match the account provided earlier in the text. Please align. What were the hypotheses?

Please specify what is meant by “deeper conversations” (p. 4, 5)

The authors write that the study “considered” other factors.” They then introduce many variables on p.6/7. Each of them is briefly introduced with a reference suggesting that this variable could be related to either emotion communication, the design

factors, or the outcomes of the current study. What is the aim of this list? Did the authors seek to justify the later inclusion of these variables as covariates? Did they want to explain why exploring interactions with these variables could be promising? Please explain and specify what “consideration of other factors” means.

Please enhance precision when making comparisons in this design with two modes and two affect facets (Example on page 15, “Older adults [...] tended to communicate more negative emotions during in-person contact.” – compared to what? To positive emotions? To phone calls?)

p. 15, “Older adults garner emotional benefits from communicating positive emotions, regardless of the mode of contact.” Please specify if this is a direct conclusion from your findings / a speculation / a past finding / or a notion derived from theory.

Methods and Results

The use of ecologically valid EAR assessments is a major strength of this study. It could be exploited more in my view. Specifically, I recommend explaining the specific advantages of this method over other methods.

On p. 11, the authors write that “all models considered” a large group of covariates. What does this mean? Did all models control for this group of covariates by default? Inclusion of default control variables is discouraged (e.g., Spector & Brannick, 2011; York, 2018; Vize et al., 2020; Wysocki et al., 2022) as it may amplify or conceal parameters of interest. I recommend reporting the results without these variables. An additional idea could be to add a note that inclusion of these variables did not change the results. If the results do change when including control variables, it is informative to present the results with and without control variables (maybe using the supplemental materials).

References:

Spector, P. E., & Brannick, M. T. (2011). Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods*, 14(2), 287-305;
York, R. (2018). Control variables and causal inference: a question of balance. *International Journal of Social Research Methodology*, 21(6), 675-684.
Vize, C. E., Collison, K. L., Miller, J. D., & Lynam, D. R. (2020). Using item-level analyses to better understand the consequences of partialing procedures: An example using the Dark Triad. *Journal of Personality*, 88(4), 719-734.
Wysocki, A. C., Lawson, K. M., & Rhemtulla, M. (2022). Statistical Control Requires Causal Justification. *Advances in Methods and Practices in Psychological Science*, 5(2), 251524592210958. <https://doi.org/10.1177/25152459221095823>

A prerequisite for communicating emotion is that people say something in the first place. They may then choose to talk about their emotions or not. I wondered about the effect of the baseline effects of talking at all. In my view, it would be informative to show that the effects are not simply due to the fact that people talk more when they are around others vs. alone. And that the results go further than showing that people speak more words when meeting someone in person vs. on the phone. Being in the presence of other people, and talking to them, could also account for better affect. LIWC includes a word count in its output and I recommend controlling for the number of words spoken. Do the results change if controlling for the number of words overall?

p. 9, I recommend reporting within-person reliabilities for the repeatedly assessed affect measures instead of the currently reported Cronbach's alpha.

p. 11, “but three-level models yielded the same pattern as two-level models” – which pattern is meant here? Please specify.

The table with the correlation between all key variables in the supplement is informative, but traditional correlation measures like Pearson's correlation are not suited for use with categorical or dichotomous variables. Please revise. The table also needs a note explaining what the variables mean and what the parameter estimates are.

Discussion

The narrative in the discussion lacks cohesion. As one example from p. 15: “Compared to younger people, older adults tend to prioritize emotional well-being and report better mood [41].” Why is this mentioned here? The sentence seems neither related to the previous nor the subsequent sentence.

Affect does not only follow social sharing of emotion but has been shown to predict this behavior in past research. I recommend addressing this in the manuscript (e.g., by additional analyses controlling for previous affect in the last time window and/or by discussing this issue of unclear causality)

In general, the discussion left me wanting. The findings are really inspiring and the literature offers so many angles to learn from them. For example, the literature discusses social support as a mediator in the effects of sharing negative emotion on affect outcomes. There is also research showing that social support varies with mode of contact. This seems to align with the finding that negative sharing (but not positive) was more frequent in person vs. on the phone. These and other low-hanging fruit were not integrated in the discussion, which is a missed chance.

Additional points

The literature list includes errors, please revise (e.g., the Fratarroli 2006 Psych Bull paper is cited as (“University of California, Riverside”).

Reviewer #3 (Remarks to the Author):

General Comments

This manuscript presents very interesting research examining interactions between modes of social contact (in-person vs. phone), verbal expression of negative and positive emotion, and positive and negative mood in older adults. This is an interesting and meaningful topic, and the ecologically valid data obtained from older adult populations makes the study more even meaningful. The manuscript is also detailed and well-written, with a good amount of detail provided regarding the methods and analysis. I just recommend a few suggestions for further improvement, from my perspective.

Specific Comments

1. I have a minor issue with H2, specifically that verbal communication of negative emotions would be associated with more positive mood and less negative mood in the same 3 hours. This being said, rational justification for this hypothesis is provided in the introduction, which makes sense to me. My only issue is that there is quite a lot of research out there which would suggest that the communication of negative emotion would be associated with more negative mood and less positive mood within the same 3 hours (e.g., Lyons et al., 2018; Meier et al., 2024). My interpretation is that the associations between negative emotion language and outcomes are highly context dependent. Therefore, although the proposed hypothesis makes sense and is justified, I think some acknowledgment of the opposing argument is at least worthy of a mention in the introduction at the relevant point.

Lyons, M., Aksayli, N.D., & Brewer, G. (2018). Mental distress and language use: Linguistic analysis of discussion forum posts. *Comput. Hum. Behav.*, 87, 207-211.

Meier, T., Stephens, J. E., & Haase, C. M. (2024). Feelings in words: Emotion word use and cardiovascular reactivity in marital interactions. *Emotion*, 24(3), 733–744. <https://doi.org/10.1037/emo0001299>

2. I am wondering why the social contact mode text/email/social media wasn't included in the analyses. I know that the authors justified not examining this in the introduction, but the methods suggest that these data are in fact available, so I am wondering why the authors did not look into the results here also? I would be interested in seeing results from this (e.g., can the positive benefits of the communication of emotion even occur from messages?). Is there sufficient data for this mode of social contact? If not, this should be stated in the methods section (with Ns provided), thereby justifying the decision not to examine this contact mode. Do the authors have access to the actual text of the participants to be included in the analyses? If the answers to these questions are yes, I would be very keen to see results from the analysis of these data.

3. There is a slight discrepancy between the sample described in the OSF pre-registration compared to that reported in the manuscript. In the pre-registration, it states that 20 participants did not participate in EMA and were excluded, whereas the manuscript states that there were in fact 22 excluded for not participating in EMA. The manuscript also reports a total of 266 participants included in the final analysis sample, whereas the pre-registration reports 286. Please address these discrepancies in the manuscript where relevant.

4. I am intrigued as to whether the authors have any data available relating to the length of time of each social contact (possibly from the EMA)? If so, I would be interested in seeing some analyses carried out using these data (e.g., are the results moderated by length of time spent communicating with others?), even if simply included as a covariate.

5. I would be interested to see how the results play out split by gender of the participant (and possibly the respondent if that data are available). An analysis of the data split into male vs. female participants would be a nice addition to the Supplemental Material (e.g., are particular effects stronger in women than men?).

6. I have a slight concern about some of the causal language used in the results interpretation/discussion. For instance, in the first paragraph of the discussion, the authors state "Older adults garner emotional benefits from communicating positive emotions...". Am I correct in thinking that all of the data in a given 3-hour period were simply aggregated as one time period (i.e., not temporally precise)? If so, it cannot be concluded that the communication of positive emotion causes emotional benefits, due to the correlational nature of the data/analyses. Rather, it could be that the elevated positive emotive language is in fact a reflection of participants' elevated positive mood (rather than vice-versa). There are strong arguments from linguistic theory that would support this alternative perspective, which proposes that words are a reflection of experience and cognition. I would therefore recommend outlining this as a limitation of the work (i.e., that it is a correlational design and causality, regarding the causal direction of the associations, cannot be assumed), and I would also suggest toning down the causal language in the discussion, etc., and acknowledging this alternative possibility.

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Version 1:

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Dear Dr Zhang,

Thank you for your patience during the peer-review process. Your manuscript titled "Mode of Social Contact, Verbal Communication of Emotion, and Well-Being in Late Life" has now been seen by 3 reviewers, and I include their comments at the end of this message. You will see that they find your revisions to have improved the manuscript. However, there remains important concerns that must be addressed in a final revision.

We therefore invite you to revise and resubmit your manuscript, along with a point-by-point response to the reviewers. Please highlight all changes in the manuscript text file.

Editorially, we consider it imperative that the revised manuscript contains an accurate literature review containing correct citations to the appropriate literature as requested by Reviewer 2. Please check each citation again for clarity. Please also address the modeling concerns raised by Reviewer 3.

We are committed to providing a fair and constructive peer-review process. Please don't hesitate to contact us if you wish to discuss the revision in more detail.

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We hope to receive your revised paper within 8 weeks; please let us know if you aren't able to submit it within this time so that we can discuss how best to proceed. If we don't hear from you, and the revision process takes significantly longer, we may close your file. In this event, we will still be happy to reconsider your paper at a later date, provided it still presents a significant contribution to the literature at that stage.

We would appreciate it if you could keep us informed about an estimated timescale for resubmission, to facilitate our planning.

We look forward to seeing the revised manuscript and thank you for the opportunity to review your work.

Best regards,

Jennifer Bellingtier

Jennifer Bellingtier, PhD
Senior Editor
Communications Psychology

REVIEWER EXPERTISE:

Reviewer #1 socioemotional aging, intensive longitudinal designs

Reviewer #2 socioemotional aging, intensive longitudinal designs

Reviewer #3 text analysis

REVIEWER REPORTS:

Reviewer #1 (Remarks to the Author):

The authors were very responsive to issues raised by the reviewers and the manuscript is much improved. I have no remaining concerns.

Reviewer #2 (Remarks to the Author):

The authors have effectively addressed most comments and the manuscript has improved as a result.

There is one remaining issue and it is not trivial. In my review for this initial submission, I voiced my deep concern about the density of citation errors. The authors were responsive to this concern and have changed several of their citations. This is good. However, it only took a few samples to find that this serious issue is still unresolved. As one example, I had requested a correction in citing a paper that I happen to know well:

"p. 4, "the availability of cues during in-person contact may enhance interpersonal recognition of positive and negative emotions (e.g., fear, happiness, disgust [13, 14]". --> Reference 13 does not support this claim. Please revise or qualify."

The authors have done as requested and corrected reference # 13 (now 14). The other citation for this claim (#14, now 15) remained unaltered in the revision. However, this reference does not make any sense for the presented claim, either.

As I specified in my initial review, I only commented on a few references in passing – those that I happen to know well. I suspected more errors in the references that I do not know. The example above shows me that this suspicion is correct and that the authors have not effectively dealt with this serious issue.

This is a good manuscript, and it is obvious that the authors put in some effort to improve it even further in the revision. However, the remaining citation issue is quite unsettling. Again, I strongly recommend double-checking each reference to prevent the spreading of misinformation. Without effectively addressing this remaining problem, this manuscript should not be published.

Reviewer #3 (Remarks to the Author):

The responses from the authors are excellent, and are highly satisfactory. I just have a few further fairly minor recommendations:

1) Regarding the authors' response to Reviewer 1's second point (i.e., what LIWC scores represent), I would make it more clear (in the manuscript) that the LIWC scores generated represent percentages of the total word count. So, for the positive emotion word category, the numbers generated reflect the number of positive emotion words (contained within the LIWC dictionary) divided by the total word count of a given text (same for other categories). This way, readers know exactly what the scores represent and how they were calculated.

2) I disagree with the Reviewer 2, Point 19 comment and authors' response to this. The main reason I disagree is because LIWC analyses and output automatically controls for WC (see my previous comment). Numbers generated by LIWC for each category, including positive and negative emotion words, are a percentage of the total word count of a text. Thus, the scores that you have for positive and negative emotion words are already generated controlling for word count; it is therefore strange to control for word count again (twice) in subsequent statistical analyses. Because of this, I would recommend removing the analyses in which you have controlled for word count again from the supplemental materials and where they are mentioned in the Results section, as these results are misleading. This being said, I do agree with Reviewer 2's main argument in this point, but more with regard to the total duration of interactions (rather than word count), as I mentioned in the previous review round (though I am now aware that the researchers did not collect these data). I also agree with the point that being in the presence of other people in general, and talking to them, could (and most likely is) account for better affect, which would then be reflected in emotion word use (as I suggested in the previous review). I see this as an important point (i.e., surrounding the direction of causality) that should be emphasised more in the Discussion (and not just briefly in the limitations section).

3) In response to my second comment, the authors need to justify their statement "Second, a significant proportion of adults over the age of 65+ do not own a smartphone" in the revised manuscript with citations to support this.

4) My concerns surround the inappropriate use of causal language have largely been addressed. However, there is still some evidence of this in the abstract that needs correcting - i.e., "This study emphasizes the emotional benefits of social contact, particularly in enhancing positive mood through communicating positive feelings."

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Dear Dr Zhang,

Your manuscript titled "Mode of Social Contact, Verbal Communication of Emotion, and Well-Being in Late Life" has now been seen by our reviewers, whose comments appear below. In light of their advice I am delighted to say that we are happy, in principle, to publish a suitably revised version in Communications Psychology.

We therefore invite you to revise your paper one last time to address the remaining concerns of our reviewers and a list of editorial requests. At the same time we ask that you edit your manuscript to comply with our format requirements and to maximise the accessibility and therefore the impact of your work.

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We hope to hear from you within two weeks; please let us know if you need more time.

Best regards,

Jennifer Bellingtier

Jennifer Bellingtier, PhD
Senior Editor
Communications Psychology

REVIEWERS' EXPERTISE:

Reviewer #2 socioemotional aging, intensive longitudinal designs
Reviewer #3 text analysis

REVIEWERS' COMMENTS:

Reviewer #2 (Remarks to the Author):

It appears that the authors have now taken adequate measures to ensure that their references are correct, and I have no further comments.

Reviewer #3 (Remarks to the Author):

I am fully satisfied with the authors' response to reviewer's comments, and I believe that this manuscript is ready for publication. Thank you for the opportunity to review this fascinating work.

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Dear reviewers,

We were thrilled that you and the reviewers saw merit in our research. We also appreciated the constructive feedback you and the reviewers provided. This feedback guided our revisions, which we believe substantially improved the paper. Below, we indicate how we addressed each of the reviewer's concerns. We also highlight the revised parts in red in the manuscript.

Reviewer #1 (Remarks to the Author):

The authors used experience sampling and Electronically Activated Recorder (EAR) data from 266 older adults to examine associations between valence of spoken words, mode of communication (telephone vs. in-person), and mood. They found that more communication between two measurement waves was associated with more positive words for both communication modes, while the same association with negative words was only significant for in-person communication. The manuscript is well written and on an interesting topic. Despite these positive aspects, however, I have a number of concerns, which are listed below:

(1) My main concern is related to the Linguistic Inquiry and Word Count (LIWC) approach. As I understand it, this method measures the valence of spoken language, but I am doubtful whether the scores obtained by this method can be referred to as “disclosing” or “sharing” positive or negative emotions, or talking about their own feelings. The finding that the negativity score of LIWC is not related to negative mood also supports this interpretation.

We understand the reviewer’s concern that the LIWC score may not accurately measure participants’ sharing and disclosure of emotions. The validity of using LIWC scores as emotional expression has been established in previous studies. For example, Kahn and colleagues (2007) directed participants to talk about their emotions after positive or negative emotion priming tasks (watching videotapes primed to certain emotions). They found that participants with the positive emotion priming task had significantly higher scores on LIWC positive emotion and significantly lower scores on LIWC negative emotion, suggesting the validity of LIWC scores as a measure of verbal expression of emotion.

Similarly, another study analyzed text samples from a 12-week internet-based support group of cancer survivors (McDonnell et al., 2020). They compared LIWC scores to human-rated emotional scores of the text samples and found that positive and negative scores generated by LIWC 2015 were significantly correlated with human ratings.

We added these studies to the measurement section in the revision.

Kahn, J. H., Tobin, R. M., Massey, A. E., & Anderson, J. A. (2007). Measuring emotional

expression with the Linguistic Inquiry and Word Count. *The American journal of psychology*, 120(2), 263–286. <https://doi.org/10.2307/20445398>

McDonnell, M., Owen, J. E., & Bantum, E. O. C. (2020). Identification of emotional expression with cancer survivors: validation of linguistic inquiry and word count. *JMIR formative research*, 4(10), e18246. <https://doi.org/10.2196/18246>

Regarding the results, to clarify, verbal communication of negative emotion (i.e., negativity score of LIWC) was correlated to negative mood ($r = .19, p < .001$; Supplementary Table 1), although the association was not significant after considering other covariates. The correlation between the LIWC score and mood indicates that the LIWC score measures the emotional state conveyed by participants' word use, referred to as "verbal communication of emotion" in the manuscript.

Additionally, to address the reviewer's concern, we added the LIWC measure of verbal communication of emotion to the limitations in the discussion section.

P24- "This approach provides important information on participants' use of emotional words, yet may overlook subtle information that is not explicitly conveyed through the word choice (e.g., sarcasm). As such, applying natural language processing algorithms for sentiment analysis may yield information on linguistic features and individuals' emotional states."

(2) In a similar vein, the description of this method could be extended. For example, the authors note that "The LIWC-generated scores indicated the levels of communication of emotions, yet they did not represent the exact number of positive or negative words that participants used." But it is not clear what the scores mean and how they can be interpreted.

We clarified the interpretations of LIWC scores in the method section.

P11, 12- "LIWC uses a word frequency approach and compares text corpus with an embedded dictionary to infer emotional state from verbal behaviors. The positive emotion dictionary contains 620 words (e.g., happy, love, sweet), and the negative emotion dictionary contains 744 words (e.g., frustrated, hurt, ugly) [41]. LIWC compared transcribed sound snippets with its embedded dictionary to generate positive and negative emotion scores, which quantifies the extent to which participants expressed emotions during daily social contact. Higher numbers indicate a greater frequency of words related to either positive or negative emotions, reflecting higher levels of verbal communication of emotion during social contact."

[41]. Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015*. Austin, TX: University of Texas at Austin. <https://doi.org/10.15781/T29G6Z>

The sentence that the reviewer pointed out is in the results section. We also added a description to facilitate interpretation following this sentence.

P14- “The LIWC-generated scores indicated the levels of communication of emotions, yet they did not represent the exact number of positive or negative words that participants used. Larger scores of positive and negative emotions indicate a higher frequency of words associated with specific emotions.”

(3) The findings are interpreted with regard to older adults, but without other age groups being included in this study it is less clear whether similar results would be found over the lifespan. The authors should discuss whether they expect the findings to generalize across age or be specific to older adults.

We appreciate the reviewer’s pointing out that the findings should be interpreted with consideration of participants’ age. We added a paragraph to the discussion section stating that the findings are specific to older adults and that the results may differ for other age groups.

P23- “Importantly, the current study focuses on individuals in late life, a stage where people prioritize emotionally meaningful goals and emphasize emotional meaning in social contact [3]. In contrast, younger people may differ in their frequency of social contact, choice of social partners (e.g., people at school or work may have more contact with friends and colleagues vs. older adults have more contact with families), and preference of mode of contact (e.g., younger people may be more used to various modes of contact, including digital contact [62]). These age-related differences in social goals and behaviors may contribute to variations in emotional experiences during social contact, underscoring the need for future studies to investigate individuals’ communication of emotion across different age groups.”

[3]. Carstensen, L. L. (2021). Socioemotional selectivity theory: The role of perceived endings in human motivation. *The Gerontologist*, 61(8), 1188–1196. <https://doi.org/10.1093/geront/gnab116>
 [62]. Faverio, M. & Sidoti, O. Teens, social media and technology 2024. *Pew Research Center* <https://www.pewresearch.org/internet/2024/12/12/teens-social-media-and-technology-2024/> (2024).

(4) The study did not include data on written communication. Because written communication (e.g., texting) is becoming increasingly common in older adults, it would be interesting to address this issue as a future direction.

We now added this point to the limitation and future studies section.

P21, 22- “Furthermore, the current study focused on participants’ spoken language. However, given the increase of use of written communication among older adults (e.g., texting, social media) [10], future studies may examine older adults’ written communication of emotions and its contribution to well-being.”

[10]. Faverio, M. Share of those 65 and older who are tech users has grown in the past decade. *Pew Research Center* <https://www.pewresearch.org/short-reads/2022/01/13/share-of-those-65-and-older-who-are-tech-users-has-grown-in-the-past-decade/> (2022).

We sincerely thank the reviewer once again for the valuable insights and feedback. The thoughtful comments guided us in enhancing the interpretation of LIWC scores and improving the manuscript. We appreciate your expertise and effort to review our work, which has significantly strengthened our study.

Reviewer #2 (Remarks to the Author):

The manuscript presents a compelling and innovative exploration of an interesting and highly relevant topic. One of its strengths is the utilization of a unique dataset characterized by high ecological validity. This is particularly commendable given the inclusion of older adults in the sample. I also found the statistical approach generally adequate (although I have some isolated points that should be addressed in order to strengthen the robustness of the results and validity of conclusions drawn). The results provide several interesting insights with the potential to make important contributions to the literature.

Despite these strengths, there are critical aspects that require attention. The general narrative is mostly coherent, but it suffers from imprecision in the line of argument and phrasing. A more rigorous articulation of the reasoning would enhance clarity and impact. In a related vein, the literature review appears superficial and lacks depth. More importantly, many references are either misplaced or outright incorrect, leading to a concerning level of misinformation. Addressing this issue is crucial for the manuscript to meet the scholarly standards of the discipline.

I elaborate on these and additional issues below.

Literature review and integration of past research

1. The literature review is remarkably sketchy and imprecise. Several citations are associatively cited for complex lines of arguments and comprehensive claims but only support isolated aspects of this claim. This should be revised to avoid misleading citations. Other citations are outright wrong: They are cited for claims they do not even address. These should be corrected. I list some

examples below that I caught in passing. I only spotted them because I am familiar with these papers. The density of mistakes among the references that I know makes me think there might be many more imprecisions and errors.

We thank the reviewer for the detailed feedback regarding the literature review. We sincerely appreciate the careful reading and constructive critique. We have thoroughly revisited the introduction section to address the concerns you raised.

In response to the reviewer's concern about the density of errors, we conducted a comprehensive review of all references to resolve inaccuracies. In addition to the suggestions that the reviewer listed below, we further made the following edits-

Citation 11:

Original citation: Dunaetz, D. R., Lisk, T. C. & Shin, M. M. Personality, gender, and age as predictors of media richness preference. *Adv. Multim.* **2015**, 243980 (2015).

Updated citation: Sherman, L. E., Michikyan, M. & Greenfield, P. M. The effects of text, audio, video, and in-person communication on bonding between friends. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* **7**, (2013).

P4- "Specifically, media richness theory suggests that in-person contact carries a larger amount of information, including both verbal and non-verbal cues (e.g., physical contact, eye contact, facial expression) than does phone contact. [4][11]"

The updated citation examined participants' social behaviors during different modes of contact, including in-person, video chat, audio chat, and instant messaging. This study coded participants' affiliation cues (i.e., nonverbal behaviors associated with the emotional experience of bonding) and found higher usage of nonverbal cues during in-person contact, compared to other formats.

Citation 13:

Original citation: Lee Masson, H. & Op de Beeck, H. Socio-affective touch expression database. *PLoS One* **13**, e0190921 (2018).

Updated citation: Debrot, A., Schoebi, D., Perrez, M. & Horn, A. B. Touch as an interpersonal emotion regulation process in couples' daily lives: The mediating role of psychological intimacy. *Pers. Soc. Psychol. Bull.* **39**, 1373–1385 (2013).

P4- "For example, one study followed 102 couples for a week and found physical touch to be associated with intimacy and better well-being for the actor and recipient of the touch. [13]"

The original statement was not an accurate description of the cited study. We updated the citation and edited our description in the manuscript. In the newly cited study, 102 dating couples were asked to complete surveys 4 times a day during a week about their physical touch, affective state,

psychological intimacy, and well-being. The study found that affective touch was associated with better mood and higher relationship intimacy for both the actor and partner of the touch.

Citation 21:

Original citation: Chaplin, T. M. & Aldao, A. Gender differences in emotion expression in children: a meta-analytic review. *Psychol. Bull.* 139, 735–765 (2013).

Updated citation: Nolen-Hoeksema, S. & Aldao, A. Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Pers. Individ. Dif.* **51**, 704–708 (2011).

P7- “Compared to men, women are more likely to express their emotions in conversations.”

We updated this citation because the original citation pertains to the gender differences in emotional expression among children, which may be a stretch from our statement. The updated citation included participants aged 25-35, 45-55, and 65-75. The study found that women were more likely to seek social support than men, regardless of the age group.

Citation 28:

Original citation: Sun, F., Norman, I. J. & While, A. E. Physical activity in older people: a systematic review. *BMC Public Health* **13**, 449 (2013).

Updated citation: Berg, A. I., Hoffman, L., Hassing, L. B., McClearn, G. E. & Johansson, B. What matters, and what matters most, for change in life satisfaction in the oldest-old? A study over 6 years among individuals 80+. *J. Gerontol. Psychol. Sci.* **61**, P335–P343 (2006).

P7- “Older age in late adulthood is associated with lower life satisfaction.”

The original citation focuses on older adults' physical activity. We updated the citation to Berg et al., 2006. This study fits growth curve models on data during a 6-year period among adults aged 80+. It found that older age was associated with worse life satisfaction.

2. Using a daily diary design with college students, a study found that communicating negative emotions (anger, fear, sadness) was associated with shortening duration of such emotions [17]. ◇ Reference 17 is Brans et al., 2013. Please revise, this reference is misplaced. It describes a different study, with a different design and different results.

We rewrote the sentence to better describe the study we cited (Brans et al., 2013).

P5, 6- “For example, one study tracked college student participants’ emotions and social sharing of emotions for five consecutive days. The study found that participants experienced shorter

duration of negative emotions (anger, fear, sadness) if they shared the emotion with social partners.”

3. Troy et al., 2013 are cited as evidence for past findings that suggest that the emotional outcomes of communicating negative emotions may be complex” ◇ This paper is on reappraisal, not about communicating negative emotions.

We replaced Troy et al., 2013 with Park et al., 2004 and Stanton et al., 2000.

Park et al., 2004 involved 190 college student participants. Participants reported their daily stress, its controllability, and coping strategies (including expression of emotion) for 28 consecutive days. This study found that participants were more likely to express emotion and seek social support on days when they perceived the stressors as less controllable, demonstrating the complexity of expressing negative emotions.

In Stanton et al., 2000, 76 college student participants were instructed to describe a stressful situation that they perceived as uncontrollable (e.g., parents’ severe physical conditions), with an adoption of an emotionally expressive coping style. The study found that emotion expression was associated with reductions in physiological activation and negative mood, supporting that emotion expression may be particularly beneficial for stressors perceived as uncontrollable.

P20- “Prior studies yield mixed findings and suggest that the emotional outcomes of communicating negative emotions may be complex [48-51].”

[50] Park, C. L., Armeli, S., & Tennen, H. (2004). Appraisal-coping goodness of fit: A daily internet study. *Personality and Social Psychology Bulletin*, 30(5), 558–569.

<https://doi.org/10.1177/0146167203262855>

[51] Stanton, A. L., Kirk, S. B., Cameron, C. L., & Danoff-Burg, S. (2000). Coping through emotional approach: Scale construction and validation. *Journal of Personality and Social Psychology*, 78(6), 1150–1169. <https://doi.org/10.1037//0022-3514.78.6.1150>

4. “Regarding the characteristics of negative events, individuals were more likely to benefit from sharing uncontrollable stressors compared to controllable stressors [44].” --> please revise, this study is on cognitive reappraisal, not on social sharing.

We edited this sentence and changed citation 44 to Park et al., 2004 and Stanton et al., 2000, the two citations described above.

P20- “Regarding the characteristics of negative events, individuals were found to be more likely

to express emotions for perceived uncontrollable stressors, compared to controllable stressors (Park et al., 2004). Further, communicating negative emotions may be particularly beneficial for perceived uncontrollable stressors (Stanton et al., 2000).”

5. “People who are married share more time in-person and may be more likely to share emotions with spouses [39].” --> please revise, this paper does not compare married to unmarried people, nor does it support the notion that people who are married share more time in-person.

We revised the citations to the book chapter The Social Sharing of Emotion in Interpersonal and in Collective Situations (Rimé, 2016).

Specifically, the book chapter The Social Sharing of Emotion in Interpersonal and in Collective Situations (Rimé, 2016) summarized findings from the author’s previous studies and reported that older adults aged 65+ predominantly share emotions with spouse/partner, rather than friends and other families.

Rimé, B. (2016). The social sharing of emotion in interpersonal and in collective situations. In A. Esposito & L. C. Jain (Eds.), *Toward robotic socially believable behaving systems – Volume I* (pp. 53–69). Springer. https://doi.org/10.1007/978-3-319-43639-5_4

6. “Compared to younger people, older adults tend to prioritize emotional well-being and report better mood [41].” --> please revise, this review is on age differences in emotion regulation strategies. Consider replacing it by references that directly address the claims you make (regarding age differences in emotional experiences and in emotion-regulation motivation).

Comment #23 questions that this sentence is out of place. We used this sentence to provide a transition from younger and middle-aged adults to older adults and to reflect the current study’s contribution in identifying the amplifying effect of sharing positive emotions among older adults. However, after reviewing this paragraph, we agree that this sentence is not necessary and thus have removed it.

P19- “The amplifying effect of sharing positive emotions has been found in previous studies mainly among younger and middle-aged populations [23,48]. This study contributes to the current body of literature by examining older adults’ interpersonal approaches in emotion regulation, highlighting the advantages of sharing positive feelings in their day-to-day experiences.”

7. “in sum, although older adults share positive emotions through both in-person and phone contact, it may be important for individuals to have in-person outlets and receive social support in-person when negative events happen [1,47] --> please revise, reference 47 is misplaced. It deals with expressive suppression in children and adolescents., not sharing emotions in older adults.

We replaced citation 47 with Springstein et al., 2024. This study included 290 participants aged from 25 to 85. It used an experience sampling procedure that collected information on participants' emotions and interpersonal emotion regulation behaviors for 10 days. The study found that although older adults were less likely to engage in social sharing of negative emotions compared to young adults, they still benefit from sharing negative emotions to a similar extent as young adults. This finding aligns with our statement that older adults need to communicate negative emotion to enhance their well-being.

Reference [58]- Springstein, T., Grownney, C. M., Strube, M. J., & English, T. (2024). Intrinsic interpersonal emotion regulation strategy use and effectiveness across adulthood: The role of interaction partner age. *Emotion*. Advance online publication. <https://doi.org/10.1037/emo0001435>

8. p. 4, “the availability of cues during in-person contact may enhance interpersonal recognition of positive and negative emotions (e.g., fear, happiness, disgust [13, 14]”. --> Reference 13 does not support this claim. Please revise or qualify.

We changed citation 13 to a study from Krumhuber and colleagues. This review article summarized previous studies on emotion recognition from dynamic facial information. It emphasizes using time-to-time visual cues (e.g., direction and speed of facial movement) for recognizing positive and negative emotions, further showing the importance of having timely visual cues for emotion recognition.

Krumhuber, E. G., Skora, L. I., Hill, H. C. H., & Lander, K. (2023). The role of facial movements in emotion recognition. *Trends in Cognitive Sciences*, 27(4), 407–423. <https://doi.org/10.1038/s44159-023-00172-1>

Precision in lines of argument and hypotheses

9. Older adults prioritize emotions in their relationships“ (p 2, line 14) – older adults prioritize emotion-regulation goals in relationships. This is different from seeking out emotions that can be negative (which is at odds with the hedonic motivation that is typical in old age)

We agree that using “emotions” is vague and changed it to “emotional well-being and regulation”.

P2- “Older adults prioritize emotional well-being and regulation in their relationships, but communication of emotion may differ by in-person and phone contact.”

10. Please check the manuscript for claims that seem justifiable but need referencing. Examples are, “Being able to receive reactions is important for emotional expression in an interpersonal context.” (p. 4/5)

We added a reference (Ruan et al., 2020) for this statement. The cited study used a daily diary approach to examine perceived response and emotional expression in an interpersonal context. It found that higher perceived partner responsiveness was associated with greater expression of both positive (e.g., joy, excitement) and negative (e.g., anger, anxiety) emotions. Results from this study support the statement that receiving supportive feedback facilitates emotional expression.

P5- “Being able to receive responses is important for expression of emotion in an interpersonal context [17].”

[17] Ruan, Y., Reis, H. T., Clark, M. S., Hirsch, J. L., & Bink, B. D. (2020). Can I tell you how I feel? Perceived partner responsiveness encourages emotional expression. *Emotion*, 20(3), 329. <https://doi.org/10.1037/emo0000568>

In addition to this sentence, we checked the references throughout the manuscript and added the following references-

P4- “These cues may facilitate emotionally deep and engaging conversations where individuals share thoughts, feelings, and experiences at a personal level [12].”

P4- “Additionally, accessing various types of informational cues during in-person contact allows individuals to understand social partners’ emotions better and faster, and thus be able to provide and receive synchronous feedback [12,16].”

[12] Tracy, J. L., Randles, D. & Steckler, C. M. The nonverbal communication of emotions. *Curr. Opin. Behav. Sci.* 3, 25–30 (2015).

This paper is a review of nonverbal communication of emotions. Specifically, it covered research on the critical role of nonverbal cues in understanding emotions during social contact. It emphasized that nonverbal cues provide rich emotional context and enable individuals to infer the expresser’s emotions, especially when information from verbal communication may be

ambiguous. This review supports our statement that nonverbal cues facilitate exchange of emotions.

[16] Madell, D. E. & Muncer, S. J. Control over social interactions: An important reason for young people's use of the internet and mobile phones for communication? *Cyberpsychol. Behav.* 7, 587–593 (2004).

This is a qualitative study examining why young people may prefer internet or phone communication rather than in-person. The study found that participants emphasized the asynchronous features of internet communication, which may give them more time to respond. In contrast, individuals always have to respond in a timely manner during in-person contact. This qualitative study demonstrates the synchronous nature of in-person contact. This study examined the comparison between internet/mobile and in-person contact and demonstrated the synchronous nature of in-person contact.

11. p., 4 The authors hypothesize that older adults communicate emotions more often in person, compared to phone calls. In building this hypothesis, they cite findings by Lee Masson et al., 2018, [Ref 12] who report that people are more likely to engage in physical contact when they wish to communicate emotions. This finding does not warrant the hypothesis (or at least some implicit additional assumption is missing here and needs explication: Why is this result informative for the hypothesis? I did not understand this notion.). Please revise.

We clarified the idea and explained the link between the cited study and our hypothesis: P4- “For example, one study found that individuals are more likely to engage in physical contact when they feel the need to express their emotions¹³. This study shows the critical role of non-verbal cues and in-person contact for effective communication of emotions, suggesting that compared to phone contact, individuals may find it easier and more comfortable to express emotions during in-person contact.”

12. H2 and H3 (p. 5 and 6) are overlapping, please rephrase them to make them distinct. I was also confused that the hypotheses were introduced twice (on pages 1-6 and on p. 7), and the account of the three hypotheses on p. 7 does not match the account provided earlier in the text. Please align. What were the hypotheses?

We revised the paragraphs related to H2 and H3. Specifically, H2 focuses on the emotional outcome of verbal expression, and we clarified this point and added literature to support our hypothesis that both verbal communication of positive and negative emotions would be associated with better mood. H3 emphasizes the mode of contact where verbal communication of

emotion happens. We explained that the emotional benefit of communication relies on social partners' responses, which may be largely influenced by the mode of contact. As such, H3 pertains to the moderating role of mode of contact in the associations between verbal communication of emotion and mood (P5-P7).

We clarified H3 in the current study section. The hypotheses are now aligned.

P7 - "We hypothesize that communicating both positive and negative emotions would be associated with better mood, and such associations would be stronger for communication of emotions during in-person contact, compared to phone contact (H3)."

P8 - "H3- Verbal communication of both positive and negative emotions would be associated with more positive mood and less negative mood in the same 3 hours, and such associations would be stronger for communication during in-person contact, compared to phone contact."

13. Please specify what is meant by "deeper conversations" (p. 4, 5)

By using "deeper conversations", we meant emotionally deep conversations where individuals feel comfortable sharing their thoughts and feelings at a profound level, rather than talking about daily routines. These conversations may involve exchanging emotions, disclosing feelings, and providing emotional support. We made edits in the manuscript:

P4- "These cues may facilitate emotionally deep and engaging conversations where individuals share thoughts, feelings, and experiences at a personal level."

P5- "As such, in-person contact may provide a rich set of informational cues that are important in emotion recognition and communication. These cues may further support disclosing emotions, sharing personal thoughts, and providing compassionate feedback."

14. The authors write that the study "considered" other factors." They then introduce many variables on p.6/7. Each of them is briefly introduced with a reference suggesting that this variable could be related to either emotion communication, the design factors, or the outcomes of the current study. What is the aim of this list? Did the authors seek to justify the later inclusion of these variables as covariates? Did they want to explain why exploring interactions with these variables could be promising? Please explain and specify what "consideration of other factors" means.

This paragraph aims to provide a list of covariates and justify the reasons for controlling them. We changed the word "considered" to "controlled" to clarify the role of this list of variables in the current study. We cited the studies in this paragraph to demonstrate the possible covariance between the covariates and key variables (predictors and outcomes) rather than to set up

interactions. This study did not examine any interactions involving the list of covariates in the main analysis.

P7- “This study also controlled other factors associated with emotional expression via different modes of contact and well-being as covariates: gender, age, marital status, education, ethnic or racial minority status, health, social network size, and time of the survey (morning, afternoon, evening).”

15. Please enhance precision when making comparisons in this design with two modes and two affect facets (Example on page 15, “Older adults [...] tended to communicate more negative emotions during in-person contact.” – compared to what? To positive emotions? To phone calls?)

We clarified our comparisons in the manuscript.

P19- “Older adults communicated positive emotions during both in-person and phone contact, yet they tended to communicate more negative emotions only during in-person contact compared to phone contact.”

P19- “Participants who had less in-person contact on average experienced a greater increase in positive mood when they communicated positive emotions, compared to those who had more in-person contact on average.”

16. p. 15, “Older adults garner emotional benefits from communicating positive emotions, regardless of the mode of contact.” Please specify if this is a direct conclusion from your findings / a speculation / a past finding / or a notion derived from theory.

This statement is based on the results that verbal communication of positive emotions was associated with better mood, regardless of the mode of contact. We edited this statement to avoid an indication of causal relationships.

P19- “Older adults experienced higher positive mood when they communicated positive emotions, regardless of the mode of contact.”

Methods and Results

17. The use of ecologically valid EAR assessments is a major strength of this study. It could be exploited more in my view. Specifically, I recommend explaining the specific advantages of this method over other methods.

In the method section about EAR, we added more details to explain the advantages of using EAR, focusing on its naturalistic features and ecological validity.

P11- “The current study used the Electronically Activated Recorder (EAR) to unobtrusively capture authentic, real-world interactions by intermittently recording ambient sounds. By collecting sound data in participants’ natural settings, the EAR is an ecologically valid method that enhances understanding of older adults’ social contact and communication in a daily context³⁵. The EAR in the current study was activated for 30 seconds every seven minutes during waking hours throughout the day³⁵.”

18. On p. 11, the authors write that “all models considered” a large group of covariates. What does this mean? Did all models control for this group of covariates by default? Inclusion of default control variables is discouraged (e.g., Spector & Brannick, 2011; York, 2018; Vize et al., 2020; Wysocki et al., 2022) as it may amplify or conceal parameters of interest. I recommend reporting the results without these variables. An additional idea could be to add a note that inclusion of these variables did not change the results. If the results do change when including control variables, it is informative to present the results with and without control variables (maybe using the supplemental materials).

References:

- Spector, P. E., & Brannick, M. T. (2011). Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods*, 14(2), 287-305;
- York, R. (2018). Control variables and causal inference: a question of balance. *International Journal of Social Research Methodology*, 21(6), 675-684.
- Vize, C. E., Collison, K. L., Miller, J. D., & Lynam, D. R. (2020). Using item-level analyses to better understand the consequences of partialing procedures: An example using the Dark Triad. *Journal of Personality*, 88(4), 719-734.
- Wysocki, A. C., Lawson, K. M., & Rhemtulla, M. (2022). Statistical Control Requires Causal Justification. *Advances in Methods and Practices in Psychological Science*, 5(2), 251524592210958. <https://doi.org/10.1177/25152459221095823>

We appreciate the reviewer’s expertise and the collection of recommended references. Following the reviewer’s suggestions, we added Supplementary Tables 3-5 to report results without controlling for the list of participant-level and assessment-level variables. We also reported the results of non-covariate models in the sensitivity tests (P17). The results remained consistent with models that controlled the covariates. Both in-person ($B = 0.24, p < .001, 95\% \text{ CI} = [0.19, 0.29]$) and phone ($B = 0.19, p < .001, 95\% \text{ CI} = [0.12, 0.27]$) contact were associated with more verbal communication of positive emotions, yet only in-person contact was associated with more verbal communication of negative emotions ($B = 0.02, p < .001, 95\% \text{ CI} = [0.01, 0.03]$). Verbal

communication of positive emotions was associated with more positive mood ($B = 0.01, p < .001, 95\% \text{ CI} = [0.01, 0.02]$). Verbal communication of neither positive nor negative mood was associated with negative mood. The interaction between verbal communication of emotion and mode of social contact was not significant.

To clarify, the list of covariates consisted of a series of participant-level variables (age, gender, marital status, racial and ethnic minority status, education, self-rated health, and social network size) and one assessment-level factor (time of day). This study focuses on the assessment-level associations that reflect within-participant fluctuations in social contact and well-being. The multilevel models isolated the assessment-level effect from participant-level effect to observe associations overtime. Thus, the participant-level variables (i.e., time-invariant) would not influence the results on the assessment level. We included the participant-level variables in the models to provide a context for interpreting results rather than to control the covariance between key predictors and participant-level covariates.

19. A prerequisite for communicating emotion is that people say something in the first place. They may then choose to talk about their emotions or not. I wondered about the effect of the baseline effects of talking at all. In my view, it would be informative to show that the effects are not simply due to the fact that people talk more when they are around others vs. alone. And that the results go further than showing that people speak more words when meeting someone in person vs. on the phone. Being in the presence of other people, and talking to them, could also account for better affect. LIWC includes a word count in its output and I recommend controlling for the number of words spoken. Do the results change if controlling for the number of words overall?

We agree with the reviewer that word count is an important factor to consider. We added the descriptives of LIWC word count to Table 1 and the bivariate associations between word count and other key variables to Supplementary Table 1. Participants on average spoke 100.37 words ($SD = 133.75$) across the EMA 3h intervals. Word count was correlated with in-person contact ($r = .33, p < .001$), but not phone contact ($r = .10, p = .09$).

We reported the models that controlled the word count in sensitivity tests (P17, 18) and Supplementary Tables 6-8. Specifically, regarding associations between social contact and verbal communication of emotions (H1), only in-person contact was associated with more verbal communication of positive emotions ($B = 0.14, p < .001, 95\% \text{ CI} = [0.10, 0.19]$). Neither in-person nor phone contact was associated with verbal communication of negative emotions. Regarding verbal communication of emotions and mood (H2), similar to the main analyses, only verbal communication of positive emotions was associated with more positive mood ($B = 0.01, p = .002, 95\% \text{ CI} = [0.00, 0.01]$). Verbal communication of neither positive nor negative emotions

was associated with negative mood.

As for the interaction between verbal communication and mode of social contact on mood (H3), similar to the main analyses, only verbal communication of positive emotions was associated with more positive mood ($B = 0.03$, $p = .002$, 95% CI = [0.01, 0.05]). Verbal communication of neither positive nor negative emotions was associated with negative mood. The interaction between verbal communication of emotions and mode of social contact on the 3h assessment level was not significant.

20. p. 9, I recommend reporting within-person reliabilities for the repeatedly assessed affect measures instead of the currently reported Cronbach's alpha.

We reported the within-person reliability (intraclass correlation coefficient) to reflect how consistent participants' responses were across the study period, along with Cronbach's alpha to show the internal consistency of the items.

P10, 11- "Participants rated the extent to which they felt four positive (e.g., calm, content) and five negative (e.g., irritated, sad) emotions from 1 (not at all) to 5 (a great deal) every 3 hours throughout the day^{33,34}. Average scores were calculated for positive (Cronbach's alpha = .69; ICC = .75) and negative (Cronbach's alpha = .72; ICC = .54) mood respectively."

21. p. 11, "but three-level models yielded the same pattern as two-level models" – which pattern is meant here? Please specify.

In three-level models, on the 3h assessment level, in-person ($B = 0.22$, $p < .001$, 95% CI = [0.18, 0.25]) and phone ($B = 0.24$, $p < .001$, 95% CI = [0.16, 0.33]) contact was associated with more verbal communication of positive emotions, yet only in-person contact was associated with more verbal communication of negative emotions ($B = 0.01$, $p = .008$, 95% CI = [0.00, 0.02]). Verbal communication of positive emotions was associated with more positive mood ($B = 0.01$, $p = .001$, 95% CI = [0.00, 0.01]). Neither positive nor negative mood was associated with negative mood. These associations between key variables were identical to two-level models. We clarified the results in the manuscript.

P12- "We considered using three-level models with assessments nested within days nested within participants, but three-level models yielded the same pattern as two-level models, such that participants reported more positive mood during in-person and phone contact, yet more negative mood only during in-person contact. We omitted results from the three-level models for parsimony."

22. The table with the correlation between all key variables in the supplement is informative, but traditional correlation measures like Pearson's correlation are not suited for use with categorical or dichotomous variables. Please revise. The table also needs a note explaining what the variables mean and what the parameter estimates are.

We edited Supplementary Table 1 to add notes explaining the variables and values in the table. We also added Supplementary Table 2 which included Cramér's V (range 0-1) for categorical and dichotomous variables, including gender, minority status, marital status, and education, to reflect how strongly the variables were related.

Discussion

23. The narrative in the discussion lacks cohesion. As one example from p. 15: "Compared to younger people, older adults tend to prioritize emotional well-being and report better mood [41]." Why is this mentioned here? The sentence seems neither related to the previous nor the subsequent sentence.

We explained in comment #6 that we agree this sentence is not necessary in this paragraph. We have removed this sentence.

P19- "The amplifying effect of sharing positive emotions has been found in previous studies mainly among younger and middle-aged populations^{23,48}. This study contributes to the current body of literature by examining older adults' interpersonal approaches in emotion regulation, highlighting the advantages of sharing positive feelings in their day-to-day experiences."

24. Affect does not only follow social sharing of emotion but has been shown to predict this behavior in past research. I recommend addressing this in the manuscript (e.g., by additional analyses controlling for previous affect in the last time window and/or by discussing this issue of unclear causality)

We did not include the previous 3h mood in the main analysis because controlling the lagged value of the dependent variable in mixed models (i.e., multilevel models) may produce bias (Allison, 2015). This is because the lagged DV is inherently correlated with unobserved individual-specific errors, violating the assumption that the errors are independent of the predictors. As such, the coefficients for the lagged dependent variable tend to be overestimated and the coefficients for the other variables may be underestimated.

Allison, P. (2015). Don't put lagged dependent variables in mixed models. *Statistical horizons*, 2. <https://statisticalhorizons.com/lagged-dependent-variables/>

Although not included in the main analysis, we understand the reviewer's concern about causality. As such, we added the models that control the lagged DV as sensitivity test. The results remained consistent after controlling the lagged DV, such that expression of positive emotion was associated with higher positive mood, yet expression of negative emotion was associated with neither positive nor negative mood.

P18- "Models predicting participants mood controlling autoregression (i.e., mood reported in the previous 3 hours) were reported in Supplementary Table 12. Results remained the same after controlling autoregression, such that verbal expression of positive emotion was associated with more positive mood ($B = 0.01$, $p < .001$, 95% CI = [0.01, 0.02]). Verbal expression of negative emotion was associated with neither positive nor negative mood."

Additionally, to better address the comment, we added the issue of causality to limitations.

P23- "However, this study examined concurrent associations between verbal communication of emotion and mood, which does not indicate causal relationship. It is possible that verbal communication of emotion (i.e., the use of words) reflects individuals' mood rather than leading to changes in mood. [61]"

[61]. Gross, J. J. Emotion regulation: Conceptual and empirical foundations. *Annu. Rev. Psychol.* **54**, 145–173 (2002). <https://doi.org/10.1146/annurev.psych.54.101601.145041>

25. In general, the discussion left me wanting. The findings are really inspiring and the literature offers so many angles to learn from them. For example, the literature discusses social support as a mediator in the effects of sharing negative emotion on affect outcomes. There is also research showing that social support varies with mode of contact. This seems to align with the finding that negative sharing (but not positive) was more frequent in person vs. on the phone. These and other low-hanging fruit were not integrated in the discussion, which is a missed chance.

We appreciate the perspectives and insights the reviewer suggested. In the paragraph that discussed the results that participants shared negative emotions during in-person but not phone contact, we added the discussion on social support and mode of contact. It is possible that participants perceived in-person as a mode that was more likely to receive social support. As such, they were more willing to express negative emotions during in-person contact compared to phone contact.

P21- “Additionally, social support has been shown to mediate the associations between communication of negative emotion and better mood [54,55]. Importantly, in-person social support is linked to better emotional outcomes, compared to other modes of contact (e.g., text) [56]. It is likely that individuals’ willingness to disclose negative emotion may be influenced by perceived availability of support [57]. As such, older adults may perceive in-person as a more effective mode to receive support and thus more willing to communicate their negative emotions in-person.”

[54] Uchida, K. & Yamasaki, K. Social support mediating between coping by emotional expression and depression. *Psychol. Rep.* **102**, 144–152 (2008).

[55] Kennedy-Moore, E. & Watson, J. C. How and when does emotional expression help? *Rev. Gen. Psychol.* **5**, 187–212 (2001).

[56] Holtzman, S., DeClerck, D., Turcotte, K., Lisi, D. & Woodworth, M. Emotional support during times of stress: Can text messaging compete with in-person interactions? *Comput. Hum. Behav.* **71**, 130–139 (2017).

[57] Kahn, J. H. & Cantwell, K. E. The role of social support on the disclosure of everyday unpleasant emotional events. *Couns. Psychol. Q.* **30**, 152–165 (2017).

Additional points

26. The literature list includes errors, please revise (e.g., the Fratarroli 2006 Psych Bull paper is cited as (“University of California, Riverside”).

We have addressed this issue and double checked the reference list for other potential formatting issues.

Again, we are very grateful for the reviewer’s expertise and constructive feedback. We appreciate the time dedicated to carefully reading our manuscript and for providing valuable insights into the literature and research methodology. The feedback has significantly enhanced the quality of our manuscript.

Reviewer #3 (Remarks to the Author):

General Comments

This manuscript presents very interesting research examining interactions between modes of

social contact (in-person vs. phone), verbal expression of negative and positive emotion, and positive and negative mood in older adults. This is an interesting and meaningful topic, and the ecologically valid data obtained from older adult populations makes the study more even meaningful. The manuscript is also detailed and well-written, with a good amount of detail provided regarding the methods and analysis. I just recommend a few suggestions for further improvement, from my perspective.

Specific Comments

1. I have a minor issue with H2, specifically that verbal communication of negative emotions would be associated with more positive mood and less negative mood in the same 3 hours. This being said, rational justification for this hypothesis is provided in the introduction, which makes sense to me. My only issue is that there is quite a lot of research out there which would suggest that the communication of negative emotion would be associated with more negative mood and less positive mood within the same 3 hours (e.g., Lyons et al., 2018; Meier et al., 2024). My interpretation is that the associations between negative emotion language and outcomes are highly context dependent. Therefore, although the proposed hypothesis makes sense and is justified, I think some acknowledgment of the opposing argument is at least worthy of a mention in the introduction at the relevant point.

Lyons, M., Aksayli, N.D., & Brewer, G. (2018). Mental distress and language use: Linguistic analysis of discussion forum posts. *Comput. Hum. Behav.*, 87, 207-211.

Meier, T., Stephens, J. E., & Haase, C. M. (2024). Feelings in words: Emotion word use and cardiovascular reactivity in marital interactions. *Emotion*, 24(3), 733–744. <https://doi.org/10.1037/emo0001299>

The literature that the reviewer suggested is informative and helpful. We added the stream of literature that suggested the associations between negative emotion expression and worse mood to the introduction of H2, with citations that the reviewer shared.

We pasted the reorganized paragraphs below.

P5, 6- “On the other hand, the emotional outcomes of sharing negative emotions may be more complex, with studies yielding opposite findings. Some studies found that verbal communication of negative emotions was associated with worse mood. For example, a study with 49 married couples found higher usage of more negative emotion words to be associated with higher cardiovascular reactivity, suggesting more intense emotional experiences and heightened physiological arousal [20]. Another line of research suggests that sharing negative emotions and events may help individuals relieve emotional burdens, potentially leading to an improved mood. For example, one study tracked college student participants’ emotions and social sharing of emotions for five consecutive days. The study found that participants experienced shorter

duration of negative emotions (anger, fear, sadness) if they shared the emotion with social partners [21]. Another study tracked interactions in romantic couples for a week and found that spouses reported worse emotional well-being on days when they were encouraged to suppress their emotions [22]. Although communicating negative emotions may involve rumination and revisiting the negative experiences, we draw on the literature suggesting that sharing negative feelings with social partners facilitates the receipt of social support and improves individuals' emotional well-being [9]. We hypothesized that communicating both positive and negative emotions to social partners may be associated with better mood throughout the day (H2)."

2. I am wondering why the social contact mode text/email/social media wasn't included in the analyses. I know that the authors justified not examining this in the introduction, but the methods suggest that these data are in fact available, so I am wondering why the authors did not look into the results here also? I would be interested in seeing results from this (e.g., can the positive benefits of the communication of emotion even occur from messages?). Is there sufficient data for this mode of social contact? If not, this should be stated in the methods section (with Ns provided), thereby justifying the decision not to examine this contact mode. Do the authors have access to the actual text of the participants to be included in the analyses? If the answers to these questions are yes, I would be very keen to see results from the analysis of these data.

We agree that it would be informative to examine communication of emotion via text, however, we do not have access to the actual text from participants. This study focuses on verbal communication of emotion via spoken language, using data collected by Electronically Activated Recorders (EAR).

In this revision, we clarified the methodology in the method section. Additionally, older adult participants did not frequently engage in digital contact (text/email/social media) during the study period (number of digital contact during 3h intervals, $M = 0.28$, $SD = 0.81$). We now included the descriptives of digital contact in the manuscript.

P10- "This study did not include an analysis of verbal communication of emotion through digital social contact (text/email/social media) for two main reasons. First, we focused on participants' spoken language (details in the following section) and we did not have access to participants' written digital communication for analysis. Second, a significant proportion of adults over the age of 65+ do not own a smartphone, and digital contact was relatively rare among older adult participants during the study period. On average, participants reported 0.28 digital contact during the 3-hour intervals ($SD = 0.81$)."

Furthermore, given the importance of examining written communication and emotion expression, we added this point to the limitations and future directions section.

P22- “Furthermore, the current study focused on participants’ spoken language. Currently, older adults are less likely to text than to use phone or in-person communication; a significant proportion of older adults do not own smartphones [66]. However, given the increase in use of written communication among older adults (e.g., texting, social media) [10], future studies may examine older adults’ written communication of emotions and its contribution to well-being.”

[10]. Faverio, M. Share of those 65 and older who are tech users has grown in the past decade. *Pew Research Center* <https://www.pewresearch.org/short-reads/2022/01/13/share-of-those-65-and-older-who-are-tech-users-has-grown-in-the-past-decade/> (2022).

[66]. Yuan, S., Hussain, S. A., Hales, K. D. & Cotten, S. R. What do they like? Communication preferences and patterns of older adults in the United States: The role of technology. *Educ. Gerontol.* **42**, 163–174 (2016).

3. There is a slight discrepancy between the sample described in the OSF pre-registration compared to that reported in the manuscript. In the pre-registration, it states that 20 participants did not participate in EMA and were excluded, whereas the manuscript states that there were in fact 22 excluded for not participating in EMA. The manuscript also reports a total of 266 participants included in the final analysis sample, whereas the pre-registration reports 286. Please address these discrepancies in the manuscript where relevant.

We thank the reviewer for the close read and for noticing this discrepancy. We clarified this discrepancy in the method section.

P9- “Compared to the preregistration where the sample size was 286, we further excluded 20 participants ($n = 2$ did not have more than five EMA, $n = 18$ only had sound files in Spanish).”

4. I am intrigued as to whether the authors have any data available relating to the length of time of each social contact (possibly from the EMA)? If so, I would be interested in seeing some analyses carried out using these data (e.g., are the results moderated by length of time spent communicating with others?), even if simply included as a covariate.

We thank the reviewer for providing this intriguing research question. However, we did not ask for information about the length of social contact in the EMA. Although participants indicated with whom they had the social encounter, and we could check the adjacent 3h assessments to see if specific social partners appeared in both 3h assessments, this approach does not guarantee that participants spent the whole 3 hours with specific social partners (e.g., a participant might have an encounter with his/her spouse at 10:05-10:10am, reported this encounter in the 3h assessment

at 12pm; then had another encounter with his/her spouse at 12:30-12:40pm, and reported this encounter at 3pm). As such, the measurement tools in the current study do not capture the length of each social contact.

We added this point as a future direction.

P24- “In addition to the mode of contact, future studies could explore other aspects of social contact, for example, the duration of social contact, the relationship with social partners (e.g., spouse, children, friends), and older adults’ emotional experiences.”

5. I would be interested to see how the results play out split by gender of the participant (and possibly the respondent if that data are available). An analysis of the data split into male vs. female participants would be a nice addition to the Supplemental Material (e.g., are particular effects stronger in women than men?).

We examined the models that included gender as a moderator. Regarding H1, we included interaction terms between gender and in-person contact, and gender and phone contact. Neither of the interaction terms was significant. As for H2, gender moderated the associations between verbal expression of positive emotion and positive mood, such that for females, verbal expression of positive emotion was linked to higher positive mood, yet the association was not significant for males. For H3, the three-way interactions between expression of emotion, mode of social contact, and gender were not significant. We reported these findings in sensitivity test and Supplementary Tables 9-11.

P18- “Additionally, given that gender may play a role in verbal communication of emotion ²¹, we investigated models with gender as a moderator. Gender did not significantly moderate the association between social contact and mood (Supplementary Table 9). The association between verbal expression of positive emotion and mood varies by gender ($B = 0.01$, $p = .039$, Cohen’s $f^2 = 0.001$, 95% CI = [0.00, 0.02]; Supplementary Table 10), such that for females, verbal expression of positive emotion was associated with more positive mood ($B = 0.02$, $p < .001$, 95% CI = [0.01, 0.02]), yet the association was not significant for males. Three-way interactions involving verbal expression of emotion, mode of social contact, and gender were not significant (Supplementary Table 11).”

6. I have a slight concern about some of the causal language used in the results interpretation/discussion. For instance, in the first paragraph of the discussion, the authors state “Older adults garner emotional benefits from communicating positive emotions...”. Am I correct in thinking that all of the data in a given 3-hour period were simply aggregated as one time period (i.e., not temporally precise)? If so, it cannot be concluded that the communication of

positive emotion causes emotional benefits, due to the correlational nature of the data/analyses. Rather, it could be that the elevated positive emotive language is in fact a reflection of participants' elevated positive mood (rather than vice-versa). There are strong arguments from linguistic theory that would support this alternative perspective, which proposes that words are a reflection of experience and cognition. I would therefore recommend outlining this as a limitation of the work (i.e., that it is a correlational design and causality, regarding the causal direction of the associations, cannot be assumed), and I would also suggest toning down the causal language in the discussion, etc., and acknowledging this alternative possibility.

The reviewer is correct that we found associations without temporal order. We edited our language in the discussion section to avoid indications of causal relationships. We also added this point to the limitations.

P19-

Original: "Older adults garner emotional benefits from communicating positive emotions, regardless of the mode of contact."

Revised: "Older adults experienced higher positive mood when they communicated positive emotions, regardless of the mode of contact."

P21-

Original: "This finding suggests that the beneficial effect of communicating positive mood may go beyond the modality of social contact and the availability of information cues."

Revised: "This finding suggests that the concurrent association between communicating positive emotion and better mood may go beyond the modality of social contact and the availability of information cues."

P23 (limitations)- "However, this study examined concurrent associations between verbal communication of emotion and mood, which does not indicate causal relationship. It is possible that verbal communication of emotion (i.e., the use of words) reflects individuals' mood rather than leading to changes in mood. [61]"

[61]. Gross, J. J. Emotion regulation: Conceptual and empirical foundations. *Annu. Rev. Psychol.* **54**, 145–173 (2002). <https://doi.org/10.1146/annurev.psych.54.101601.145041>

We thank the editor and the reviewers very much again for the thoughtful comments, for the suggested readings regarding this topic, and for all the effort in helping us greatly improve the paper. We believe that we have improved the paper substantially by incorporating the comments. We look forward to additional feedback.

REVIEWER REPORTS:

Reviewer #1 (Remarks to the Author):

The authors were very responsive to issues raised by the reviewers and the manuscript is much improved. I have no remaining concerns.

Reviewer #2 (Remarks to the Author):

The authors have effectively addressed most comments and the manuscript has improved as a result.

There is one remaining issue and it is not trivial. In my review for this initial submission, I voiced my deep concern about the density of citation errors. The authors were responsive to this concern and have changed several of their citations. This is good. However, it only took a few samples to find that this serious issue is still unresolved. As one example, I had requested a correction in citing a paper that I happen to know well:

“p. 4, “the availability of cues during in-person contact may enhance interpersonal recognition of positive and negative emotions (e.g., fear, happiness, disgust [13, 14]”. --> Reference 13 does not support this claim. Please revise or qualify.”

The authors have done as requested and corrected reference # 13 (now 14). The other citation for this claim (#14, now 15) remained unaltered in the revision. However, this reference does not make any sense for the presented claim, either.

As I specified in my initial review, I only commented on a few references in passing – those that I happen to know well. I suspected more errors in the references that I do not know. The example above shows me that this suspicion is correct and that the authors have not effectively dealt with this serious issue.

This is a good manuscript, and it is obvious that the authors put in some effort to improve it even further in the revision. However, the remaining citation issue is quite unsettling. Again, I strongly recommend double-checking each reference to prevent the spreading of misinformation. Without effectively addressing this remaining problem, this manuscript should not be published.

We thank the reviewer for their thoughtful feedback and for taking the time to review the

references. We appreciate the reviewer's careful attention to this issue and have taken steps to ensure integrity of the manuscript. Please see our responses below.

Regarding citations #13 (citation #15 in revision 1, Keltner et al., 2019), we initially included this paper to support the claim that facial expressions are fundamental in recognizing emotions during in-person contact. But we agree with the reviewer that it may be a far stretch from this citation to our statement that the large availability of informational cues during in-person contact may enhance interpersonal recognition of emotions. As such, we have removed this citation in the current manuscript.

We understand the reviewer's concern regarding the accuracy and reliability of our citations. To address this concern, we carefully reviewed the manuscript to ensure that all citations accurately reflect the corresponding statements/descriptions. We made several changes in the introduction and discussion in how we described the studies, which are listed below. Additionally, in this revision, we uploaded an Excel file that documents the rationale of each citation (in the introduction and discussion) as a supporting document. This Excel file shows the cited work, the statement from our manuscript, and the explanation side by side. Newly added citations are highlighted in blue.

Citation-related edits in this resubmission (marked in red in the manuscript):

P3-4:

Original: This study does not consider texting, social media, or video communication because fewer than two thirds of older adults have a smart phone and fewer than half use social media.

Revised: This study does not consider texting, social media, or video communication because estimates suggest that fewer than two thirds of adults over the age of 70 may own a smartphone and just over half use social media.

P4:

Original: These cues may facilitate emotionally deep and engaging conversations where individuals share thoughts, feelings, and experiences at a personal level

Revised: Nonverbal cues may facilitate emotional connection and be associated with conversations where individuals share thoughts, feelings, and experiences at a personal level.

Original: In sum, the availability of cues during in-person contact may enhance interpersonal recognition of positive and negative emotions (e.g., fear, happiness, disgust).

Revised: In sum, the availability of cues (e.g., facial expression), during in-person contact may enhance interpersonal recognition of positive and negative emotions (e.g., fear, happiness, disgust).

P5:

Original: Being able to receive responses is important for expression of emotion in an interpersonal context.

Revised: A 14 day diary study of young adults found that receiving responses from close social partners was important for expression of emotion in that interpersonal context.

Original: For example, when individuals express positive emotions and share positive events, social partners may provide encouraging responses which verify individuals' initial pleasure and thus boost their original positive emotions.

Revised: For example, studies using diary approaches and laboratory manipulations revealed that when young adults express positive emotions and share positive events, social partners may provide encouraging responses that verify individuals' initial pleasure and thus boost their original positive emotions.

P6:

Original: For instance, in a study where young adults shared positive events with peers, receiving positive social feedback enhanced their positive mood in the moment²⁴. In the context of sharing negative emotions, participants experienced emotional recovery from negative videos only when social partners responded with empathy and cognitive reappraisal²⁵.

Revised: For instance, in a study where young adults shared positive events with peers in online forums, receiving positive social feedback enhanced their social bonding²⁴. In the context of sharing negative emotions, participants subjectively reported feeling better when a partner listened to them express negative emotional reactions, but only experienced emotional recovery from negative videos when social partners responded with cognitive reappraisal²⁵

P19-20:

Original: Additionally, social support has been shown to mediate the associations between communication of negative emotion and better mood^{54,55}. Importantly, in-person social support is linked to better emotional outcomes, compared to other modes of contact (e.g., text)⁵⁶. It is likely that individuals' willingness to disclose negative emotion may be influenced by perceived availability of support⁵⁷.

Revised: Additionally, a review of the literature suggests that under many conditions, communication of negative emotion can mitigate distress and affect personal relationships in positive ways⁵⁰. Two experimental studies with young adults revealed that in-person social support was linked to better emotional outcomes, compared to other modes of contact (e.g., text)⁵¹. A study of college students further revealed that willingness to disclose negative emotion may be influenced by perceived availability of support⁵²

P21:

Original: For example, one study found that when participants did not perceive that other people expected them to be sad, they reported greater levels of sadness

Revised: For example, a series of studies involving college students in different countries found that when participants did not perceive that other people expected them to be sad, they reported greater levels of sadness⁵⁴

Reviewer #3 (Remarks to the Author):

The responses from the authors are excellent, and are highly satisfactory. I just have a few further fairly minor recommendations:

1) Regarding the authors' response to Reviewer 1's second point (i.e., what LIWC scores represent), I would make it more clear (in the manuscript) that the LIWC scores generated represent percentages of the total word count. So, for the positive emotion word category, the numbers generated reflect the number of positive emotion words (contained within the LIWC dictionary) divided by the total word count of a given text (same for other categories). This way, readers know exactly what the scores represent and how they were calculated.

We added the following description to the method section to increase clarity-

P12- "The score for each category reflects the percentage of targeted words relative to the total word count. For example, the positive emotion score of a given snippet is calculated by dividing the number of positive emotional words (defined by LIWC dictionary) by the total number of words in the snippet."

2) I disagree with the Reviewer 2, Point 19 comment and authors' response to this. The main reason I disagree is because LIWC analyses and output automatically controls for WC (see my previous comment). Numbers generated by LIWC for each category, including positive and negative emotion words, are a percentage of the total word count of a text. Thus, the scores that you have for positive and negative emotion words are already generated controlling for word count; it is therefore strange to control for word count again (twice) in subsequent statistical analyses. Because of this, I would recommend removing the analyses in which you have controlled for word count again from the supplemental materials and where they are mentioned in the Results section, as these results are misleading. This being said, I do agree with Reviewer 2's main argument in this point, but more with regard to the total duration of interactions (rather than word count), as I mentioned in the previous review round (though I am now aware that the researchers did not collect these data). I also agree with the point that being in the presence of other people in general, and talking to them, could (and most likely is) account for better affect, which would then be reflected in emotion word use (as I suggested in the previous review). I see this as an important point (i.e., surrounding the direction of causality) that should be emphasised

more in the Discussion (and not just briefly in the limitations section).

We appreciate the reviewer for pointing this out and have now removed the relevant analyses from the supplementary material (previous Supplementary Tables 6-8).

We agree with reviewers 2 and 3 that the total duration of social contact and the physical presence of social partners may influence individuals' mood and use of emotional words (reversed direction). In the study, we did not find differences in using positive emotion words between in-person and phone contact. Instead, we found that participants used more negative emotion words during in-person, compared to phone contact. As such, we incorporated the point of this alternative direction into the paragraph where we discussed participants' likelihood and emotional benefits of expressing emotions during different modes of contact.

P21- "Importantly, the current study focuses on the potential emotional benefits of verbally expressing emotions. However, the reversed direction is also plausible, such that older adults may experience improved mood in in-person settings with social partners, which could in turn increase their likelihood of expressing emotions. Although this alternative direction is beyond the scope of the current study, it warrants further analysis to understand the social contact dynamics across different modes of contact."

3) In response to my second comment, the authors need to justify their statement "Second, a significant proportion of adults over the age of 65+ do not own a smartphone" in the revised manuscript with citations to support this.

We added a citation to justify this statement. The cited report from Pew Research Center showed that 39% of Americans aged 65+ did not own a smartphone in 2021 and 54% in this age group did not own a smartphone in 2018, a date closer to our data collection period (2016-2017). We didn't state the data collection time in the previous manuscripts and this information is now added. (P9)

Faverio, M. Share of those 65 and older who are tech users has grown in the past decade. *Pew Research Center* <https://www.pewresearch.org/short-reads/2022/01/13/share-of-those-65-and-older-who-are-tech-users-has-grown-in-the-past-decade/> (2022).

4) My concerns surround the inappropriate use of causal language have largely been addressed. However, there is still some evidence of this in the abstract that needs correcting - i.e., "This study emphasizes the emotional benefits of social contact, particularly in enhancing positive mood through communicating positive feelings."

We removed the word “enhancing” to revise the sentence. It now reads-
“This study emphasizes the emotional benefits of social contact, particularly in the context of communicating positive feelings.”

We believe that the reviewer’s constructive feedback has truly improved the manuscript. We sincerely appreciate the reviewer’s expertise, insights, and efforts in helping us address important issues in the manuscript.